MEASURING SOCIAL COMPETENCE, TASK COMPETENCE AND SELF-
PROTECTION IN AN ORGANISATIONAL CONTEXT

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DECLARATION

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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ABSTRACT

In Chapter 1, I describe social competence, task competence and self-protection in an organisational context. In Chapter 2, I review key self theories and relate them to the self-competence construct. In Chapter 3, I review the research on self-competence to show that there is a need for a construct of social competence and self-protection. I discuss the limitations of three self-competence theories: Bandura's (1977) self-efficacy theory, Williams and Lillibridge's (1992) self-competence theory and Tafarodi & Swann's (1995) self-competence/self-liking theory. In Chapter 4, I present my self-competence model. I raise the research questions and specify my hypotheses. In Chapter 5, I describe the construction of Social and Task Competence Scale. I present evidence of the reliability and factor structure of the Social and Task Competence Scale. I concluded that scale revisions were needed. In Chapter 6, I present evidence of the reliability, factor structure and predictive validity of the revised Social and Task Competence Scale and Self-Protection Scale. I describe the results of an experiment that investigated the interaction of task setting, social competence, task competence and self-protection. I concluded that the measures predicted performance. In Chapter 7, I investigate the factor structure and reliability of the revised Social and Task Competence Scale and revised Self-Protection Scale. I provide evidence of the convergent and discriminant validity of these measures with reliable measures of self-competence, self-esteem, self-monitoring, personality and social desirability. In Chapter 8, I investigate the factor structure and reliability of the Social and Task Competence Scale and Self-Protection Scale after final revisions and show that these measures are acceptable for use in scientific research. I present evidence of their convergent validity with a valid and

reliable measure of emotional intelligence, and describe experimental results that supported the hypothesised relationships between perceived task difficulty, social competence, task competence and self-protection and task performance. In Chapter 9, I discuss the implications of my research for self-competence theory, self-regulation and self-esteem and the prediction of social and task performance in organisations.

CHAPTER 1: A BRIEF INTRODUCTION TO SELF-COMPETENCE IN AN
ORGANISATIONAL CONTEXT

The self in psychology is a complex and multidimensional construct that has
generated a lot of academic interest over the past 30 years. After an initial moratorium
on the subject by the behaviourists, the self made its way into the social psychological
literature as researchers came to recognise that a substantial amount of human behaviour
involves self-reflection (e.g., Baumeister, 1986; Bem,1972; Carver & Scheier, 1998;
Duval & Wicklund, 1972; Higgins, 1987; Markus & Nurius, 1986; Snyder, 1987). Since
then, social psychologists have studied the cognitive, affective and social aspects of the
self from different perspectives. For example, they have studied how behaviour is self-
regulated, how self-awareness affects behaviour and the nature of self-esteem (e.g.,
Carver & Scheier, 1981; Duval & Wicklund, 1972; Rosenberg, 1979).

Out of the many self constructs that have emerged from the literature on the self,
judgements of personal abilities, also known as *self-competence beliefs* have come to
light as some of the most powerful cognitive determinants of human behaviour. Self-
competence is closely related to Bandura's (1977) self-efficacy construct that refers to
people's beliefs about their personal abilities to produce and control their behaviour in
prospective situations (Bandura, 1982; Gist, 1987; Gist & Mitchell, 1992; Williams &
Lillibridge, 1992; Wood & Bandura, 1989b). Research has consistently linked self-
competence beliefs to motivational and behavioural outcomes in clinical settings (e.g.,
Bandura, 1977; Bandura, Adams & Beyer, 1977; Bandura, Cioffi, Taylor, Barr &
Brouillard, 1988; Bandura, Pastorelli, Barbaranelli, Caprara, 1999; Bandura, Taylor,

Williams, Mefford & Barchas, 1985; Cervone, Kopp, Schaumann & Scott, 1994; Holahan & Holahan, 1987; Jex, Bliese, Buzzell & Primeau, 2001; Schneider, O'Leary & Agras, 1987), educational settings (e.g., Colquitt, Lepine & Noe, 2004; Hoffman & Schraw, 2009; Joo, Bong & Choi, 2000; Lent, Brown & Larkin, 1987; Multon, Brown & Lent, 1991) and organisational settings (e.g., Bandura & Wood, 1989; Eden & Aviram, 1993; Gist, Schwoerer & Rosen, 1989; Latack, Kinicki & Prussia, 1995; Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1997, 1998; Wood & Bandura, 1989a).

The construct of self-competence is appealing to organisational psychology for two reasons. First, there is a large body of evidence that supports the proposition that individual differences in work performance can be explained by differences in self-competence beliefs (e.g., Bandura, 1997; Bandura & Adams, 1977; Bandura & Cervone, 1983, 1986; Bandura & Jourden, 1991; Bandura, Reese & Adams, 1982; Bandura, Taylor, Williams, Mefford & Barchas, 1985; Bandura & Wood, 1989; Button, Mathieu & Aikin ,1996; Cervone, 1989; Cervone, Jiwani & Wood, 1991; Cervone & Peake, 1986; Gist, 1987; Gist & Mitchell, 1992; Kernan & Lord, 1990; Locke, Frederick, Lee & Bobko, 1984; Locke & Latham, 1990; Locke, Shaw, Saari & Latham, 1981; Peake & Cervone, 1989; Sandelands, Brockner & Glynn, 1988; Weinberg, Gould & Jackson, 1979; Wood & Bandura, 1989a). Second, self-competence is able to predict the variability in a person's work performance in different settings (Barling & Abel, 1983; Barling & Beattie, 1983; Betz & Hackett, 1987; Blustein, 1989; Kahn & Long, 1988; Lee & Gillen, 1989; Lent, Larkin & Brown, 1984, 1986; Taylor & Betz, 1983). Hence,

self-competence is highly predictive of both individual and situational differences in work performance.

As a predictor of work performance, self-competence is also important to the field of personnel selection. Personnel selection is concerned with predicting work performance through psychological assessments of job applicants (Aamodt, 1996). Work performance comprises all measurable work behaviors that are within a person's control and relevant to organisational goals (Campbell, Gasser & Oswald, 1996). The task of personnel selection is to match a person's knowledge, skills, abilities, and other personal characteristics to the requirements of the work role (Borman, Hansen & Hedge, 1997). The psychological assessments that are commonly used in personnel selection to predict work performance combine psychometric instruments with behavioural measures and biodata in the assessment process (for reviews, see Murphy & Bartram, 2002; Robertson, Bartram, & Callinan, 2002; Hough & Oswald, 2000; Salgado, 1999).

The psychological assessments typically consist of IQ tests, ability measures and personality tests. Ability measures provide personnel selectors with important information about the extent to which a person possesses the skills and abilities that are specific to the role, in addition to their general cognitive abilities such as verbal, numerical and spatial abilities (Kaplan & Sacuzzo, 1993). General intelligence and general cognitive ability measures have the highest predictive validity (.51) and are the best predictors of acquisition of job knowledge on the job (Schmidt & Hunter, 1992, 2004; Schmidt, Hunter, & Outerbridge, 1986) and of performance in job training programs (Hunter & Hunter, 1984; Ree & Earles, 1992). However, having a high IQ does not necessarily indicate that good work performances will be produced, because

work performance can be negatively affected by other factors such as mental health problems confidence in work abilities (Crist & Stoffel, 1992).

Personality tests measure the patterns of thoughts, feelings and behaviours that characterise a person (McCrae & Costa, 1991, 1992, 1995; McCrae & John, 1992). In recruitment settings, the data from these psychometric measures tends to be supplemented with data from behavioural measures of work performance (Robertson & Smith, 2001). The behavioural measures of work performance that are used in personnel selection consist of standardised or non-standardised interviews that measure a person's interpersonal and nonverbal behaviour and measures of a person's competencies that are based on their performance in job-related exercises completed at assessment centres such as leaderless group discussions and group problem solving exercises (Bartram, 2004). The collection of biodata in personnel selection is based on the premise that a person's biographical information can provide information about past achievements, personal characteristics that may be relevant for person-organisation fit, preference for group attachments and cultural socialisation (Borman et al., 1997).

Personnel selection then, involves the collection of information about a person's general and technical abilities and personal characteristics in order to predict technical proficiency, interpersonal effectiveness, situational performance and ability to work as part of a team. Therefore, a measure of self-competence that is able to predict work performance on the basis of beliefs about task and social abilities could be a useful addition to personnel selection processes.

Personality vs. Social-Cognitive Approaches

Personality tests have played an important role in personnel selection (Borman et al., 1997). They are considered to provide insight into how people are likely to use their skills and abilities, cope with work-related stress and behave in interpersonal work relationships (Kaplan & Saccuzzo, 1993). It is widely believed that the broadest dimensions of personality consist of a core set of five behavioural traits known as the *big five* personality factors: emotional stability, extraversion, openness, agreeableness and conscientiousness (McCrae & Costa, 1992). Assessment of the big five aims to identify a person's underlying personality traits in order to develop an understanding of how they may actually behave. Thus, work performance is predicted on the basis of how much a person is expected to display each personality trait at work.

Empirical support for the use of personality tests in personnel selection seems to be equivocal. There is some research that shows personality traits reliably predict work performance (e.g., Barrick & Mount, 1991; Barrick, Mount & Judge, 2001; Borman, Penner, Allen & Motowildo, 2001; Hermelin & Robertson, 2001; Motowildo & Van Scotter, 1994; Murphy & Bartram, 2002; Tett, Jackson & Rothstein, 1991) whereas in other research (for a review, see Matthews, 1997) the big five personality factors do not correlate highly with work performance at all. The predictive validity of personality when combined with job analysis is low to moderate and ranges between .21 and .38 (Hurtz & Donovan, 2000; Schmitt, 1984). Therefore, some researchers have concluded that the *five factor model* produces information about the higher-order factor structure of personality but it obscures the variables that are subsumed into the five broad factors (e.g., Hough 1997, 1998).

Self-competence is one variable that is obscured by the five factor model. Some of the dimensions of self-competence are subsumed by the conscientiousness factor. Conscientiousness refers to a person's characteristic tendencies to be dependable, careful, thorough and hardworking (Hurtz & Donovan, 2000). These traits are also components of self-competence along with goal striving, analytical thinking and persistence characteristics (Williams & Lillibridge, 1992). The dimensions of self-competence are well supported in the self-competence literature (for reviews, see Gully, Incalcaterra, Joshi & Beaubien, 2002; Locke, Frederick, Lee & Bobko, 1984; Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1997, 1998; Tharenou & Harker, 1991 Wood, Mento & Locke, 1987). It can be argued that conscientiousness subsumes some facets of self-competence, but research on self-competence suggests that self-competence is a reliable predictor of work performance in its own right and only weakly related to conscientiousness (Baum, Locke & Smith, 2001; Demetriou, Kyriakides & Avraamidou, 2003; Gellatly, 1996).

A further criticism of the five factor model relates to its focus on the consistency of personality traits over time, situations and social roles (Funder, 1994; Langston & Sykes, 1997; McAdams, 1992; Pervin, 1994). Social-cognitive theorists have challenged this assumption by emphasising the situation-specificity of cognitive appraisals of situations rather than the generalised patterns of behaviour that are characterised by personality traits (e.g., Bandura, 1986; Dweck & Leggett, 1988; Mischel & Shoda, 1995, 1998). From this perspective, behaviour is determined by cognitive appraisals or interpretations of situations arising from personal or vicarious experiences. Perceptions of self-competence, expectancies of future performance outcomes and the subjective

importance of those outcomes are thought to jointly influence the actual behaviour that is produced in different situations. Thus, social-cognitive theories such as self-competence theories (Bandura, 1997; Williams & Lillibridge, 1992) highlight the situational specificity of behaviour, whereas personality theories point to the stability of behaviour through generalised personality traits.

These distinctions suggest that self-competence theories (Bandura, 1997; Williams & Lillibridge, 1992) may be useful to personnel selection for two reasons. First, research has shown that the stability and variability in performance over time and across situations can be partially attributed to the causal effects of self-competence beliefs in the self-regulatory system (for reviews, see Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1997; Tharenou & Harker, 1991). Thus, self-competence research provides a strong empirical platform on which to base psychometric measurement. In contrast, the five factor model is not supported by a theory that has clear causal mechanisms of behaviour (Epstein, 1983).

The second reason that self-competence may be useful in the field of personnel selection is that current practice in personnel selection depends on personality tests to predict work performance (Hurtz & Donovan, 2000). In assessing generalised behaviours from a trans-contextual perspective, personality tests neglect the important social-contextual influences that lead to variations in work performance in different situations. In contrast, the focus of self-competence theories is on the antecedents and consequences of beliefs about personal abilities as they may apply to individual situations.

Over the years psychological tests have become essential tools for implementing change because of their ability to provide organisations with data for personnel selection, promotion and the evaluation of rehabilitation and training. The ability to distinguish between work performances on the basis of differences in self-competence beliefs has several advantages for organisations. First, it facilitates the identification of job applicants who are likely to be motivated to produce the highest performance attainments. Studies have shown that high self-competence leads to greater work productivity when compared to low self-competence (e.g. Barling & Beatie, 1983; Kahn & Long, 1988; Lee & Gillen, 1989; Locke, Frederick, Lee & Bobko, 1984; Taylor, Locke, Lee & Gist, 1984; Wood Bandura & Bailey, 1990). Therefore, a psychometric measure of self-competence could be used to identify high performing individuals on the basis of their motivation to act.

Second, detecting differences in self-competence could facilitate job matching by revealing how different job applicants are likely to approach the completion of tasks. A job applicant who is assessed as being high self-competence would be expected to possess a strong analytical approach to solving problems and making decisions, set higher goals and persist and expend additional effort when faced with a complex task. In contrast, a job applicant with low self-competence would be expected to be less confident solving problems and making decisions, and have lower performance standards and less tenacity for dealing with complex tasks (for reviews, see Sadri & Robertson, 1993; Stajkovic & Luthans, 1997, 1998; Stajkovic & Lee, 2001). Therefore, job applicants with high self-competence should make better team leaders, supervisors or managers than applicants with low self-competence because they think more

analytically and are able to manage complex tasks more effectively (Stajkovic & Luthans, 1998). In contrast, people with low self-competence are likely to need to be supervised and require training to strengthen their self-competence. Therefore, a psychometric instrument that is able to inform personnel selectors about domain-specific strengths and weaknesses by differentiating between beliefs of task and social abilities may add to existing job matching processes.

Third, unlike personality assessments, a measure of self-competence could differentiate between a job applicant's own performances in different situations. For example, recall that Ms Watson has high task competence if she works alone, but loses confidence when she has to discuss her work with colleagues. Hence, identifying job applicants who find the management of the social aspects of work difficult could possibly assist personnel selectors to match job applicants to role competencies and assist in the identification of training needs.

A psychological test that is able to predict performance on the basis of self-competence beliefs would be a valuable adjunct to the existing psychometric measures that are used in personnel selection. Such a measure could also be useful in work rehabilitation settings through its capacity to identify the potential areas where psychological intervention could improve work performance by increasing task and social competence beliefs.

Task Competence vs. Social Competence

The research on self-competence is focussed on the role that beliefs about task-related abilities play in *work performance*. Work performance has been defined as behaviours that are relevant to organisational goals and a function of ability and

motivation (Campbell, 1990). Campbell (1990) classified ability into two categories: declarative knowledge and procedural knowledge. Declarative knowledge is defined as the ability to state relevant facts and things. Procedural knowledge refers to the knowledge attained when knowing what to do is combined with knowing how to do it. Self-competence would be more closely aligned with procedural knowledge through its ability to inform a person about whether or not they have the ability to perform at task.

Borman and Motowildo (1997) proposed that work performance consists of task performance and contextual performance. Task performance refers to how effectively a person performs activities that are relevant to the organisation's technical aspects (Borman & Motowildo, 1997). For example, the task performance dimensions of a lawyer's job could include knowledge of the law, preparing affadavits, issuing of subpeoneas, court appearances and delivery of opening and closing arguments, organisation skills and time management. Contextual performance is concerned with the organisational, social and psycholgocial context and includes activities such as volunteering to carry out task activities that are not formally part of the job, helping and cooperating with others in order to complete tasks (Borman & Motowildo, 1997).

Borman and Motowildo (1997) proposed that task performance varies cross-situationally and involves cognitive ability, whereas contextual performances tend to be similar across jobs and involves personality variables. Task performance is also more likely to be role-prescribed than contextual performance is (Borman & Motowildo, 1997). One implication of this definition of work performance is that self-competence could have social dimensions as well as task dimensions.

Sackett, Zedeck and Fogli (1988) defined work performance in terms of *maximum performance* and *typical performance.* Maximum performance is defined as the level of performance that a highly motivated person can achieve whereas typical performance is the level of performance that a person will usually achieve (Sackett et al., 1988). Self-competence has been found to correlate higher with typical performance than maximum performance (Klehe & Anderson, 2007). One implication of this finding is that self-competence could play an important role in predicting the most common performances that people produce at work.

Ng and Feldman (2008) identified 10 dimensions of work performance: core task performance, creativity, performance in training programs, organisational citizenship behaviours, safety performance, general counterproductive work behaviours, and workplace aggression, on the job substance use, tardiness and absenteeism. Most of these job behaviours influence organisational culture and environments where task performances take place (Borman & Motowildo, 1997). Research has linked self-competence to task performance (for reviews, see Judge, Jackson, Shaw & Rich, 2007; Stajkovic & Luthans, 1998), managerial idea generating (e.g., Gist, 1989), work training programs (e.g., Mathieu, Martineau & Tannenbaum, 1993; Tannenbaum, Mathieu, Salas & Cannon-Bowers, 1991), organisational citizenship behaviours (e.g., Saks, 1995), leadership (e.g., Chen & Bliese, 2002), creativity (Redmond, Mumford & Teach, 1993) and positive moods (Tsai & Tien-Cheng, 2007). Therefore, self-competence affects behaviour across many of the dimensions of work performance that Ng and Feldman (2008) proposed.

The most robust finding on self-competence suggests that there is a strong causal link between *task competence*, self-regulation and task performance (for reviews, see Gully, Incalcaterra, Joshi & Beaubien, 2002; Judge et al., 2007; Locke, Frederick, Lee & Bobko, 1984; Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1997, 1998; Tharenou & Harker, 1991 Wood, Mento & Locke, 1987). However, this literature does not consider the possibility that beliefs about social abilities, or *social competence,* can also affect work performance through their ability to influence contextual performances. Indeed, research has linked poor adjustment to the social aspects of work to mental health problems and decreased work rehabilitation (e.g., McCay & Seeman, 1998).

The notion of social competence has a long history in psychology (e.g., Broom, 1928; James, 1892/1948; Mead, 1934; Schneider, Ackerman & Kanfer, 1996; Thorndike, 1920). Social competence has been used for predicting work performance from the point of view of psychometric instruments of social insight (e.g., Gough, 1968) and empathy (e.g., Hogan, 1969) and social intelligence (Moss, 1955). The variables of social appropriateness, social influence, social openness, social maladjustment, warmth and extraversion are also subsumed under the label of social competence (Schneider et al., 1996). However, little work has been done to investigate the relationship between social competence, task performance and social factors in work performance (e.g., Bandura & Jourden, 1991). People do not work in social isolation in organisations. Their performance affects, and is affected by, the social environments in which they work (Garcia Prieto, Bellard & Schneider, 2003; Gibbons & Buunk, 1999; Gifford, Fan & Wilkinson, 1985; Viswesveran et al., 2005). Viswesveran et al. (2005) found that

contextual performance affected supervisor ratings of all of the performance dimensions (e.g., effort, leadership, quality, administrative competence, interpersonal competence, compliance with rules) that loaded onto their general factor of work performance. It follows that social competence may play an important role in predicting the social behaviours associated with contextual performance, and in turn, general work performance.

A major proposition of this thesis is that self-competence is composed of social competence beliefs as well as task competence beliefs. I regard social competence as a significant component of self-competence, and one that interacts with task competence to affect performance outcomes.

<div align="center">Self-Protection and Self-Competence</div>

Research suggests that self-competence is strongly affected by abilities to protect self-esteem from unfavourable or negative social feedback (e.g., Bandura & Jourden, 1991; Wood & Bandura, 1989a). People worry about what other people will think of them (Bandura, 1997). Most people compare their performances to other people's performances in the same situations (Aspinwall & Taylor, 1993). When the outcome of these cognitive evaluations is negative, some people begin to suffer social anxiety, which can lead to avoidance of social groups and activities, and a high degree of emotional and psychological discomfort in social situations that cannot be avoided (e.g., Gibbons, Benbow & Gerrard, 1994; Marsh, 1987; Mussweiler, Gabriel & Bodenhausen, 2000; Taylor & Lobel, 1998; Tesser, 1988). Socially anxious people are characterised by a discrepancy between their perceived social standards and doubts about their ability to fulfil them (Alden, Bieling & Wallace, 1994; Wallace & Alden, 1991). That is,

socially anxious people believe that they are not as socially competent as other people whereas socially confident people believe that they can match other people's evaluative standards.

Research has shown that people who have strong doubts about their coping abilities in social situations suffer from chronic distress and expend considerable effort in protective forms of behaviour (e.g., Bandura, 1978; McCay & Seeman, 1998). For example, people who perceive that their task performance is inferior to their social referents, become highly anxious and self-critical, and take self-protective measures to avoid performing the same tasks that they find subjectively threatening in the future (e.g., Bandura & Jourden, 1991; Prussia & Kinicki, 1996). They also abandon easily manageable tasks because they see them as leading to more threatening events over which they will be unable to exercise adequate control (e.g., Bandura & Wood, 1989; Wood & Bandura, 1989a).

The role of self-protection in the relationship between social and task competence and task performance has not been investigated before now. Additionally, the effect of social competence on work performance has been understudied (e.g. Bandura & Jourden, 1991). Therefore, a psychometric instrument that is able to predict work performance on the basis of whether a person is high or low task competence, high or low social competence and high or low self-protection could provide important information about how that person is likely to perform in different work situations and how well adjusted they are to the social aspects of work performance.

In order to illustrate my model of self-competence, I will refer throughout my thesis to the hypothetical example of Ms Watson. Ms Watson recently joined a law firm as an

associate. She is confident about her abilities to practice corporate law, and she identifies herself psychologically as a lawyer. As an associate, she is expected to manage small corporate clients. She attends weekly briefings with other associates in order to deliver progress reports to senior partners. She shares her office with another associate and a secretary but she prefers to work alone because she is not confident in social situations.

From the perspective of existing models of self-competence (Bandura, 1989; Williams & Lillibridge, 1992), which focus on beliefs about task-related abilities, Ms Watson could be said to be high in self-competence because she is confident that she has the ability to successfully perform the tasks associated with being a lawyer. However, in a recent performance review senior partners commented that they had noticed that she seemed anxious when she discussed the progress of her cases at weekly meetings. Ms Watson has always felt self-conscious in social situations. Therefore, she has difficulty adjusting to the social aspects of work even though she is confident in her abilities to perform the tasks of a lawyer. Her performance at the weekly briefings can be said to be negatively affected by her low social competence beliefs. Traditional models of self-competence do not consider how work performance may be affected by social competence beliefs.

Bandura (1989) argued that self-efficacy beliefs, performance and successful work socialisation influence one another reciprocally to facilitate cognitive appraisals that create favourable social environments in organisations and reinforce future feelings of competence. If the social aspects of work do affect task performance, then predicting how confident people are about their ability to cope with the social aspects of work

could provide useful information about their future work performance. More research is needed that examines the dimensions of social and task competence in an organisational setting. The first aim of the present research was to explore a new approach to self-competence scale construction. The second aim of the present research was to gain an understanding of how social and task competence may contribute to self-regulation and work performance in an organisational context.

CHAPTER 2: A CRITICAL REVIEW OF THEORIES OF THE SELF AND SELF-

COMPETENCE

Summary

In Chapter 2, I describe classic and contemporary theories of the self and relate these

theories to the self-competence construct. I begin with a review of the classic theories of

the self proposed by James (1890/1948), Cooley (1902), Mead (1934) and Freud

(1922/1961). Then, I review two contemporary theories of the self proposed by Markus

& Nurius (1986) and Snyder (1987). Next, I review several key theories of self-

regulation (Baumeister, Heatherton & Tice, 1994; Carver & Scheier, 1981; Duval &

Wicklund, 1972; Higgins, 1987) and defence (A. Freud, 1936; S. Freud, 1922/1961).

Then, I explore the disparities in conceptualisations of defence mechanisms and coping

(Baumeister, 1996; Lazarus & Folkman, 1984; Taylor, 1983) and discuss why these

constructs may be important for self-competence theories. I conclude that self-

competence is an important mechanism of self-regulation that interacts with defence

mechanisms to affect performance outcomes.

Theories of the self

Theories of self-competence (e.g., Bandura, 1977; Tafarodi & Swann, 1995;

Williams & Lillibridge, 1992) are preceded by a rich body of knowledge about the self.

The self was a bona fide topic of intellectual discussion in diverse religious and

theological contexts for many centuries before influential figures such as James

(1890/1948), Cooley (1902) and Mead (1934) focused on its usefulness as an

explanatory psychological construct. A number of different definitions of the self have appeared in the psychological literature. For example, the self can mean a person's personality, the homunculus inside a person's head that subjectively organises thoughts and feelings, a person's knowledge about him- or her- self or the source of agency and volition (Leary & Tangney, 2003). The confusion about the definition of the self is mirrored by the theoretical disparity that exists among classic and contemporary self theorists. The classic self theorists were concerned with understanding the facets of the self, how knowledge about the self is acquired, the social self and how the self protects itself from threat. In contrast, contemporary self theorists have focused on the component processes of the self and the effects of these processes on behaviour. First, I will discuss some general issues regarding the self from the point of view of classic theories. Then, I will discuss some recent advances in specific self-related processes from the viewpoint of contemporary self theories.

<div align="center">*Classic Theories of the Self*</div>

James's (1890/1948) Model

James (1890/1948) was the first psychologist to theorise about the multifaceted self and self-evaluative processes. James (1890/1948) argued that the ubiquitous nature of the self meant that it was more than purely physical. He proposed the knower or *I* self and the known or *me* self were two closely related yet distinct facets of the self that united a person's perceptions, thoughts, beliefs and sensations into a fluid entity. The I self was the core of the self that subjectively experienced and organised and interpreted thoughts, perceptions and feelings to form a continuous memory of past perceptions and

emotions. James argued that the I self perceives the me self. Thus, the I self is the psychological process that James thought was responsible for self-awareness and self-knowledge.

Embedded in James's (1890/1948) theory of the self is the idea that the self is always connected to environmental context. James proposed that the me self connected the self to the environment through its three hierarchically organised components: the *material*, *social* and *spiritual* self. He introduced the idea of personal identity as a composite of social and inner psychological identities that cause individuals to behave differently in different social contexts, formulate attitudes and beliefs and evaluate their perceived abilities. Thus, the social self can be connected to the concept of social competence through James's (1890/1948) idea that knowledge about the social self and beliefs about social abilities are acquired from self-evaluations of behaviour in different social contexts.

James's (1890/1948) proposition that the individual is consciously aware of some activity of him- or her-self that is superimposed on other awareness is central to his understanding of self-evaluative processes. James (1890/1948) considered that self-competence was a critical element in self-esteem. He proposed that self-esteem resulted from how people weighted their competencies. Thus, if people judge themselves as competent in domains in which they aspire to succeed, then they are likely to have high self-esteem. More generally, James (1890/1948) thought that self-esteem is determined by the ratio of a person's successes to the relevant goals (*pretensions*) that are assembled in the spiritual facet of the me self. Furthermore, he considered that a person's perceptions of his or her success, wealth or attractiveness are more important to the self-

evaluation of personal worth than the outcomes measured from goal striving. Consequently, James believed the kind of self-related affect that people experience depends on the importance that they ascribe to mastery efforts.

Correlational studies support James's (1890/1948) assumption of a relationship between self-competence perceptions and self-esteem (Brockner, 1988; Pierce, Gardner, Cummings & Dunham, 1989; Tafarodi & Milne, 2002; Tafarodi & Swann, 2001; Tesser, 1988). However, the causal direction of this relationship is yet to be clarified.

Cooley's (1902) 'Looking Glass' Self and Mead's (1934) Social Self

Symbolic interactionists such as Cooley (1902) and Mead (1934) popularised the notion that the self is essentially a social phenomenon that is shaped by social experiences. In highlighting the role of affective processes in self-concept development, Cooley (1902) introduced the notion that self-feeling and self-judgements depend on how the self perceives that it is regarded. Cooley (1902) proposed that assumptions about others' judgements of the self, or reflected self-appraisals, shape self-understanding. This concept of reflected self-appraisals is exemplified in Cooley's (1902) analogy of the "looking glass" self, in which other people are regarded as social "mirrors" for the self. Cooley's (1902) concept of reflected self-appraisals should underpin any theory of self-competence that is based on the assumption that others' judgements about the self are incorporated into the self-concept.

Mead (1934) proposed that the self's propensity to adopt the perspective of others included adopting the attitudes of a general social reference group, which he referred to as the *generalised other*. Mead (1934) argued that the ability to adopt the perspective of

the generalised other depends on a person's ability to engage in symbolic communication through language and gestures.

Mead's (1934) concept of the generalised other introduced the idea that societal values and cultural norms are incorporated into the self-concept. The generalised other is represented in organisational psychology by organisational ethics and culture. The ideas of Cooley (1902) and Mead (1934) highlight the point that an organisational model of self-competence needs to account for the effects of reflected self-appraisals and the influence of organisational ethics and culture on task and social competence beliefs.

Sigmund Freud's (1922/1961) Structural Theory of the Self

The fundamental assumption of Freud's (1922/1961) structural theory of the self is that the mind is dogged by conflict between conscious and unconscious forces. Freud (1922/1961) thought that the mind could be divided into three regions: the *id*, *ego* and *superego*.

The id referred to instincts, which are principally sexual and aggressive urges. Freud (1922/1961) argued that the id operates solely in the unconscious, where it competes against external influences for expression. Freud (1922/1961) believed that the id split off during development to form the ego, or self, and the superego, which he defined as moral conscience. He believed that the superego was responsible for directing the internalisation of inhibiting moral forces that originated from interaction with the environment.

Applying these three regions of the mind to human behaviour, Freud (1922/1961) proposed that thoughts, feelings and impulses could be grouped according to the role

that they played in the conflict between the id, ego, and superego. The ego was credited with the role of orienting the person to the external environment and consciously or unconsciously mediating between it and inner mental life. A major function of the ego was to protect the mind from internal dangers, which are precipitated by the threat of conflicting impulses from the unconscious entering into consciousness. Freud (1922/1961) considered that the chief function of the ego was to respond to these opposing forces and restore equilibrium to the mind.

Freud (1922/1961) proposed that anxiety functioned to warn the ego that unconscious desires were about to enter, or had entered into, conscious experience. When a threat was perceived, the role of the ego was to then balance the two opposing forces of the id and superego. Freud (1922/1961) argued that this was achieved through the process of *repression*, which refers to the active efforts of the ego to protect the individual from pain or unpleasantness by keeping certain thoughts out of awareness. Therefore, in the ego, the self fulfils an essential self-protective function that is connected to the processes of affect and thought regulation.

Freud's (1922/1961) ideas introduce the possibility that self-protective mechanisms are activated when task and social competence perceptions are threatened. For example, the perception of organisational threat in response to changing technologies could trigger defensive efforts to preserve past judgements of personal abilities. Repression is one of several defences that could explain this type of cognitive response. Repression has been linked to the protection of self-esteem (Baumeister & Cairns, 1992; Baumeister, Dale & Sommer, 1998; Boden & Baumeister, 1997; Medolia, Moore & Tesser, 1999; Weinberger, Schwartz & Davidson, 1979). However, as Baumeister et al.

(1998) have pointed out, in Freudian theory, repression involves the blanking out of threatening material from the conscious mind and defence mechanisms are activated only when repression fails. Hence, defence mechanisms would be obsolete if repression could succeed. If defence mechanisms do in fact operate to protect a threatened sense of personal competence, then it is necessary to look beyond Freud's (1922/1961) concept of repression.

Baumeister et al. (1998) found strong support for three Freudian defences in the social psychological literature: *denial, isolation* and *reaction formation*. Denial is defined as the tendency to refuse to accept the implications of a threatening situation. Isolation is defined as minimising the importance of the threat, whereas reaction formation refers to displaying the opposite trait in a threatening situation. The intrinsically self-protective function of these defence mechanisms is important because the changeability, and social environments of organisations could frequently threaten task and social competence beliefs. To illustrate how social environments may threaten task competence beliefs, consider the hypothetical case of Ms Watson. Ms Watson has difficulty finding some information for a case that she is working on and has been floundering in front of her computer for a long time. She immediately rejects an offer of assistance when a colleague offers to help. The defence mechanism of denial could have protected Ms Watson's task competence beliefs by preventing a perception of failure made salient by the colleague's offer to help. Hence, defence mechanisms may be important for understanding how self-competence beliefs are protected in situations of unexpected failure. The interaction of defence mechanisms and self-competence in work performance has not previously been considered.

Contemporary Theories of the Self

The contemporary literature on the self consists of a large number of mini-theories which, as Baumeister (1998) has suggested, leads one to conclude that the self is a composite of loosely related sub-topics rather than a single unified construct. Various self-related phenomena are reflected in these mini-theories such as self-awareness, self-esteem, self-control, self-efficacy, self-monitoring, self-discrepancy, self-evaluation, and self-regulation. However, the interrelationships between these constructs are unclear. In this section, I will discuss some of these mini-theories in order to highlight how several self-related cognitive processes may influence work performance.

Markus and Nurius's (1986) Model of Possible Selves

In their model of possible selves, Markus and Nurius (1986) explained how knowledge about the ideal self that is stored in *self-schemata* regulates social behaviour (Cross & Markus, 1994; Markus, 1977, 1980; Markus & Nurius, 1986). Self-schemata are defined as "cognitive generalisations about the self, derived from past experiences, that organise and guide the processing of self-related information contained in the person's social experience" (Markus, 1980, p. 64). Thus, self-schemata are domain-specific knowledge structures that enable people to explain their social behaviour.

Possible selves are defined as the cognitive outcomes of self-evaluations of thoughts and feelings that are associated with past social behaviour (Markus & Nurius, 1986). They refer to the different ways that people think about their future and are postulated to include actual and ideal selves as well as desired and unwanted selves (Markus, 1980).

Markus (1980) proposed that possible selves develop as a result of the cognitive evaluation of goals, aspirations, motives, fears and threats. The cognitive simulation of

possible selves translates different self-images into goal-directed behaviour by motivating people's effort through self-regulatory processes (Markus & Nurius, 1986). Self-schemata are thought to motivate the individual by providing the exact goals and incentives to guide the pursuit of possible selves (Markus & Ruvulo, 1989). People explain their social behaviour through cognitive comparisons of past selves and expectations (incentives) for future possible selves (Markus & Nurius, 1986; Markus & Ruvolo, 1989). Thus, the self-schemata that are constructed from an individual's past experiences are believed to provide a framework for interpreting past social behaviour and shaping future social behaviour (Markus & Nurius, 1986).

The concept of social competence fits nicely with Markus's and Nurius's (1986) model of possible selves because beliefs about social abilities are outcomes of cognitive evaluations of past performance that have been shown to inform people about how effective they can expect to be in social situations at work (Bandura, 1982; Bandura & Wood, 1989; Bandura & Jourden, 1991; Betz & Hackett, 1986; Jones, 1986). In the model of possible selves (Markus & Nurius, 1986), the outcomes of the cognitive evaluations of past performances act as a benchmark that guides present and future social interactions. Hence, social performances are affected by comparative self-evaluations of social abilities (Festinger, 1954; Furnham & Capon, 1982; Stone & Stone, 1984; Snyder, 1974). Arguably, appraisals of social performances can lead to cognitive appraisals of whether the social performances were performed competently. Thus, Markus's and Nurius's (1986) theory of possible selves hints at the possibility that self-evaluations of one's social competence may influence the development of possible social selves through the effects of social competence beliefs on social and task

behaviour. For example, let us say that Ms Watson was criticised in her performance review for not expressing her ideas clearly and for speaking too quietly during case presentations. Ms Watson has clear ideas about how she would like to perform during case presentations, but negative self-evaluations of her past social performances have decreased her confidence in her communication abilities. As a result of these negative self-evaluations of her past social performances, Ms Watson has developed low social competence for communicating effectively to her colleagues during case presentations.

Snyder's (1974, 1987) Self-Monitoring Theory

Snyder's (1974, 1987) self-monitoring theory is a theory of self-presentation that highlights some of the underlying cognitive processes that may be important for understanding how social competence beliefs may develop. In self-monitoring theory, Snyder (1974) differentiates between two personality types in order to highlight that people possess different degrees of responsiveness to social and interpersonal cues of situationally appropriate behaviour. The two personality types are high and low self-monitors.

According to self-monitoring theory (Snyder, 1987), high self-monitors control their expressive behaviours, self-presentation and nonverbal displays of affect by creating and displaying a public image of themselves that may not necessarily be congruent with their private or 'true' selves. They are confident in their ability to project different social images of themselves in order to purposefully impress others and gain social acceptance (Gangestad & Snyder, 2000; Krosnick & Sedikides, 1990; Turnley & Boline, 2001).

Snyder (1987) proposed that the expressive behaviour of low self-monitors is more consistent with their inner attitudes, beliefs, emotions and dispositions. Low self-

monitors are assumed to be less responsive to situational social cues because they are less motivated to control their expressive behaviours compared to high self-monitors. Rather, low self-monitors value genuineness and sincerity in their interpersonal contact (Gangestad & Snyder, 2000). Because the behaviour of low self-monitors is based more on their stable personality traits than on transient situational cues, the social performances of low self-monitors are considered to be more predictable than high self-monitors (Snyder, 1979; 1987).

Low self-monitors are conceptualised by Snyder (1987) as being relatively unwilling and less capable of engaging in the type of impression management practiced by high self-monitors. Low self-monitors are people who prefer to adopt a principled approach to self-presentation that functions to maintain congruity between their private beliefs and public appearances (Gangestad & Snyder, 1986; Snyder & Gangestad, 1982). It is possible that their social competence beliefs are connected to judgements of whether they have maintained that congruity.

In contrast to low self-monitors, Snyder (1987) argued that high self-monitors are motivated to influence the impressions of others because of their desire for social approval or their desire to control the outcome of the interaction. One implication of this theorising is that social competence beliefs may be self-regulatory factors that influence work performance through their effects on self-monitoring processes. For example, if Ms Watson was a high self-monitor with high social competence then she would be expected to behave in a way that gains the social acceptance of her colleagues. However, if she was a high self-monitor with low social competence, she would be expected to have decreased control over her behaviour in social situations. The potential

relationship between social competence beliefs and self-monitoring implies that there is a need for a social competence construct in any theory of self-competence.

A common feature of theories on the self is that they emphasise that the self plays a major role in determining behaviour (e.g., James, 1890/1948, Freud, 1922/1961, Snyder, 1987). Therefore any theory of self-competence needs to establish how self-competence influences behaviour. The most potent effects of self-competence are likely to be achieved through its affect on the self-regulation of behaviour. In the next section, I will discuss self-regulation theories with the aim of showing how self-regulation may be involved in the relationship between self-competence and work performance.

Theories of Self-Regulation

The Negative Feedback System

A common feature of theories on the self is that they emphasise that the self plays a major role in determining behaviour (e.g., James, 1890/1948, Freud, 1922/1961, Snyder, 1987). Therefore any theory of self-competence needs to establish how self-competence influences behaviour. The most potent effects of self-competence are likely to be achieved through its affect on the self-regulation of behaviour. In this section, I will discuss self-regulation theories with the aim of showing how self-regulation may be involved in the relationship between self-competence and work performance.

Self-regulation theories are concerned with the attentional, cognitive and/or executive control processes that give rise to behaviour (e.g., Bandura, 1977, 1986; Carver & Scheier, 1981; Duval & Wicklund, 1972; Higgins, 1987; Markus & Nurius, 1986; Snyder, 1987). The majority of self-regulation theories, including self-competence

theories, use negative feedback loops as their primary organising principle, although positive feedback loops are also postulated to exist (e.g. Bandura, 1977, 1986, 1997; Carver & Scheier, 1998; Williams & Lillibridge, 1992). A negative feedback loop (see Figure 1.1) refers to "any information about the functioning of one or more components of a system that leads to modification of functioning" (Reber, 1995, p. 283). The purpose of a negative feedback system is to reduce discrepancies between the perceived effects of behaviour and goals or standards. In contrast to negative feedback loops, positive feedback loops increase discrepancies between behaviour and standards. Feedback loops are considered to be *closed* systems when behaviour impacts on the future perceptions of the system. Alternatively, open feedback loops are defined as systems of behaviour that occur without any comparison to goals or standards. Hence, in open feedback loops, behaviour moves away from goals or standards.

As shown in Figure 1.1, self-regulatory feedback loops are usually thought to comprise four components: input, reference value, comparator and output function (Carver & Scheier, 1998). The input component functions as a sensor and brings information into the loop. It can be equated to any information about the self that is perceived and enters the system. The reference component refers to standards of behaviour or goals against which the input information is compared. The comparator is the component in the system that allows for a comparison between the input and the reference value. Lastly, the output function follows the comparison function and represents behaviour (Carver & Scheier, 1998).

Figure 1.1. Behaviour and perception as elements of a negative feedback loop
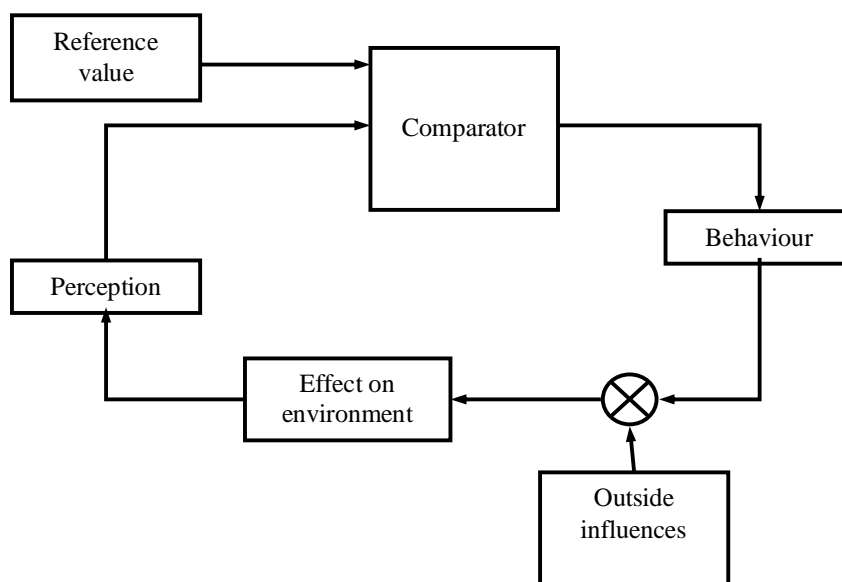
Most self-regulation theories incorporate negative feedback loops. However, they differ in how the components of negative feedback are configured and which aspects of the components are emphasised. When considering how self-competence may fit into the negative feedback model, any self-competence theory needs to consider the function of self-competence beliefs as standards or reference components. Furthermore, self-competence theories need to explain the discrepancies between goals and self-competence standards that may develop in the negative feedback system.

Consistent with the negative feedback model (Carver & Scheier, 1998), Williams and Lillibridge (1992) proposed that self-competence operates as a reference component in the negative feedback system. Hence, when a behavioural discrepancy is perceived, people compare the behaviour to the standard of competence that they believe they are capable of producing. If the standard of competence is higher than the actual behavioural attainments, then a discrepancy between goal and standard is produced.

Perceiving this discrepancy motivates people with high self-competence to strive harder to reach the standard (Bandura & Wood, 1989b). When people reach the standard, they may evaluate their self-competence and set new goals to pursue. Thus, self-competence beliefs may operate within a broader negative feedback system that controls work performance. In this section, I will discuss the theories of self-regulation that highlight how self-competence may operate as a system of self-regulation.

Duval and Wicklund's (1972) Objective Self-Awareness Theory

In objective self-awareness theory, Duval and Wicklund (1972) deal with the idea that different states of self-awareness affect behavioural regulation. Objective self-awareness theory is concerned with situational differences in self-awareness that lead to the self being experienced as an object of itself. Thus, the term *objective self-awareness* refers to attention focused on the self. According to Duval and Wicklund (1972), focusing attention on the self determines the salience of relevant goals or standards. The higher the self-focus is the greater is the extent to which the self is compared to these goals or standards. Thus, the theory is important to a theory of self-competence because self-awareness processes may mediate the effects of self-competence beliefs on work performance.

Duval and Wicklund (1972) argued that the saliency of goals, stimuli and prior experiences lead to self-awareness, which, in turn, determines discrepancy detection. The detection of discrepancies creates negative affect which either provides the motivation to reduce the discrepancy or changes the level of self-focus by physically avoiding the self-focusing situation. Self-competence beliefs provide important

information about a person's capacity to produce desired behaviour. Therefore, self-competence may moderate the process by which negative affect is reduced following self-standard discrepancies.

Carver and Scheier's (1981, 1982, 1998) Control Theory

Control theory (Carver & Scheier, 1981, 1982, 1998) extends Duval and Wicklund's (1972) theory by explaining the component processes in negative feedback loop systems. In control theory, goals are one of the most important components in negative feedback systems. Goals may also be important to a theory of self-competence because people's sense of competence can determine whether or not they will engage in goal pursuit.

In control theory, goals are hierarchically organised according to their level of abstraction, although they operate simultaneously. From the perspective of self-competence, the link between abstract goals (e.g., "I will be successful") and work performance is important because it links high-level goals, self-competence and work performance (e.g., "Being successful means being good at my job"). Goals at a higher level of abstraction are related to an idealised sense of self. High-level goals are referred to in control theory as principle goals. Due to the high level of abstraction of principle goals, reaching high-level goals means performing acts that are related to low-level goals (Carver & Scheier, 1998). Goals at a lower level of abstraction are more concrete and involve a particular kind of action, which is consistent with the notion of an actual self. Program goals (e.g., "I will read case documents") and sequence goals (e.g., "I will

prepare a case presentation") are low-level goals that instil a sense of competence if they are carried out successfully.

In an organisational setting, an idealised sense of self could be represented by the principles of leadership. The schema for leadership would be expected to provide guiding principles to lower goals contained in the schemas for "be organised", "be responsible" or "be innovative" or program goals that specify a general course of action that is congruent with the high level goal, such as "make notes for case presentation". The act of "making notes" may reciprocally influence high-level goals by providing a cognitive opportunity to appraise progress towards high-level goals. An evaluation of satisfactory performance strengthens competency beliefs whereas unsatisfactory performance may lead to cognitive evaluation of whether adequate abilities are available to improve future performances.

One of the most important issues addressed in control theory is how discrepancies between goals and performances are detected. People with high self-competence are more likely than people with low self-competence to closely monitor their progress toward goals (Bandura & Wood, 1989; Wood & Bandura, 1989a). Therefore, people who possess high self-competence beliefs are more likely to detect discrepancies between actual behaviour and ideal standards and regulate their behaviour accordingly. In contrast, people with low self-competence are less likely to monitor actual behaviour, and hence discrepancies between their actual behaviour and ideal standards may go undetected.

Failure to detect discrepancies between actual behaviour and ideal standards increases the probability that actual behaviour will have a negative effect on

organisational outcomes. For example, Ms Watson may have a higher level goal to "be impressive". Mindful of this goal, she accepts a difficult case. Ms Watson spends many hours preparing the case. When she reports her progress to her colleagues, they inform her that she has overlooked some important aspects of the case. According to control theory, Ms Watson will be focused on her goal of "be impressive" and her other high-level goals (e.g. "be successful") will not become salient until she detects that her actual behaviour is not at the standard that the organisation expects. Notification from her colleagues that she has overlooked some important aspects of the case draws her attention to the omissions in her case preparation. Thus, her other high-level goals of "be successful" will become salient. Detecting the discrepancy between inadequate case preparation and her "be successful" goal may activate cognitive comparisons between existing self-competence beliefs and the achievability of the task. In this scenario, Ms Watson's future case preparation will depend on whether she perceives that she has the ability to be more comprehensive in her preparation of the case. If she perceives that she does not have the ability to more thoroughly prepare the case, then she is likely to expect that she will not be able to prepare the case satisfactorily. In turn, these negative outcome expectancies may cause her to lose motivation in addition to negatively affecting the completeness of the case that she will later present. Any theory of self-competence needs to consider how detecting discrepancies between actual behaviour and ideal competent behaviour can affect the self-regulation of future behaviour.

Self-competence beliefs, which are formed following appraisals of past performance, provide valuable information about future performance (Bandura, 1997; Williams & Lillibridge, 1992). The decision to perform a particular behaviour that is

associated with attaining goals may be made on the basis of cognitive evaluations of whether it is possible to successfully perform that behaviour. Thus, self-competence beliefs may also act as guides that assist individuals to determine the likelihood of reaching their goals (Bandura, 1997; Williams & Lillibridge, 1992). If self-competence and goals are incongruent, as may occur when an individual has low self-competence for attaining a goal, then the person may decide not to pursue that particular goal. Thus, self-competence beliefs may determine whether people will attempt to reduce discrepancies between reference values and actual behaviour. That is, self-competence beliefs may determine whether people stay engaged or disengage from a task (Carver & Scheier, 1998).

Higgin's (1987) Self-Discrepancy Theory

In self-discrepancy theory, Higgins (1987) adapts Carver and Scheier's (1981) negative feedback model to explain the motivational effects of discrepancies between the *actual*, *ideal* and *ought* self in self-regulation. The actual self is the kind of person that an individual believes he or she actually is. The ideal self is the kind of person that an individual wishes he or she could be, and the ought self is the kind of person that an individual believes they should be. Thus, in an organisational setting, three dimensions of self-competence beliefs are possible: ideal, actual and ought self-competence. Ideal self-competence refers to how competent people would ideally like to be, whereas actual self-competence is the sense of one's existing abilities. Ideal and actual self-competence may act in concert with role obligations to create ought self-competence.

Each domain of self-representation in self-discrepancy theory can be considered from an individual's own perspective on the self or the inferred perspective of significant others (Higgins, 1987). The own perspective on the self refers to the values, goals and standards that people believe that they actually, ideally or should possess. In contrast, others' standpoints refer to the values, goals and standards that people believe that another person thinks that they actually, ideally or should have. Higgins (1987) maintained that an individual's own perspective on the actual self is synonymous with the self-concept. In contrast, ideal and ought selves from both own and other's perspectives function as *self-guides* or standards for the regulation and evaluation of the actual self.

A key proposition of self-discrepancy theory is that negative affect is a consequence of detecting discrepancies in the negative feedback system (Higgins, 1987). Interestingly, Higgins makes specific predictions about the type of emotions that are related to specific types of self-discrepancies. An actual-ideal self-discrepancy represents the absence or loss of positive outcomes and is thought to induce feelings of sadness and disappointment. In contrast, an actual-ought self-discrepancy represents the inducement of obligation and elicits the anticipation of punishment or feelings of fear and agitation. It is possible that if self-competence beliefs function as reference standards in the system, then they may mediate between affect and goals when discrepancies between actual and ideal selves are detected (Cervone, Kopp, Schaumann & Scott, 1994). To understand how this mediation process might work, consider again the example of Ms Watson, who feels worried after her colleagues have informed her that she has overlooked some important aspects of the case she was working on.

Because she thought that she had the ability to prepare the difficult case, her perceived self-competence for completing the task successfully now is lower than when she began the task. Corresponding to self-discrepancy theory, Ms Watson is likely to fear that she will be removed from the case because the discrepancy between her actual and ought self will result in the anticipation of punishment. However, as her self-competence beliefs are high for similar tasks, she should be motivated to persist with the task by examining the aspects of the case that her colleagues suggested that she had overlooked. Self-competence fits nicely with the idea that actual-ideal and actual-ought self-discrepancies motivate people to regulate their behaviour in order to return their self-regulatory system to homeostasis.

Baumeister, Heatherton and Tice's (1994) Self-Regulation Strength Theory

The focus of self-regulation strength theory (Baumeister, Heatherton & Tice, 1994) is the behavioural consequences of failure to self-regulate behaviour. The notion of self-regulation failure introduces the possibility that loss of control over behaviour can have a negative affect on self-competence beliefs. Baumeister et al. (1994) suggested that self-regulatory control is lost when people fail to monitor their behaviour in relation to goals or standards, a process they refer to as *devindividuation*. According to the theory, deindividuation causes behaviour to move away from desired goals. As the behaviour moves further away from the desired goal, there is a revival of the negative feedback system using the existing standard, which causes the person to discover that the discrepancy has become large. The discovery of a large discrepancy between behaviour and goals causes emotional tension to intensify that motivates a strong attempt to return to normal, with demands on energy resources. Thus, self-regulation failure is

attributable to a failure to monitor the progress of performance relative to goals or standards.

In self-regulation strength theory, there are four causes of deindividuation: *misregulation, underregulation, false sense of efficacy and misguided attention.* Misregulation refers to using inappropriate strategies to control behaviour that occurs as a result of misperception about the self or the environment due to faulty perceptual or other cognitive processes. Underregulation is defined as failure to persist in attempts to control behaviour. A false sense of efficacy refers to an inaccurate perception of personal coping ability. Finally, misguided attention refers to focusing on the wrong aspects of behaviour. Of these four causes, it is a false sense of efficacy that provides a conceptual link between self-competence and self-regulation failure by connecting perceptions of abilities to loss of control over behaviour.

Regaining self-regulatory control depends on a person's *self-regulatory strength*. Self-regulatory strength is the capacity to bring about changes in behaviour using mental and physical resources (Baumeister et al., 1994). When self-regulatory strength is depleted, the extent of self-regulatory loss is thought to depend on the degree of emotional arousal that is caused by awareness of the initial lapse. Theoretically, the degree of negative affect will need to be stronger if it is to affect people with high self-competence because they have been found to be good problem solvers (e.g., Bandura & Wood, 1989; Wood & Bandura, 1989a; Wood, Bandura & Bailey, 1990). Therefore, people with high self-competence are less likely to be consumed by the emotionally distressing properties of a situation.

Baumeister et al. (1994) considered that people may evaluate the situation and consciously decide to allow the lapse in self-regulation. This conscious decision is based on the perception that self-regulatory strength is depleted. Theoretically, a weak sense of self-competence potentially influences the decision not to exert self-regulatory control through expectations of failure.

A key proposition of self-competence theories is that cognitive appraisals of past performances inform self-competence beliefs (Bandura, 1997; Williams & Lillibridge, 1992). Thus, when people fail repeatedly on a task, it follows that they will develop negative outcome expectancies that influence decision making for future task performances. If people with low self-competence expect that they will fail on a task, then they are less likely to produce the self-regulatory strength that is needed to challenge these beliefs during task performance. Alternatively, high self-competence beliefs have the potential to shore up self-regulatory strength by instilling confidence that ability, persistence and effort will produce the desired results. However, those same beliefs may also lead to loss of self-regulatory control if they are based on inaccurate perceptions of task achievability or a false sense of efficacy in which case the same outcomes as for people with low self-competence would be expected.

Based on the above reasoning, self-competence beliefs may be related to self-regulation failure through their effects on self-regulatory strength. Hence, the concepts of deindividuation and self-regulatory strength are important for self-competence theories because they highlight the point that a negative affective response to a task can reduce task focus by depleting mental and physical resources, and in turn, lead to task failure. The reinforcing effects of repeated task failure explain why some people doubt

their task abilities and why people with high self-competence come to lose faith in their future ability to succeed.

Theories of Self-Defence

A main assumption of self-regulation strength theory (Baumeister et al., 1994) is that self-regulation failure is the result of the emotionally distressing properties of a salient stimulus. In contrast, S. Freud's (1922/1961) concept of *defence mechanisms* explains how the self may be protected from negative emotional arousal so that control over mental and physical functioning is not depleted or lost. Freud defined defence mechanisms as unconscious internal drives or impulses that protect the ego from experiencing negative emotional arousal when it perceives threat. It is possible that defence mechanisms are responsible for the false sense of self-efficacy that Baumeister et al. (1994) proposed. Defence mechanisms could also be linked to self-competence perceptions by functioning to protect self-competence beliefs when they are threatened by task failure. For example, Ms Watson could refuse to accept that she had overlooked some important aspects of the case because defence mechanisms acted to protect her existing beliefs that she has the ability to successfully complete her work on the case.

Defence mechanisms have generated some controversy in the literature on the self because they are difficult to measure in a valid and reliable manner (Cramer, 1998). However, the recent introduction of priming techniques in experimental research (e.g., Bargh & Barndollar, 1996; Murhaven, Baumeister & Tice, 1998) has enabled researchers to incorporate the concept of defence mechanisms into their research programs and theories. Priming refers to activating particular representations or

associations in memory just before carrying out an action or task. It is frequently used by social psychologists to tap the effects of learning that facilitates memory outside of conscious awareness and links it to motivational factors (e.g., Bargh & Barndollar, 1996; Baumeister & Cairns, 1992; Baumeister, Dale & Sommer, 1998). The technique of priming has produced evidence of the activity of unconscious mental processes by showing that some people selectively process threatening information (e.g., Bargh, 1990; Baumeister & Cairns 1992; Boden & Baumeister, 1997; Jacoby & Kelley, 1990; Newman, Duff & Baumeister, 1997). Hence these findings add weight to Freud's (1922/1961) idea that defence mechanisms prevent threatening information from being processed. The selective processing of threatening information suggests that unconscious influences in self-regulation may protect existing self-competence beliefs. Hence, unconscious influences like defence mechanisms should play an important role in theories of self-competence. In the following subsections, the work of S. Freud (1922/1961) and A. Freud (1936) is discussed in order to highlight how defence mechanisms may protect existing self-competence beliefs from situational threat.

S. Freud

S. Freud (1922/1961) proposed that defence mechanisms are activated when efforts to unconsciously avoid unpleasant thoughts fail. Therefore, a consequence of defence mechanisms is the transformation of unpleasant thoughts about the self into more acceptable thoughts about the self. S. Freud (1922/1961) theorised that defence mechanisms are cognitive processes that are part of both pathological and non-pathological human behaviour. This idea is important because it means that defence

mechanisms can influence self-competence perceptions in normal individuals. Hence, Ms Watson does not need to be suffering from any mental disorder in order for defence mechanisms to affect her perceptions of self-competence.

According to S. Freud (1922/1961), defence mechanisms are activated when the ego attempts to prevent certain instinctual impulses from being expressed. The unconscious impulse generated by the id is thought to be associated with a dangerous situation and triggers an anxiety signal that functions to activate defence mechanisms if repression fails. The aim of the defence mechanism is to stop conscious displeasure, which is achieved by keeping the anxiety signal and impulse from reaching consciousness (Cramer, 1998). The idea that defence mechanisms interrupt emotional responding and prevent negative emotions from being experienced by altering interpretations of threatening situations is important for two reasons. First, it highlights the possibility that defence mechanisms may override discrepancy detecting components in the self-regulatory system in order to protect reference standards, including self-competence beliefs (Bandura, Reese & Adams, 1982; Baumeister & Cairns, 1992; Baumeister et al., 1994; Brockner, 1979; Brockner, Derr, & Laing, 1987; Pierce, Gardner, Cummings & Dunham, 1989; Sandelands, Brockner & Glynn, 1988; Wegner, Sneider, Cater & White, 1987). Second, it relates internal theories of causation to attributions and coping, which are mechanisms related to self-competence (Bandura, 1997; Brief, Burke, George, Robinson & Webster, 1988; Latack, 1986; Lazarus & Folkman, 1984; Taylor, 1983, 1989; Taylor & Armor, 1996; Taylor & Brown, 1988; Taylor, Kemeny, Aspinwall, Schneider, Rodriguez, & Herbert, 1992; Terry, 1991, 1994; Weiner, 1986; Williams & Lillibridge, 1992). For example, rather than attribute her less than expected performance

to lack of personal abilities, Ms Watson may rationalise that excessive office noise, which is an external and hence unthreatening attribution, caused her to overlook some important aspects of the case.

A. Freud

A. Freud (1936) suggested that three distinct sources of defence mechanisms exist: the environment, the superego and the strength of instinctual pressures (Cooper, 1998; Ehlers, 1993). Whereas S. Freud (1922/1961) considered that the role of defence mechanisms was to prevent conscious displeasure arising from instinctual impulses, A. Freud (1936) argued that the function of defence mechanisms was to defend the ego and personality from the unpleasant affect of anxiety that was elicited by both threatening internal and external demands. Therefore, A. Freud (1936) proposed that the purpose of defence mechanisms was to protect the individual from experiencing excessive anxiety as a result of consciously and unconsciously perceiving a disturbing event, regardless of its source (Cramer, 1998).

A. Freud's (1936) theorising on defensive behaviour is significant because it links cognition and defence to one another and extends the conceptualisation of defence mechanisms as a form of maladaptive coping in response to id-based stress to adaptive functioning in order to protect self-esteem (Kline, 1993). Specifically, A. Freud (1936) highlighted the positive consequences of defence mechanisms for self-esteem by suggesting that in addition to reducing anxiety, defence mechanisms also assist people to cope with the demands and challenges that arise from the external environment. Therefore, defence mechanisms are conscious and adaptive in the sense that they allow

people to continue to function in anxiety-arousing situations (Cramer, 1987). Moreover, it is possible that defence mechanisms play an important role in ameliorating responses to threats to self-competence.

Defence and Coping in Self-Regulation

So far, I have looked at theories of self-regulation and defence. In this section, I will discuss some of the criticisms of defence mechanisms and highlight theories of coping that have emerged in the literature as a result of these criticisms, including Lazarus & Folkman's (1984) stress coping model, positive illusions theory (Taylor, (1983) and repressive coping styles (e.g., Baumeister, 1996).

The issue of whether defence mechanisms protect self-competence is unclear for several reasons. First, it has been difficult to operationalise the construct of defence mechanisms in social psychological research (Baumeister, Dale & Sommer, 1998). Part of the difficulty relates to the lack of consensus regarding the ontological status of defence mechanisms. On the one hand, defence mechanisms are treated as a theoretical concept, which enables assumptions to be made in relation to the workings of the mind but presupposes that defence mechanisms are an inferred mode of mental functioning that does not exist in any real sense (Sjoback, 2004). On the other hand, it has been argued that if anxiety triggers defence mechanisms and these mechanisms subsequently affect observable behaviour then defence mechanisms must exist in more substantial form (Kline, 1993). Thus, the nature of defence mechanisms is not clearly understood.

Second, defence mechanisms are poorly defined in the personality literature (Cramer, 1998; Parker & Endler, 1996). Consequently, it is difficult to find conclusive support for the proposition that defence mechanisms protect self-competence beliefs.

Third, evidence from the occupational stress literature (e.g., Latack, 1986; Parkes, 1990) showed that people manage threat in different ways. In some cases, people appear to cope with threat by intentionally managing or solving a problem through conscious, planned cognitive and behavioural efforts (e.g., Bandura & Cervone, 1986; Bandura & Jourden, 1991; Bandura, Reese & Adams, 1982; Bandura, Taylor, Williams, Mefford, & Barchas, 1985; Bandura & Wood, 1989a; Gist & Mitchell, 1992; Latack, 1986; Parkes, 1990; Williams & Lillibridge, 1992). In other cases, the perception of performance failure causes people to become emotionally focussed which leads them to lose control over their behaviour (Baumeister et al., 1994; Folkman, 1984). Finally, there are cases in which people seem to unconsciously or consciously override the threatening implications of stressful situations by ignoring them or making overly positive compensatory judgements that effectively wipe out any perceptions of threat (e.g., Baumeister & Cairns, 1992; Boden & Baumeister, 1997; Newman, Duff & Baumeister, 1997; Taylor, 1983; Taylor & Brown, 1988; Weinberger, Schwartz & Davidson, 1979). Defence mechanisms and the construct of coping both refer to the conscious and unconscious regulation of perceived stress. Therefore, it will be important for the theoretical differences between defence mechanisms and coping to be clarified because the relationship between self-competence and both coping and defence mechanisms needs to be explained.

In the discussion that follows, I attempt to address some of these theoretical anomalies in more detail. I begin by discussing a problem-solving model of coping (Lazarus & Folkman, 1984). Next, I discuss an accommodation model of coping (Taylor, 1983). Finally, I conclude my discussion on defence theories by briefly examining an escape model of coping (Baumeister & Cairns, 1992; Boden & Baumeister, 1997; Newman, Duff & Baumeister, 1997; Weinberger, Schwartz & Davidson, 1979).

A Problem-Solving Model of Coping

Problem-solving models of coping conceive of coping as an adaptive process that is concerned with coordinating actions and contingencies in the environment and involves adjusting actions to be effective (Skinner, Edge, Altman & Sherwood, 2003; Skinner & Zimmer-Gembeck, 2007). One of the most influential problem-solving models of coping is Lazarus and Folkman's (1984) stress coping model. According to this model, people adopt two different forms of coping strategies that influence their level of adjustment to situational stress or change: *problem- focused coping* and *emotion-focused coping*. Problem-focused coping refers to adaptive coping responses that focus on the situation for the purpose of changing the person-environment relationship. People are expected to use problem-solving strategies to assist them to successfully manage threatening situations. Conversely, emotion-focused coping is thought to be a maladaptive response to situational stress because it involves a strong negative emotional response to an event. People who engage in this form of coping are thought to use cognitive strategies that do

not directly alter a situation, but rather, assign new meaning to it that has a destructive effect on their behaviour.

Problem-focused coping is believed to a more effective coping strategy than emotion-focused coping because it focuses on direct attempts to find a solution to the problem, thus facilitating the retention of self-regulatory control. Research has revealed that people with high self-competence adopt a problem-focused coping approach to situational threat (e.g., Kahn & Long, 1988; Wood & Bandura, 1989a).

In contrast to problem-focused coping, emotion-focused coping is self-diagnostic and characterised by focusing on internal deficits and negative affective states (Parkes, 1990).Therefore, emotion-focused coping is associated with loss of self-regulatory control. Researchers have found that people with low self-competence become emotionally focused when they are given difficult work tasks to complete (e.g. (Lazarus, 1990; Lazarus & Folkman, 1984; Terry, 1991, 1994; Terry & Jimmieson, 2003; Terry, Tonge & Callan, 1995; Wanbag & Banas, 2000; Wood & Bandura, 1989a). Findings such as these suggest that individual differences in self-competence moderate how people cope with workplace stress (Bandura, 1997; Williams & Lillibridge, 1992). People with high self-competence are likely to respond to stressful situations by focussing their attention on finding a solution to the problem. In contrast, people with low self-competence should tend to become consumed with their emotional response to the situation and lose sight of the task. People who adopt a problem focused approach to dealing with stressful events are much more likely to overcome situational difficulties than people whose response to workplace stress is controlled by the negative emotions that they experience in response to the stressful situation.

An Accommodation Model of Coping

Accommodation models of coping conceive of coping as an adaptive process that is concerned with coordinating preferences and available options and involves flexibly adjusting preferences to options (Skinner, Edge, Altman & Sherwood, 2003; Skinner & Zimmer-Gembeck, 2007). Positive illusions theory (Taylor, 1983) is an accommodation model of coping that posits that coping emotionally under stress can be an adaptive form of coping. Taylor (1983) introduced the concept of *positive illusions* to explain the cognitive restructuring that occurs when people make positively biased self-evaluations as a means of protecting themselves from perceiving threatening information. Positive illusions are defined as consciously experienced perceptions, mental images and conceptions that distort reality through misinterpretation and imagination (Taylor & Brown, 1988).

In positive illusions theory (Taylor, 1983), positively biasing perceptions about the self is a form of coping that protects the self through the cognitive regulation of motivational processes, goal selection, persistence and actual performance (Taylor & Brown, 1994). Hence, positive illusions may protect self-competence beliefs by helping people to find a meaningful explanation for the threatening event that does not diminish their existing competence beliefs. Positive illusions are also crucial in assisting people to regain a sense of personal mastery over the situation by allowing them to maintain a sense of competence and optimism for the future. According to Taylor et al., (1992), self-aggrandising positive traits and inflating the degree of perceived personal control over the situation are two ways that people maintain self-regulatory control in the face

of perceived threat. Hence it is possible that positive illusions influence people's sense of self-competence by increasing their perceived ability to manage stressful situations.

Minimising and *attributions* are two cognitive mechanisms that are thought to support positive illusory beliefs (Taylor & Armor, 1996; Taylor & Brown, 1988). Minimising is a cognitive process that involves the tendency to play down the importance of a perceived threatening stimulus so that it no longer has any threatening qualities. Hence, it is conceptually similar to the defence mechanism of isolation. Attributions are cognitive responses that people make to explain the causes of some behaviour or event. The principle function of these cognitive mechanisms is to facilitate cognitive control by restructuring threatening thoughts with thoughts that either downplay or rationalise the threatening aspects of a situation. Thus, minimising and attributions may be cognitive mechanisms that have an important self-protective function to maintain existing self-competence beliefs.

An Escape Model of Coping

Escape models of coping conceive of coping as an adaptive process that is concerned with coordinating actions and contingencies in the environment and involves escape from the noncontingent environment (Skinner, Edge, Altman & Sherwood, 2003; Skinner & Zimmer-Gembeck, 2007). The experimental research on the coping style of *repressors* (e.g., Baumeister & Cairns, 1992; Boden & Baumeister, 1997; Cutler, Larsen & Bunce, 1996; Furnham & Traynar, 1999; Mendolia, Moore & Tesser, 1996; Newman, Duff & Baumeister, 1997; Weinberger, Schwartz & Davidson, 1979) shows that repressors engage in defensive self-regulation by using *self-deceptive strategies* to

achieve cognitive self-control when they are confronted by threatening information (Baumeister, 1996; Baumeister & Cairns, 1992; Weinberger et al., 1979). Repressors are people whose personality traits predispose them to becoming preoccupied with mastering their anxiety and controlling their behaviour in response to threatening situations. Self-deceptive strategies are unconscious cognitive efforts that facilitate the systematic, motivated avoidance of threatening or unpleasant information about the self by enabling a person to perceive and interpret events in a way that promotes a favourable view of the self to be sustained (Baumeister, 1996). It is thought that the impact of threatening information is substantially reduced by *defensive selectivity*, which occurs when people minimise the amount of time that they spend attending to unpleasant thoughts (Baumeister & Cairns, 1992; Weinberger et al., 1979).

Biases in attention, encoding and memory processes are the three mechanisms of defensive self-regulation that are considered to lead to successful avoidance of threatening information in repressors (Baumeister & Cairns, 1992). Consistent with this reasoning, the biasing of attention and memory processes should prevent threatening competency-related information from being detected so that it is successfully avoided. Baumeister and Cairns (1992) found that repressors successfully recalled favourable information, but failed to recall threatening information. This might have been the case had Ms Watson recalled praise that she had received from senior partners but failed to recall that she had been informed that she had omitted some important information in her case presentation. The researchers concluded that favourable information is processed in order to store it in memory whereas unfavourable and neutral information is processed in a manner that prevents it from being encoded at all (Baumeister &

Cairns, 1992). Thus, the protection of self-competence beliefs may depend on how threatening information is cognitively processed. One interesting finding in the studies by Baumeister and Cairns (1992) is that repressors engaged in defensive regulation in private situations, but they closely attended to evaluative feedback when there was a possibility that self-presentational factors would become salient in public situations. One explanation for such behaviour is that the perception of threat from negative social appraisal triggers conscious awareness of social comparison processes, which induces repressors to attend to the negative evaluation more closely. Social comparisons refer to the cognitive evaluations that people make about their own behaviour when they compare their behaviour to the behaviour of other people (Festinger, 1954; Suls & Miller, 1977). This particular behaviour of repressors is reminiscent of James's (1890) proposition that social judgements may have a harmful effect on self-esteem. Thus, repressors may pay closer attention to evaluative feedback in public situations in order to protect their self-esteem. If this reasoning is correct, then the protection of self-competence beliefs may also depend on the attention people give to evaluative feedback in social situations.

In summary, the defensive processes of self-regulation uncovered by research on repressors (e.g., Baumeister & Cairns, 1992; Boden & Baumeister, 1997; Newman, Duff & Baumeister, 1997; Weinberger et al., 1979) suggests that unconscious biases in attention, encoding and memory processes perform a defensive function in self-regulation by altering how threatening situations are perceived. The effects of unconscious defensive processes are self-regulatory because they act to control responses to threat. The purpose of defensive processes is inherently self-protective

because they aim to reduce negative affect by minimising the self's awareness of discrepancies between aspects of self-knowledge, such as self-competence beliefs, and threatening stimuli. Accordingly, the mechanisms of self-protection in defensive self-regulation need to be accounted for in theories of self-competence because defensive processes may interact with self-competence beliefs in order to help some people maintain control in threatening situations.

Conclusions

James's (1890/1948) idea that self-competence is the most critical component of self-esteem, representing the ratio of successful performance relative to desired goals, captured the very source of the construct. Among his most notable assertions is the proposition that interpretive processes override performance outcomes in their prescriptive value for self-esteem. This idea has been echoed by Cooley (1902) and is important because it emphasises the relevance of interpretive experiences in developing self-competence beliefs. Cooley (1902) also widened the scope for self-competence researchers by stressing the powerful influence of social situations in the formation of self-judgements through reflected self-appraisals. Mead (1934) extended Cooley's (1902) ideas by suggesting that the self incorporates the attitudes of the generalised other into its identity. The inference for self-competence is that people develop social competence beliefs on the basis of their work experiences.

S. Freud (1922/1961) introduced the idea that the purpose of defence mechanisms is to prevent conscious awareness of anxiety arising from internal causes. A. Freud (1936) extended this idea with the suggestion that threat could be sourced consciously from the

external environment. A. Freud (1936) also proposed that defence mechanisms could be linked to adaptive, as well as maladaptive behaviour. The idea that defence mechanisms are adaptive conscious and unconscious processes that protect the self from anxiety has important implications for self-competence theory. Defence mechanisms could possibly be connected to task and social self-competence when self-regulatory systems detect that performance feedback is threatening. Research on the defensive coping style of repressors and self-enhancement through social comparison processes lends support to this proposition (e.g., Baumeister, 1993; Baumeister et al., 1990, 1998; Baumeister & Cairns, 1992; Baumeister, Heatherton & Tice, 1993; Furnham & Traynar, 1999; Hixon & Swann, 1993; Meleshko & Alden, 1993; Mussweiler, Gabriel & Galen, 2000; Rhodewalt, Morf, Hazlett & Fairfield, 1991; Tice, 1991; Wood, Giordano-Beech, Taylor, Michela & Gaus, 1994; Weinberger et al., 1979).

The concept of self-schemata (Markus, 1977) provided an explanation for how self-competence beliefs may be cognitively stored. Self-schemata are considered to motivate people by providing the exact goals and incentives to guide the pursuit of possible selves in social situations (Markus & Ruvulo, 1989). The implication for self-competence is that self-competence beliefs could potentially inform possible selves on the basis that social competence beliefs contain information about a person's social abilities.

Snyder (1987) presented the idea that some people are more inclined than others to manipulate their social images so that they are consistent with their perceptions of social acceptability. Thus, self-monitoring theory opened the door to social competence beliefs on the basis that perceptions of social abilities inform high and low self-monitors about their abilities in social situations at work.

Self-regulation theories (Duval & Wicklund, 1972; Carver & Scheier, 1981; Higgins, 1987) provided a causal structure that is able to explicate the underlying processes in self-competence. It may be inferred from Duval and Wicklund's (1972) theory of objective self-awareness that self-awareness mediates between self-competence and self-regulation by drawing attention to people's future expectations of success. Control theory (Carver & Scheier, 1981) provided insight into some of the components of self-regulation that may affect how self-competence influences behaviour. The components of negative feedback that are described in control theory outlined how this may occur. Accordingly, self-competence may operate as a reference standard in self-regulation that guides goal-directed behaviour by informing people how effective they are likely to be in different situations. Hence, it is possible that the purpose of self-competence in self-regulation is to assist the system to return to homeostasis by informing people about what is possible and impossible to achieve. This point fits nicely with Higgins's (1987) idea that discrepancies between actual-ideal and actual-ought selves leads to goal-striving activities.

In the next chapter, I review evidence for the role of social competence and self-protection in the self-competence literature. I discuss the limitations of self-efficacy theory (Bandura, 1977), the self-competence model (Williams & Lillibridge, 1992) and the self-competence/self-liking model (Tafarodi & Swann, 1995) in light of this evidence.

CHAPTER 3: A CRITICAL REVIEW OF THE LITERATURE ON

SELF-COMPETENCE

Summary

In Chapter 3, I review the research on self-competence to show that any self-competence theory needs to include the constructs of social competence and self-protection. First, I review the evidence for the role of social competence in the self-competence literature. Then, I discuss the limitations of three self-competence theories in light of this evidence: Bandura's (1977) self-efficacy theory, Williams and Lillibridge's (1992) self-competence model and Tafarodi and Swann's (1995) self-competence/self-liking model. Second, I review the evidence for the role of self-protection in the self-competence literature. Then, I discuss the limitations of the same self-competence theories in light of this evidence.

Introduction

Over the past two decades, researchers have recognised the relevance of self-competence beliefs for understanding and predicting work performance (e.g., for reviews, see Bandura, 1982, 1986; 1988; 1991; Barling & Beattie, 1983; Gist 1987; Gist & Mitchell, 1992). The concept of self-competence has also been investigated in more than 2,000 studies (for reviews, see Bandura, 1997; Gully, Incalcaterra, Joshi & Beaubien, 2002; Multon, Brown & Lent, 1991; Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1997, 1998; Tharenou & Harker, 1991; R. Wood, Mento & Locke, 1987). These studies have provided information about some of the

causal mechanisms that potentially underlie self-competence, and they have identified key variables that a well validated instrument of self-competence should measure.

The dependent variables that have been measured in most studies about work performance are task performance (e.g. Bandura & Adams, 1977; Bandura & Cervone, 1983; Bouffard-Bouchard, 1990; Cervone & Wood, 1995; Cervone, Jiwani & Wood, 1991; Chen, Goddard & Casper, 2004; Gist, 1989; Lent, Brown & Hackett, 1994; Lent, Brown & Larkin, 1986; Parajes & Miller, 1994; Whyte & Saks, 1995; R. Wood & Bandura, 1989a, 1989b). Recall from Chapter 1 that task performance is distinct from job performance and refers to how effectively a person performs activities that are relevant to the organisation's technical aspects (Borman & Motowildo, 1997). Meta-analytic research (e.g., Judge, Jackson, Shaw, Scott & Rich, 2007) found that self-competence predicted task performance but not job performance. Task performance has been operationalised in different ways in these studies. For example, task performance has been operationalised as single and relatively simple tasks such as a handgrip task (e.g., Vohs, Baumeister & Ciarocco, 2005) to fairly complex tasks like assigning employees to production lines (R. Wood & Bandura, 1989), brainstorming tasks (Locke, Lee, Frederick & Bobko, 1984), improving work training programs (Mathieu, Martineau & Tannenbaum, 1993; Tannenbaum, Mathieu, Salas & Cannon-Bowers, 1991) and increasing the total number of sales (Barling & Beattie, 1983).

The tendency of self-competence researchers to focus on the relationship between self-competence and task performance has meant that the influence of social factors on social competence beliefs and social performances has not been widely addressed. However, people rarely work in isolation. Their workplaces are a complex mix of social

networks and cultural systems as well as places where tasks are performed. Thus, when people are at work, they must engage in social performances in order to manage the social aspects of the relationships that they have with their managers, subordinates, peers, mentors and/or coaches. Social performances enable people to develop alliances with their co-workers and the organisations that they work for. Thus, work performance is more than task performance because it involves social performances in social situations.

As work performance is a blend of social and task performances, it is surprising that there are relatively few studies that have purposefully investigated the role of social factors in self-competence and work performance (e.g., Anderson & Betz, 2001; Bandura & Jourden, 1991; Cervone, Jiwani & Wood, 1991; Cervone & Wood, 1995; J.V. Wood, 1989; Schneider, Ackerman & Kanfer, 1996; Williams, Williams & Ryer, 1990; R. Wood & Bandura, 1989a). These studies connect social factors to self-competence and work performance. Therefore, any theory of self-competence needs to account for this relationship.

There is also minimal research on the role of self-protective factors in self-competence (e.g., Markman, Mcullen & Elizaga, 2008; Ruan, 2005; Tal-Or, Boninger & Gleicher, 2004; Tsai, Chen & Lui, 2007). With the advent of research on emotional intelligence and work performance (for a review, see Zeidner, Roberts & Matthews, 2008), how people deal with their emotions at work has come under scrutiny. However, the self-protective processes that assist people to cope when they experience the negative emotions that are associated with feeling threatened needs to be better understood. As Black (2006) has pointed out,

Although the literature presents self-protection as the explanatory motive of numerous processes in human and animal life, it is an odd fate for the motive that, unlike other motives (e.g., achievement, affiliation, cognitive dissonance, pleasure), its aim and characteristics have not been examined or defined. (p. 191).

Not surprisingly then, there is no research that has examined the relationship between self-protection, self-competence and work performance. There is, however, evidence of a moderating effect of self-efficacy, a construct that is similar to self-competence, on stress reactions, but this evidence is equivocal (e.g., Averill, 1973; Bhagat & Allie, 1989; Kahn & Long, 1988; Karasek & Theorell, 1990; Levine & Ursin, 1980; Jex, Bliese, Buzzell & Primeau, 2001; Miller, 1980; Terry & Jimmieson, 2003; Terry, Tonge & Callan, 1995). Self-efficacy is defined as "beliefs in one's capabilities to organise and execute course of action that are required to produce given attainments" (Bandura, 1997, p. 3). One possible explanation for these equivocal findings is that research on self-efficacy and stress has failed to include measures of self-protection. While people with high self-efficacy should be more confident that they can handle stress than people with low self-efficacy, the self-protective processes that may be involved are unclear in the self-efficacy literature. However, coping research (e.g., Kahn & Long, 1988; Kinicki & Latack, 1990; Lazarus & Folkman, 1984) and the literature on self-esteem (e.g., Aspinwall & Taylor, 1993; Musseweiler, Gabriel & Bodenhausen, 2000; Nosanchuk & Ericson, 1985; Taylor & Brown, 1988; J.V. Wood, Giordano – Beech, Taylor, Michela & Gaus, 1994) provide some ideas about how self-protection could potentially influence self-competence and work performance.

In this chapter then, I review the self-competence literature to show that a comprehensive theory of self-competence needs to include a construct of social competence and account for the self-protection strategies that may protect social and task competence beliefs. First, I review the evidence for the role of social competence. Then, I show the limitations of three self-competence theories: self-efficacy theory (Bandura, 1977), self-competence theory (Williams & Lillibridge, 1992) and self-competence/self-liking theory (Tafarodi & Swann, 1995) in light of this evidence. Second, I review the evidence for the role of self-protection. Then, I show how the same three theories overlook the role of self-protection in the relationship between self-competence and performance.

The Case for Social Competence

Evidence for the Role of Social Competence

The Relationship between Self-Competence and Task Performance

The largest group of studies that have examined the relationship between self-competence and task performance is focused on the study of self-efficacy beliefs (for reviews, see Bandura 1982, 1986). Bandura (1977) has argued that self-efficacy, although based on environmental feedback, is primarily a product of people's perceptions of that feedback. A key proposition of self-efficacy theory (Bandura, 1986, 1997) is that self-efficacy is positively and causally related to actual performance through self-regulation processes. The negative feedback systems in which self-efficacy beliefs are assumed to operate, mirrors the feedback model of control theory (Carver & Scheier, 1998). Thus, Bandura (1997) argued that past performance influences self-

efficacy such that successful performance increases self-efficacy and unsuccessful performance decreases self-efficacy. Bandura (1997) noted that people construct efficacy expectations based on their past experience by evaluating their performance attainments and comparing them to standards. Efficacy expectations are considered to be conceptually different to outcome expectancies because people can believe that a particular behaviour will produce a particular outcome (outcome expectancy), while simultaneously doubting their ability to produce the desired behaviour (efficacy expectations).

The concept of efficacy expectations is central to how self-efficacy beliefs are predicted to influence goal-directed behaviour. According to Bandura (1977), efficacy expectations motivate goal-directed behaviour by both producing and reducing discrepancies between standards and performance attainments. In turn, goal striving behaviour is regulated through reactive feedback control and adjustments to the amount of effort that is necessary to reach a particular standard.

Studies have found support for Bandura's (1997) idea that past performance influences future self-efficacy (for reviews, see Bandura & Locke, 2003; Gully, Incalcaterra, Joshi & Beaubien, 2002; Locke, Frederick, Lee & Bobko, 1984; Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1998; Tharenou & Harker, 1991; R. Wood, Mento & Locke, 1987). One important finding from this line of research is that self-efficacy positively and negatively affects subsequent performance. Researchers in the positive camp espouse that high self-efficacy positively affects subsequent performance through its effects on challenging goals, commitment to self-set and assigned goals (e.g., Bandura, Adams & Beyer, 1977; Bandura, Adams, Hardy &

Howells, 1980; Bandura & Cervone, 1983; Bandura & Wood, 1989; Blustein, 1989; Button, Mathieu & Aikin, 1996; Cervone, 1983; Cervone, Jiwani & Wood, 1991; Cervone & Wood, 1995; Chen, Gully, Whiteman & Kilcullen, 2000; Jacobs, Prentice-Dunn & Rogers, 1984; Kazdin, 1974; Locke, Lee, Frederick & Bobko, 1984; Locke, Shaw, Saari & Latham, 1981; Peake & Cervone, 1989; Phillips & Gully, 1997; Taylor, Locke, Lee & Gist, 1984; R. Wood & Bandura, 1989a; R. Wood, Bandura & Bailey, 1990; VandeWalle, Cron & Slocum, 2001).

A well controlled study by Bandura and Wood (1989) provided evidence of the self-regulatory effects of self-efficacy on goal setting and analytical thinking. The aim of this study was to investigate the relationship between self-efficacy, perceived controllability and performance standards to actual work performance. The study was conducted at the between-person level with participants being assigned to one of four conditions: high controllability and high performance standards, high controllability and low performance standards, low controllability and high performance standards and low controllability and low performance standards. In the controllability conditions, participants were led to believe that they could or could not control a simulated organisation and the work productivity of its employees through their decision making. In the performance standards conditions, participants were instructed to try and get their employees to perform above or below the standard of performance that the organisation expected.

The experimental task was a complex organisational task that involved participants' rostering employees of a simulated furniture production company to different production activities based on their assessments of the employees' competencies and organisational

goals. It was necessary for participants to learn to use a complex set of decision rules effectively in order to succeed at this task. The decision rules involved testing different options, implementing analytical strategies and cognitive processing of instructional feedback.

The results highlighted the discrepancy producing effects of goal choice when goal setting was challenged by perceptions of controllability and uncontrollability. Participants in the high controllability conditions had high self-efficacy and increased their goals repeatedly, regardless of whether the goals were self-set or assigned. In contrast, participants in the low controllability conditions had low self-efficacy and decreased motivation and goal attainments. Participants in the high controllability and high performance condition were more methodical and used analytical strategies more effectively than participants in the other three conditions.

A path analysis revealed that goals influenced actual performance outcomes directly and indirectly through analytical strategies and analytical strategies, in turn, affected actual performance. These results replicated findings from an earlier study by R. Wood and Bandura (1989a) that employed the same experimental task. However, in R. Wood and Bandura's (1989a) study, participants' perceptions of their abilities were manipulated instead of their controllability beliefs. Thus, participants were led to believe that their decision making ability was either a stable personal trait or an acquirable skill. R. Wood and Bandura (1989a) found that participants who believed that decision making is an acquirable skill used analytical strategies more systematically and made better choices than participants who believed that their decision making ability was a

stable personal trait. Thus, it was participants' belief that they could improve their decision making skills that influenced their actual performance the most.

In addition to its robust effects on goal processes and analytical thinking, self-efficacy has also been shown to affect the length of time that people persevere during actual task performance. For example, research has shown that task persistence is positively correlated with academic performance (e.g., Multon, Brown & Lent, 1991) and leadership self-efficacy (e.g., Paglis & Green, 2002). Multon, Brown and Lent's (1991) meta-analytic study showed that the mean uncorrected correlation between student self-efficacy and various academic persistence measures (e.g., time spent on task) was positive ($r = .34$, $p < .05$). Paglis and Green (2002) found that higher leadership self-efficacy was associated with greater persistence in efforts to improve organisational effectiveness and push for changes. Furthermore, job commitment (a construct that is similar to persistence) was positively correlated with actual task performance (e.g., Aryee, Chen, & Budhwar, 2004; Van Scotter & Motowildo, 1996). Several other studies have produced evidence that people exert more effort and persist or lose motivation and abandon difficult endeavours depending on whether they have high or low self-efficacy beliefs respectively (e.g., Bandura & Cervone, 1983; 1986; Bandura & Schunk, 1981; Brown & Inouye, 1978; Cervone & Peake, 1986; Gist & Mitchell, 1992; Schunk, 1981; 1984; Weinberg, Gould & Jackson, 1979; Whyte, Saks & Hook, 1997).

Recently, studies have shown that the effects of self-efficacy differ across levels of analysis (e.g., Chen & Bliese, 2002, Chen, Webber, Bliese, Mathieu, Payne, Born, & Zaccaro, 2002, Gibson, 2001; Seo & Ilies, 2009) with several studies producing

evidence of the negative effects of self-efficacy on subsequent performance at the within-persons level (e,g., Richard, Diefendorff & Martin, 2006; Vancouver & Kendall, 2006; Vancouver, Thompson, Tischner & Putka, 2002, Vancouver, Thompson & Williams, 2001; Yeo & Neal, 2006). Vancouver and his colleagues (2001, 2002, 2006) conducted a series of studies examining direction of the relationship between self-efficacy and performance at the within-person level. The studies used a computerised analytical task as the performance task. The task required participants to guess the correct arrangement of coloured squares in as few steps as possible. Vancouver et al. (2001, 2002) found that performance was positively related to subsequent self-efficacy (consistent with self-efficacy theory, Bandura, 1997), but self-efficacy was negatively related to subsequent performance. These findings were interpreted as suggesting that that high self-efficacy lead to over-confidence and withdrawal of cognitive effort, resulting in lower subsequent performance.

Vancouver et al. (2001) reasoned that their findings were consistent with the claims of control theory (Carver & Scheier, 1998) which predicts if people perceive that they have not reached a goal, they will increase their effort and persistence until the goal is reached. Conversely, if people perceive that they have surpassed the goal, they may reduce the amount of cognitive resources that they allocate to the task so that they can direct their effort towards other goals. Vancouver et al. (2002) added that as participants did not receive any feedback until after they had committed to a guess, they had to infer their progress towards their goal from limited information. Thus, Vancouver et al. (2002) reasoned that high self-efficacy from successful performance on an earlier trial lead participants to feel that there was less discrepancy between their current state and

their goal, resulting in fewer cognitive resources being allocated to the task (committing to a guess without thinking it through) and decreased performance.

To address criticisms raised by Bandura and Locke (2003) that the results of Vancouver and his colleagues (2001, 2002) were methodological artefacts based on an overly simple performance task, several other studies have examined the direction of the self-efficacy and performance relationship using complex and real-life tasks (e.g., Richard et al., 2006; Seo & Ilies, 2009; Vancouver & Kendall, 2006; Yeo & Neal, 2006). With the exception of a recent study by Seo and Ilies (2009), these studies replicated the negative effects of self-efficacy on subsequent performance in a real-life training (learning) context with university students completing an introductory courses (Richard et al., 2006; Vancouver & Kendall, 2006) and an air traffic control task (Yeo & Neal, 2006). Thus, these findings provided further support for the idea that performance will exert positive effects on self-efficacy but self-efficacy will exert negative effects on subsequent performance.

Vancouver, More & Yoder (2008) proposed that distinguishing goal-planning processes from goal choice processes could play an important role in determining the direction of the within-person relationship between self-efficacy and performance. They argued that self-efficacy has negative effects on performance when planning for accepted goals because high self-efficacy involves a higher expectancy of reaching a goal, which, in turn leads to less resources allocated to the task and lower motivation. On the other hand, under goal choice processes, when goals are actively selected (that is, highly valued), higher self-efficacy leads to higher goals and thus, higher motivation. Therefore, the relationship between self-efficacy and performance will be positive.

In support of this explanation, Vancouver and Kendall (2006) observed little within-in person variation in personal goals (what grade participants aimed for on their exams), which suggests that they strived for an overall goal (performance on the course). The small adjustment in personal goals that they made was not an indication of how motivated they were for subsequent performance. This result shows that the goal planning process supported a negative effect of self-efficacy on performance at the within-person level. On the other hand, Vancouver et al. (2001) found evidence of a positive relationship between self-efficacy and performance in the difficult goal condition, even when controlling for past performance. Thus, in some situations at least it seems that goal choice processes may cause the negative effects of self-competence on performance at the within-person level to be reversed. Bandura and Locke (2003) attributed the dominance of the goal planning process in some studies (e.g., Vancouver et al., 2001, 2002, Vancouver & Kendall, 2006; Yeo & Neal, 2006) to the task settings themselves claiming that they were simple, static and disjointed in nature.

Recently, Seo and Ilies (2009) found that when the task setting is a dynamic task environment, goal choice processes are operating and thus, self-efficacy's effects on performance are positive. They used a simulated stock market to characterise a highly dynamic and complex task environment where tasks and performance fluctuations reflected continuous processes in response to changing task conditions towards cumulative performance. The results showed that self-efficacy had a positive effect on motivation and performance with higher self-efficacy associated with intention to spend and actually spending more time on the task and in turn, higher performance. The results also showed that performance goals uniquely and positively contributed to both the

intended and actual time spent on the task, and lead to higher performance. Finally, they found that the within-person relationship between self-efficacy and performance increased the more adjustments that participants made to the goals that they had chosen to pursue. Thus, it is possible that when the task is complex and dynamic, self-efficacy may have a positive effect on subsequent performance.

The positive and negative effects of self-efficacy on subsequent performance at different levels of analysis suggest that a positive effect of self-competence on subsequent performance could be expected at the between-persons level and at the within-person level, but only if the task setting is dynamic and complex. For simple tasks, goal planning processes should be at work and in turn, a negative within-person relationship between self-competence and subsequent performance could be expected.

Social Factors in Self-Competence and the Self-Regulation of Performance

The results from meta-analytic studies support the argument that social competence could play an important role in work performance. Meta-analytic research has consistently shown that there are small effect sizes for self-efficacy on actual task performance (e.g., Judge et al., 2007; Sadri & Robertson, 1993; Stajkovic & Luthans, 1998). For example, when Judge et al. (2007) meta-analysed 158 studies that examined the relationship between self-efficacy and work-related performance, they found that self-efficacy was moderately correlated with work-related performance when individual differences were taken into account such as when the task was low in complexity, there was a short interval between the measure of self-efficacy and work-related performance, goals were assigned, and individuals were familiar with the task. However, self-efficacy did not significantly predict performance when task complexity was medium or high,

when there was a relatively long time interval between measurement of self-efficacy and actual task performance, no feedback was provided, no goals were present, individuals had no prior exposure to the task, Likert measures of self-efficacy were used, the criterion measure was job performance, performance was measured subjectively, the study was conducted in a field setting or the sample were postgraduate students or employed adults. Furthermore, self-efficacy did not significantly predict performance when it was entered into the regression equation with general mental ability, the Big Five personality factors and experience. In contrast, general mental ability, conscientiousness and experience each significantly predicted work-related performance. Even when all of these variables were entered in a hierarchical regression analysis, self-efficacy's contribution was nonsignficant. Therefore, self-efficacy's effect was only apparent when individual differences were taken into account and self-efficacy did not have a unique effect on work-related performance. The researchers concluded that "self-efficacy matters in some conditions but not in others" (Judge et al., 2007, p. 116). However, it is unclear whether or not social factors may have influenced the relationship between self-efficacy and work-related performance in this meta-analysis.

When Sadri and Robertson (1993) meta-analysed 21 studies that examined the relationship between self-efficacy and actual task performance, they found that a total of 78% of the variance in the observed correlation coefficients was left unexplained after correcting for sampling error and unreliability. The effect sizes for studies that were conducted in simulated experimental settings were much greater than for studies that were conducted in vivo and produced correlations of 0.60 and 0.34 respectively. Hence, Sadri and Robertson (1993) concluded that it was possible that environmental factors

affected performance in real work settings. However, they did not explain what these environmental factors could be or how they influenced performance. One possibility is that social factors influenced performance through the effects of social competence on social and task performance.

Stajkovic and Luthans (1998) found evidence of the moderating effects of situational characteristics on self-efficacy and performance when they meta-analysed 114 empirical studies conducted over the past 20 years. This study tested the prediction that task complexity and type of setting moderated the relationship between self-efficacy and performance. The researchers partitioned studies according to whether they were conducted in simulated or actual settings, and then subordinated type of setting to levels of task complexity (low, medium or high) in order to obtain pairwise average correlations. Consistent with findings in individual studies (e.g., Ackerman, Kanfer & Goff, 1995; Taylor, Locke, Lee & Bobko, 1984; R. Wood, Bandura & Bailey, 1990), Stajkovic and Luthans (1998) found that the relationship between self-efficacy and actual task performance was strongly moderated by the complexity of the task and the situational characteristics (study setting). The overall magnitude of the relationship between self-efficacy and performance was .38 and was comparable to Sadri and Robertson's (1993) meta-analysis. Again, simulated settings produced stronger relationships than in vivo settings for each level of task complexity. Self-efficacy had the least impact on performance of highly complex tasks in real settings. Therefore, the researchers concluded that situational factors in real work environments lowered the strength of the relationship between self-efficacy and complex task performance.

The situational factors that Stajkovic and Luthans (1998) linked to field studies included some socio-contextual variables. For example, performance constraints such as noise and interruptions (Gist & Mitchell, 1992) and insufficient feedback from colleagues (R. Wood & Bandura, 1989a) were two of the situational characteristics that Stajkovic and Luthans (1998) reasoned weakened the effects of self-efficacy on complex task performance in real situations. Thus, the social aspects of real work environments weakened the relationship between self-efficacy and task performance. One implication of this finding is that the relationship between self-efficacy and task performance may be moderated by social factors and other situational characteristics.

The results from meta-analytic research (e.g., Judge et al., 2007; Sadri & Robertson, 1993; Stajkovic & Luthans, 1998) introduce the possibility that social competence could account for some of the unexplained variance in the relationship between self-efficacy and task performance. R. Wood and Bandura (1989a) showed that the self-regulatory effects of self-efficacy on actual task performance declined dramatically when outcomes became contingent on social, extraneous or discriminative factors such as age or gender rather than high quality performance. When participants perceived that their performance was substandard compared to other participants' performance, they lost confidence in their task abilities and produced poorer subsequent performances. This finding suggests that task competence and actual competent behaviour are affected by the way that decision making is socially construed. Hence, there may be a social dimension of self-competence that is conceptually distinct from the task dimensions of the construct that have been identified.

Social Facilitation Effects. The literature on social facilitation effects provides further evidence for a construct of social competence (for a review, see Uziel, 2007). Social facilitation research has shown that the presence of other people during task performance can have either a negative or positive impact on performance (e.g., Allport, 1920; Dashiell, 1930; Guerin, 1993; Triplett, 1898; Zajonc, 1965). The results suggest that the more public that a person's performance is, the more likely people are to be concerned with how their performance appears to others, and the more motivated they are to control how others perceive them (e.g., Arkin, Appelman, & Berger, 1980; Baumgardner & Levy, 1987; Bradley, 1978; Cottrell, Wack, Sekerak & Rittle, 1968; Graydon & Murphy, 1995; Reis & Gruzen, 1976). The implication of this finding is that social competence may interact with these social factors to control task performance. That is, people may evaluate their ability to perform a task and simultaneously take into account the social factors that could impact on their social and task performance.

A study by Cottrell et al. (1980) that investigated whether the mere presence of other people was sufficient enough to influence performance illustrates this point. Cottrell et al. randomly assigned participants to an alone, mere presence or audience condition. In the alone condition, participants were alone in the laboratory during testing. In the mere presence condition, participants were in the presence of two blindfolded spectators who did not express any interest in watching participants or what they were doing. In the audience condition, two spectators observed participants and expressed interest in what they were doing. Participants were presumed to perceive the presence of the interested spectators as evaluative and the presence of the blindfolded spectators as non-evaluative. The dependent variable was performance of a pseudo-recognition task. To perform the

pseudo-recognition task correctly, participants had to learn paired sequences of nonsense words and photographs and then match them correctly when they were presented in varying order across 160 trials.

The results showed that the presence of an interested audience increased participants' motivation and performance but the mere presence of the blindfolded spectators in the laboratory did not affect performance. In other words, when participants were concerned about how they would be evaluated, their performance was affected. In contrast, when participants perceived that their performance would not be evaluated there was no change in their motivation. Thus, the performances that the participants produced were a combination of both task and social performances.

A study by Stone and Stone (1984) reinforces this point. Stone and Stone's (1984) study had two aims. The first aim was to investigate whether performance feedback from two people, as opposed to a single person, would have a greater impact on how task competent participants perceived themselves to be. The second aim was to investigate whether performance feedback from two people would be perceived as more accurate than performance feedback from one person. The independent variables were the number of people who provided the performance feedback and the favourability (satisfactory, unsatisfactory or excellent) of the feedback.

The experimental task was an assembly-type task similar to the assembly-type tasks found in industry. Participants were presented with a model of a diamond molecule and required to assemble a replica of the molecule from the parts on the table in front of them. Participants were randomly assigned to one of two acceptable feedback conditions or one of two superior feedback conditions. In the acceptable feedback conditions,

participants received acceptable feedback about their performance from either a single source or two sources. In the superior feedback conditions, participants received superior feedback about their performance from either a single source or two sources.

The results showed that consistent positive feedback from two people increased task competence beliefs more than repeated positive feedback from one person. Furthermore, the more favourable the feedback from two people was, the more competent participants perceived themselves to be. The number of agents providing the feedback had no influence on the perceived accuracy of feedback. Therefore, perceived feedback accuracy was not a mediator in the relationship between number of feedback agents and task competence beliefs.

A limitation of this study was that the experimental manipulations were restricted to consistent feedback. Hence the interactive effect of inconsistent or failure feedback on task competence was not measured. Such findings would have been informative from the point of view of self-protection because inconsistent or failure feedback would have induced threat. Nevertheless, the results showed that social sources that provide evaluative information can modify self-perceptions of task competence, particularly when the evaluative information is positive. Additionally, the change in participants' perceptions of their task competence on the basis of the evaluative feedback from multiple social sources suggests that the ability to interpret feedback from social sources could be linked to self-competence. Therefore, the traditional definition of self-competence may be limiting its potential to explain the social aspects of self-competence and performance.

Social Comparisons. Several studies that manipulated self-efficacy beliefs through social comparative information provide further evidence for a construct of social competence (e.g., Bandura & Jourden, 1991; Bouffard-Bouchard, 1990; Festinger, 1954; Goethals & Darley, 1977; Hoyt, Murphy, Halverson & Watson, 2003; J.V. Wood, 1989; Jacobs, Prentice-Dunn & Rogers, 1984; Jaina & Tyson, 2004; Suls & Miller, 1977; Stapel & Tesser, 2001; Prussia & Kinicki, 1996; Tam, 2000). For example, Bandura and Jourden (1991) investigated the impact of different patterns of social comparison on self-regulatory factors and performance of a simulated managerial task. They randomly assigned participants to one of four conditions: a superior capabilities condition, a similar capabilities condition, a progressive mastery condition or a progressive decline condition. In the superior capabilities condition, participants were given information that they had outperformed the other participants from the outset and had maintained this position throughout the experiment. In the similar capabilities condition, participants were given feedback that their capabilities were either slightly better or slightly worse than other participants to create the impression that they had similar capabilities to the other participants. In the progressive mastery condition, participants were given information that the other participants had outperformed them initially but they had overtaken them over the course of the task. In the progressive decline condition, participants were told that they had performed as well as the other participants at the start of the task but were overtaken over the course of the task, which created the impression that their decision making abilities decreased over time.

The results revealed that when participants saw themselves being surpassed by participants in the similar capabilities condition, they questioned their own abilities,

their analytical thinking was disrupted and they became overly self-critical of their achievements. In contrast, when participants saw themselves as gaining progressive mastery compared to participants in the progressive decline condition, their self-efficacy beliefs strengthened, they were able to think more analytically and they evaluated themselves more positively as their progress increased. The findings from this study are important for self-competence theory because they show that beliefs about abilities are framed in relation to others.

This idea is reinforced by other research that has shown that people use the performance of others to establish frames of reference in order to evaluate their own performances (e.g., Brown & Inouye, 1978; J.V. Wood, 1989) and they internalise evaluative performance feedback which subsequently affects how they perceive themselves (e.g., Bouffard-Bouchard, 1990; Shrauger, 1975; Shrauger & Schoenemann, 1979). For example, Bouffard-Bouchard (1990) investigated the effects of performance feedback from peers on self-efficacy and performance. Bouffard-Bouchard (1990) randomly assigned participants with the same cognitive abilities to a high self-efficacy, low self-efficacy or control condition. In the high self-efficacy condition, participants were given verbal feedback indicating that their performance was excellent compared to their peers, regardless of whether or not it really was. In the low self-efficacy condition, participants were given verbal feedback indicating that their performance was substantially poorer than their peers, regardless of whether or not it really was. In the control condition, participants were not given any feedback. The participants who were given feedback that they had high or low self-efficacy were led to believe that they were more capable of performing higher goals than participants who were not given feedback.

The experimental task required participants to discover a single meaningful word to replace a nonsense word in a sentence.

The results showed that participants who were induced to believe that they had high self-efficacy set more difficult goals and were more efficient problem solvers than participants of the same cognitive ability, but who were led to believe that they lacked these capabilities compared to their peers. Thus, when people perceive that they are more competent than their peers, regardless of whether or not they actually are, they produce better performances.

These results are important for self-competence theory for two reasons. First, they show that there is a social dimension to self-competence and performance that involves internally represented social information and social performances. Second, they show that self-competence perceptions that are based on comparisons to other people influence performance more than self-appraisals of actual performance. Thus, any theory of self-competence needs to account for these social factors and the impact that they may have on self-competence and performance.

Self-Presentation. There is additional evidence in the self-presentation literature for the role of social factors in self-competence (for reviews, see Banaj & Prentice, 1994; Baumeister, 1982; Leary & Kowalski, 1990; Markus & Wurf, 1987; Vohs, Baumeister & Ciarocco, 2005). Early theorising on self-presentation (e.g., Goffman, 1959) led researchers to focus on how people present themselves to others during social performance (e.g., Baumeister, 1982; Baumeister & Jones, 1978; Baumeister & Tice, 1986; Goffman, 1959; Jones & Pitman, 1982; Schlenker, 1980; Schneider, 1981; Swann, 1982; Tedeschi, 1986). One consistent finding is that people are concerned

about creating a positive impression and try hard to ensure that their public image is consistent with the role demands of a particular situation (e.g., Baumeister, Cooper & Skib, 1979; Leary, Robertson, Barnes & Miller, 1986; Swan, 1987). The implication of this finding is that people are social performers. It follows then, that social competence beliefs may play a self-regulatory role in their social performances.

A study by Vohs et al. (2005) that investigated the relatedness of self-presentation and self-regulation processes supports this point. Specifically, Vohs et al. (2005) found that self-competence was related to interpersonal cues in the performance of a handgrip task. The dependent variable was handgrip ability measured in number of seconds and length of time recording a video. Participants were randomly assigned to either a competence or likeability condition. In the competence condition, participants completed the handgrip task first and then made a "first impression video" in which they had to adopt a competent self-presentational style. In the likeability condition, participants completed the handgrip task first and then made a "first impression video" in which they had to adopt a socially skilled presentational style. Participants were informed that the video would be viewed and evaluated by strangers. After making the video, participants' ability to squeeze the handgrip was again measured. Participants completed a postexperimental questionnaire that required them to describe their accomplishments and interpersonal qualities.

The results showed that stamina on the subsequent handgrip task increased when participants were more familiar with the self-presentational style that they were required to adopt and decreased when participants were less familiar with the self-presentational style. A path analysis revealed a main effect of gender. Female participants rated

themselves as more socially skilled than the male participants did. Therefore, the researchers concluded that it was possible that the ability to self-present as socially skilled differed with gender, and because the unfamiliar self-presentations required more self-regulatory resources, participants were less able to control themselves afterward in a seemingly unrelated context. Therefore, they produced inferior task performances. These effects could not be accounted for by the length of time that participants spent self-presenting or any change in their perceptions of themselves as socially skilled and competent. It is possible that social competence influenced their ability to adopt the self-presentational styles. Thus, the male participants may have had low social competence for adopting a social self-presentational style and the female participants may had have low social competence for adopting a competent self-presentational style. Hence, the variability in participants' subsequent task performances may be due to differences in their social competence beliefs.

Extending on this argument, research has shown that how effective people are in social situations depends on how successfully they use their social skills to project their desired self-images (e.g., Barry & Stewart, 1997; Jones & George, 1998; Marks, 1999; Leach, Wall, Rosellberg & Jackson, 2005; Leary, 1989; Snyder, 1974, 1979; Turnley & Boline, 2001; Webb, Marsh, Schneidermann & Davis, 1989). For example, Turnley and Boline (2001) found that high self-monitors used impression management strategies more effectively than low self-monitors. Therefore, high self-monitors may have had higher social competence than low self-monitors. Self-monitoring theory (for a review, see Gangestad & Snyder, 2000) does not provide an explanation of the causal processes

that potentially underlie self-monitoring behaviour[1]. One possibility is that social

competence beliefs influence social performances through self-monitoring processes.

Although people may perceive what social behaviour is required, and the impact of that

behaviour, they may not perceive that they are socially competent or possess the social

skills that are needed to deliver that behaviour successfully (Pendleton & Furnham,

1980; Stimpson, Robinson & Gregory, 2001). Thus, social competence could account

for some of the cognitive processes that give rise to competent social performance.

Conceptual Differences between Social Competence and Emotional Intelligence

Over the past decade, emotional intelligence has become a focus of enquiry among

social and organisational psychologists (e.g., Davies, Stankov & Roberts, 1998;

Goleman, 2001; Mayor & Salovey, 1997; Schutte, Malouff, Hall, Haggerty, Cooper,

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[1] Snyder (1974) proposed that self-monitoring is a learned social skill and argued
that low self-monitors lack the ability or motivation to regulate their self-presentation.
Interestingly, the focus of research on self-monitoring has been as a stable personality
trait rather than a learned skill (e.g., Briggs, Cheek & Buss, 1980; Webb, Marsh,
Sneiderman & Davis, 1989). This is potentially a problem for self-competence theory
because social competence is linked to social skills and not personality traits per se.
    Furnham and Capon (1983) investigated whether self-monitoring is a social skill.
They had participants complete the Self-Monitoring Scale (Snyder, 1974) and one of
three social-skills questionnaires: Assertiveness Scale (Wolpe & Lazarus, 1966), Social
Anxiety and Distress Scale (Watson & Friend, 1969) and Social-Situations
Questionnaire (Bryant & Trower, 1974). The results of a correlational analysis revealed
a significant relationship for low self-monitoring only. Even so, the results showed that
low self-monitoring was related to specific social-skills deficits such as anxiety, lack of
assertiveness and social difficulty. The researchers interpreted these findings as
indicative that self-monitoring is a component of social skill rather than a distinct
personality dimension. This finding has implications for social competence because
people should control their social performances through social competence, whereas
personality traits are innate factors that automatically affect social and task
performances.

Golden & Dornheim, 1998; Zeidner, Matthews & Roberts, 2004; 2008). Emotional

intelligence is defined as

> the ability to perceive accurately, appraise, and express emotion; the ability to
>
> access and/or generate feelings when they facilitate thought; the ability to
>
> understand emotion and emotional knowledge; and the ability to regulate
>
> emotions to promote emotional and intellectual growth (Mayer & Salovey, 1997,
>
> p. 10).

Thus, emotional intelligence helps people to control their thinking and actions (Salovey

& Mayer, 1990).

Researchers have debated whether emotional intelligence is an independent

psychological construct that predicts work performance (Wong & Law, 2002), a subset

of social intelligence (Mayer & Salovey, 1990), a dimension of general intelligence

(Mayer, Caruso & Salovey, 2000), or a personality trait (Davies et al., 1998). Therefore,

the dimensions of emotional intelligence are unclear in the literature and it is possible

that there may be points of overlap between emotional intelligence and social

competence.

Currently, it is unclear in the literature on emotional intelligence whether emotional

intelligence is a cognitive or noncognitive, abilities construct (Zeidner et al., 2008). The

cognitive model of emotional intelligence places more emphasis on the cognitive

components of emotional intelligence and conceptualizes emotional intelligence in

terms of potential for intellectual and emotional growth (Mayer & Salovey, 1997). In

this model, emotional intelligence consists of perception, appraisal and expression of emotion; emotional facilitation of thinking; understanding, analysing and employing emotional knowledge and reflective regulation of emotions to further emotional and intellectual growth. The perception, appraisal and expression of emotion are viewed as the most basic processes, while the reflective regulation of emotions requires the most difficult processing.

In the noncognitive abilities model, emotional intelligence refers to three types of adaptive abilities: ability to appraise and express emotion, ability to regulate emotion and ability to utilise emotion to solve problems (Salovey & Mayer, 1990). The first two types of emotional intelligence concern appraisal and expression of emotion in the self and others and regulation of emotion in the self and other. The ability to appraise and express emotions consists of verbal and non-verbal processes such as the ability to perceive one's own and others' emotions and ability to show empathy. The third type involves cognitive processes such as planning, cooperating, thinking creatively and motivation and affects social and cognitive functions related to the expression, regulation and use of emotions. The abilities model conceptualises emotional intelligence as either a mental ability that assists people to regulate and manage their emotions or as mixed ability comprising personality traits and social skills as well as the ability to regulate and manage emotions (Zeidner et al., 2004).

Social competence is most closely related to the conceptualisation of emotional intelligence as a mixed ability through its relationship with social skills and relationship management (Zeidner et al., 2004). However, while emotional intelligence and social competence both influence performance, emotional intelligence is focused on how well

people cope emotionally in social situations whereas social competence is focused on people's subjective opinions about their abilities to deliver competent social performances. For example, Ms Watson would be using her emotional intelligence if she resisted the urge to cry in front of her supervisor and her confidence in her ability to do this would be predicated by the strength of her social competence.

A second difference between emotional intelligence and social competence is that emotional intelligence is a group of crystallised abilities that determine people's *potential* for learning social skills and emotional competencies (Goleman, 2001), whereas social competence refers to beliefs about social skills. For example, Ms Watson's supervisor would need to possess emotional abilities such as intuition and empathy in order to sensitively provide constructive feedback to Ms Watson about her performance. Her supervisor would also need to believe in his ability to sensitively provide the constructive feedback to Ms Watson. Thus, social competence is a system of beliefs based on *self-evaluations* of social skills and emotional competencies implicit in social performances. Hence, social competence should moderate between emotional intelligence and social performance.

Dimensions of Social Competence

Goffman (1955) proposed that embarrassing situations and failing publicly both motivate people to utilise self-presentation strategies in order to counteract or repair the damage to their social image. Hence, self-presentation is integrally connected with social competence and social skills (Argyle & Kendon, 1967).Research has shown that people use different types of self-presentation strategies in order to present themselves favourably in social situations (e.g., Gibson & Sachau, 2000; Jones & Pittman, 1982;

Leach, Wall, Rosellberg & Jackson, 2005; Lee, Quigley, Nesler, Corbett & Tedeschi, 1999). For example, Leach et al. (2005) found that the ability to listen non-judgementally and use active listening techniques when working in groups are two social skills that people in organisations value highly.

Research has also shown that the ability to communicate effectively and work cooperatively with other people mediate the relationship between collective self-efficacy and team performances (Barry & Stewart, 1997; Jones & George, 1998; Marks, 1999). Jones and George (1998) found that willingness to work together on a task had a strong, positive effect on interpersonal cooperation and teamwork and in turn, led to greater performance outcomes. Marks (1999) found that high levels of communication partially mediated the positive relationship between collective efficacy and team performance in a routine task environment when the task environment was controlled. Communication and cooperation were also key mediating variables that affected how effectively teams gathered information and evaluated it in order to arrive at a performance strategy (Erez & Elmes, 2002; LePine & Van Dyne, 1998; Looney 2005). Adding to these findings, studies have found that when people received help and support from their coworkers, they were more likely to provide equivalent help (Bateman & Organ, 1983; Cirka, 2001) and receive more help in return (Vos, Buyens & Schalk, 2003).Thus, the evidence points to communication and cooperation as two abilities that influence task and social performance. It follows that beliefs about communication and cooperation abilities should fall under the rubric of social competence. Hence beliefs about communication and cooperation abilities may be dimensions of social competence.

In addition to communication and cooperation abilities, researchers have also found that social factors that involve cooperating with and emotionally supporting one's coworkers leads to greater psychological identification with both the work role (Brooke & Price, 1989) and organization (Mossholder, Setton & Henegan, 2005). High self-efficacy was a strong predictor of people's emotional attachment and psychological identification with organisations (e.g. Brief & Weiss, 2002; Gardner & Pierce, 1998; Jex & Bliese, 1999; Mathieu & Zajac, 1990; Tannenbaum, Mathieu, Salas & Cannon-Bowers, 1991) and organisational commitment (e.g., Ashford, 1988; Blake & Saks, 2000; Brief, Burke, George, Robinson & Webster, 1988; Carver, Scheier & Weintraub, 1989; Eden & Aviram, 1993; Judge, Thoresen, Pucik & Welbourne, 1999; Terry, Tonge & Callan, 1995). Additionally, psychological identification with the organization was positively correlated with job commitment and task persistence (Meyer, Becker & Vandenberghe, 2004; Tsai, 2007). Thus, the extent that people are able to perceive that they are psychologically connected to the organisation influences their actual performance. It follows that the extent that people perceive that they have the ability to psychologically identify with the organisation may be informative as a dimension of social competence.

The Lack of a Social Competence Component in Contemporary Theories of Self-Competence

Self-Efficacy Theory

Self-efficacy theory (Bandura, 1997) provides a broad explanation of how ability beliefs may influence performance. However, self-efficacy applies to virtually any

ability in any situation. The idea that people develop beliefs about their social abilities that regulate their social and task performances is not clearly explained in the underlying theory.

According to self-efficacy theory (Bandura, 1997), people learn about their abilities through four experiential sources: personal accomplishments (enactive mastery), emotional arousal, social modeling (vicarious learning) and social persuasion (verbal persuasion). Social modeling and social persuasion connect self-efficacy beliefs to social factors and involve social performances. However, Bandura (1997) does not clearly explain how beliefs about social abilities may develop through these sources. The research on self-efficacy has shown that social factors moderate the relationship between self-efficacy and task performance (e.g., Bandura & Jourden, 1991). One implication of this research is that social competence may interact with social factors to moderate social performances. Hence, any theory of self-competence needs to clearly account for social competence and its underlying causal processes.

Similarly, Bandura (1997) proposed that collective efficacy beliefs influence how people behave when they are engaged in group action. However, again, Bandura (1997) failed to clearly draw a distinction between task and social abilities and his construct of collective efficacy does not explain the idea that when people are engaged in group performances they are participating in both social and task performances. Therefore, Bandura's (1997) theory may be limiting the potential of self-efficacy to account for the role that social factors may play in real work performance.

Bandura (1997) also proposed that self-efficacy is best measured at the task level "because undifferentiated, contextless measures of personal efficacy are weak predictors

of human performance" (p. 49). Not surprisingly then, the majority of self-efficacy studies have been focused on self-efficacy and task performances and overlooked the reality that most task performances are completed within social contexts. Hence, social competence, as it relates to social and task performances, is not clearly articulated in self-efficacy theory (Bandura, 1997).

Self-Competence Theory

Williams and Lillibridge (1992) defined self-competence as "an individual's subjective evaluation of task-related ability, a self appraisal of what one can do in a specific situation" (p. 156). Hence, the construct is concerned with task performances only. This definition is consistent with the way in which self-competence has been operationally defined in organisational research because most of the organisational research on self-competence has been concerned with task performances specifically (e.g., Gully, Incalcaterra, Joshi & Beaubien, 2002; Multon, Brown & Lent, 1991; Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1997, 1998; Tharenou & Harker, 1991; Wood, Mento & Locke, 1987).

The main proposition of Williams and Lillibridge's (1992) self-competence theory is that self-competence influences task performance through persistence and effort, attributions, goal setting and coping strategies. The relationship between self-competence, these four mediating variables and task performance is seen to be reciprocal, which is consistent with the self-regulatory pathways postulated in self-efficacy theory (Bandura, 1977).

Although Williams and Lillibridge (1992) conceptualise self-competence as influenced by both situational and dispositional factors, they emphasise the role of

cognitive self-appraisals in developing and changing self-competence beliefs. Hence, self-competence beliefs are malleable thought processes that can be changed by present and future experiences and by deliberate attempts to change them.

Williams and Lillibridge (1992) argued that self-competence encompasses self-efficacy. Their rationale is that, like self-efficacy, self-competence is related to performance expectancies. Thus, people who perceive themselves as competent will expect that they can perform at a sufficiently high level to produce the type of behaviour that will enable them to achieve their goals. However, for Williams and Lillibridge, self-competence is related to a person's cognitive assessment of his or her level of expertise for a specific task in a particular setting. In contrast, for Bandura (1977, 1986), self-efficacy is related to *any* behaviour that requires a sense of personal proficiency.

Williams and Lillibridge's (1992) self-competence theory is limited to the extent that the researchers have relied on the same research produced by self-efficacy researchers to support their theory. This approach is confusing because it raises the question about whether or not Williams and Lillibridge (1992) have conceptualised self-competence and self-efficacy as distinct constructs. However, their theorizing comes closer than self-efficacy theory (Bandura, 1986; 1997) to incorporating the notion of social competence in the relationship between self-competence and work performance. Specifically, in Williams and Lillibridge's (1992) model, self-competence is connected to the component of social acceptance in the same system of self-evaluation[2]. The

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[2] The other component in this system is *perceived control*. Perceived control refers to beliefs that desired outcomes are controllable. Williams and Lillibridge (1992) suggest that the perception of successful performance attainments is distinct from

construct of social acceptance is equivalent to the notion of reflected self-appraisals (Cooley, 1902).

According to Williams and Lillibridge (1992), people are informed about whether or not their perceptions of their task abilities are accurate through social acceptance. If any uncertainty about performing specific tasks exists, it is alleviated by social feedback. Therefore, in their model, self-competence encompasses a set of skills that are associated with social performances and positively reinforced by social environments. However, Williams and Lillibridge (1992) do not specifically address the role of social performance in work performance. Their definition of self-competence as related to task abilities is limiting because it overlooks the possibility that perceptions of social abilities could exist. Research on social facilitation effects, social comparisons and self-presentation has shown that many of the situations that involve task performance are likely to involve social performances also. Therefore, failing to draw a distinction between task competence and social competence highlights the point that the definition of self-competence in Williams and Lillibridge's (1992) theory may be limiting the potential of the self-competence to explain the social factors in real work performance.

While Williams and Lillibridge (1992) have given careful consideration to outcomes of self-efficacy research, they do not appear to have considered the notion that people develop social competence beliefs that inform them about how socially competent they

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perceived environmental control. Anticipatory success relative to performance is construed as an *outcome expectancy*, which refers to the perceived likelihood that behaviour will produce desired outcomes. In contrast, control perceptions are seen as being related to self-competence perceptions on the basis that they are performance expectancies. Thus, they are related to the potential for obtaining those outcomes (Williams & Lillibridge, 1992).

are. However, one implication of the research on social facilitation effects is that people engage in social performances simultaneously to undertaking task performances (e.g., Cottrell et al., 1968). In addition, research that has shown the task performance of people with high self-efficacy deteriorates when they are forced to adopt an unfamiliar self-presentational style (e.g., Vohs et al., 2005) implies that social performances may interact with task performance. Therefore, Williams and Lillibridge's (1992) definition of self-competence needs to incorporate beliefs about social abilities in the context of social performances in specific situations.

Self-Competence/Self-Liking Theory

Tafarodi and Swann's (1995) key proposition is that self-esteem consists of generalised feelings of self-competence (ability to react to situations and engage in goal pursuit) and self-liking (self-evaluations of social worth). This idea is important for self-competence theory because it connects self-competence to social factors. According to Tafarodi and Swann (1995), self-competence is a global evaluative dimension of personal identity that informs people about their strengths and weaknesses. Hence, it is considered to provoke positive awareness of a self that is effectively and consciously controlling its own environment (Tafarodi & Swann, 2001). In this sense, Taforodi's and Swann's construct of self-competence combines personal efficacy and perceived control into a single construct.

In the self-competence/self-liking model (Tafarodi & Swann, 1995, 2001), self-competence has two dimensions: *personal efficacy* and *experience of autonomy.* Personal efficacy is understood to mean the ability to react in accordance with perceived social and material demands on the basis of outcomes from the chronic association of

goals and performance. *Experience of autonomy* refers to perceived control and is defined as a sense of freedom to select goals and actively engage in goal pursuit. The researchers argue that both of these dimensions are needed to achieve a balanced sense of self-competence.

Self-liking refers to the general sense of self-appraised worth that people obtain from social interactions. Two sources of self-liking are proposed. The first source of self-liking is based on reflected self-appraisals of one's social worth, which includes cultural and social influences (Mead, 1934). The second source of self-liking is based on the self-ascriptions that people make of their own social worth, which is considered to be derived from viewing the self as an object (Tafarodi & Swann, 2001).

Tafarodi and Swann (2001, 2002) argue that the social elements of self-competence functionally bridge the gap between the dimensions of self-competence and self-liking. They predict that self-competence and self-liking should be highly correlated because self-competence develops through meaningful feedback from others about actual performance (Tafarodi & Swann, 2001; 2002).

Research has shown that the constructs of self-competence and self-liking are highly correlated ($r = .75$ (Bosson & Swann, 1999) and $r = .69$ (Tafarodi & Swann, 1995). One implication of the high correlation between self-competence and self-liking is that self-competence and self-liking are aspects of the broader construct of self-esteem rather than independent constructs. Williams and Lillibridge (1992) proposed that self-esteem is dependent on self-competence beliefs and, as such, it is an aspect of the broader construct of self-competence. Therefore, it is unclear how self-competence is related to self-esteem.

Tafarodi and Swann (2001) argued that the social elements of self-competence and self-liking explain the high correlation between these constructs. They proposed that self-competence and self-liking should be highly correlated because self-competence develops via meaningful feedback from others about actual performance. The idea that self-competence has social elements is important for self-competence theory because it accounts for social comparison processes (e.g., Bandura & Jourden, 1991; Bouffard-Bouchard, 1990) and social facilitation effects (e.g., Arkin, Appelman, & Berger, 1980; Baumgardner & Levy, 1987; Bradley, 1978; Cottrell, Wack, Sekerak & Rittle, 1968; Reis & Gruzen, 1976). However, Tafarodi and Swann's (2001) posited social dimension of self-competence still needs to be more fully explained in the underlying theory.

A study by Tafarodi and Milne (2001) highlights this point. Tafarodi and Milne (2002) administered the Self-competence/Self-Liking Scale (Tafarodi & Swann, 1995) and the Self-Esteem Scale (Rosenberg, 1979) to 1,648 participants to test the predictions that (1) self-competence would be more thematically matched to negative achievement-related events than social events involving negative evaluation by others, and (2) self-liking would be more responsive to social events involving negative evaluation than to achievement related events. The findings suggested that self-competence and self-liking were associated with the ability to recognize negative but not positive trait words that were uniquely associated with each dimension. That is, people with low self-competence were better than people with high self-competence at recognizing common words suggestive of failure or inefficacy and people low in self-liking were better at recognizing common words related to low self-worth (Tafarodi & Milne, 2001). These results indicate that self-competence may be more task orientated. However, the

paradoxical relationship between self-competence and self-liking suggests that there is a social dimension to self-competence (e.g., Aidman, 1998; Bosson & Swann, 1999; Tafarodi, 1995, 1998; Tafarodi, Lang & Smith, 1999; Tafarodi & Milne, 2002; Tafarodi & Swann, 1996; 1998, 2001; Tafarodi, Tam & Milne, 2001; Tafarodi & Vu, 1997; Tafarodi & Walters, 1999).

Studies have shown that people with low self-liking and high self-competence tend to interpret and remember negative social feedback whereas people with high self-liking and low self-competence tend to interpret social feedback positively and forget critical appraisals of their personality (Tafarodi, 1995, 1998; Tafarodi, Tam & Milne, 2001; Tafarodi & Vu, 1997). It is possible that differences in social competence beliefs may account for these contrasting paradoxical relationships. People with low self-liking and high self-competence should have low social competence beliefs that should affect the way that they construe their social performances. In contrast, people with high self-liking and low self-competence should have high social competence beliefs that should enable them to dismiss negative social feedback and focus on positive social feedback.

The high correlation of the two constructs is problematic for several reasons. First, the high correlation of the constructs diminishes both the unique predictive validity of each construct as well as evidence of their discriminant validity (Taforodi & Swann, 2001). The high intercorrelations of scale items do not reveal the true correlation of self-competence and self-liking. Rather, it suggests that a limited amount of unique variance for each construct is accounted for. The true correlation of the two constructs can be ascertained through the removal of shared variance, although this action tends to distort the latent constructs that the smaller correlations represent (Tafarodi & Swann, 2001).

Tafarodi and Swann (2001) suggested that the high correlations between the two constructs could also be explained by method factors. For example, *halo effects,* which are negative or positive biases of judgements across different groups of items, contextual factors and the semantic interdependence of some items on the Self-Liking/Self-Competence scale. These limitations of measurement suggest that the true extent of any overlap between the two constructs needs to be further examined.

Second, it can be inferred from the high correlation of constructs that there is a single self-esteem factor that dominates over the semantic distinctions made in the self-liking/self-competence model. This reasoning implies that a third higher-order dimension of global self-esteem may exist (Rosenberg, 1979). The position adopted by the researchers has been to negate this proposition on the basis that the two constructs define self-esteem in the same way that length and width define a rectangle (Tafarodi & Milne, 2002; Tafarodi & Swann, 1995). That is to say, the high correlation between constructs is simply an interaction of two higher-order constructs that function together as the most parsimonious explanation of self-esteem (Tafarodi & Milne, 2002). Even if these propositions are true, there is no way of predicting which of the two constructs will predict a particular behaviour. The lack of precision in the Self-Liking/Self-Competence scale means that self-competence researchers will find it almost impossible to develop hypotheses to test the two-dimensional model of self-esteem.

In the next section, I discuss evidence for the role of self-protection in the self-competence literature. First, I review evidence that social factors are potential sources of threat to self-competence beliefs. I propose that the different ways that people cope with threats to their self-competence from social sources introduces the need for a construct

that explains the self-protective strategies that people use in order to protect their self-competence beliefs. Then, I review the different ways that some researchers have found people respond to threat. Finally, I argue that self-efficacy theory (Bandura, 1997), self-competence theory (Williams and Lillibridge, 1992) and self-competence/self-liking theory (Tafarodi & Swann, 1995) do not explain the self-protective processes that may be operating to protect self-competence.

<center>The Case for Self-Protection</center>

<center>*Evidence for the Role of Self-Protection*</center>

Self-Efficacy, Stress and Coping

Self-efficacy studies have revealed that when people feel threatened, they experience certain physiological responses that assist them to reduce the negative effects of stress (e.g., Bandura, Taylor, Williams, Mefford & Barchas, 1985; Biran & Wilson, 1981; Dematatis, 2006). For example, when Bandura et al. (1985) investigated the hypothesis that self-efficacy mediates the relationship between anxiety and stress, they found that participants were less affectively aroused when they were confident that they could cope with the potential threat but their heart rate, blood pressure and catecholamine reactivity (epinephrine, norepinephrine and dopac activity) increased when they believed that they could not cope. Their epinephrine and norepinephrine levels declined rapidly as soon as they withdrew from the task and their dopac levels returned to normal once their anxiety had fully habituated. One implication of this finding is that catecholamine reactivity is a biological self-protection mechanism that assists people to perceive a threat. These results are important for self-competence theory because they suggest that self-

competence may be connected to the biological functions that help people to cope with threat.

In addition to there being biological mechanisms of self-protection, research has also shown that cognitive coping style is a strong predictor of how people respond in threatening situations (e.g., Beehr, Johnson & Nieva, 1995; Latack & Havlovic, 1992; Wanberg, 1997). Organisational studies on stress and coping have revealed that high self-efficacy is associated with active and adaptive coping and low self-efficacy is associated with negative psychological and behavioural changes (e.g., Bhagat & Allie, 1989; Kahn & Long, 1988; Theorell & Karasekl, 1996; Jex, Bliese, Buzzell & Primeau, 2001; Terry & Jimmieson, 2003; Terry, Tonge & Callan, 1995).

The cognitive model of stress and coping (Lazarus, 1999; Lazarus & Folkman (1984) posits that people's feelings, thoughts and actions in response to stress depends on cognitive appraisals of the situation and coping strategies. The emotional consequences of threat are not fixed, but are influenced by both individual and situational factors. Research has shown that problem-focused coping, which refers to attempts to alter or manage a situation, is more adaptive than emotion-focused coping, which refers to attempts to alter or manage emotional distress (e.g., Billings and Moos, 1981; Kahn & Long, 1988; Kinicki & Latack, 1990; Lazarus & Folkman, 1984). Self-efficacy studies have shown that people with high self-efficacy who utilise problem-focused coping strategies cope better with organisational change (Amiot, Terry, Jimmieson & Callan, 2006; Ashford, 1988; Wanberg & Banas, 2000). In contrast, people with low self-efficacy are more focused on their emotional distress from their failure to deal adequately with the situation (e.g., Amiot et al., 2006; Blake & Saks,

2000; Brief, Burke, George, Robinson & Webster, 1988; Carver, Scheier & Weintraub, 1989; Ellen, 1988; Jimmieson, Terry & Callan, 2004; Jones, 1986; Lazarus, 1990; Saks, 1995; Stumpf, Brief & Hartman, 1987).

Other research has shown that the effectiveness of coping style depends on the combination of type of stressor, coping style, and ability beliefs (e.g., Jex et al., 2001; Schauebroeck & Merritt, 1997). For example, Jex et al. (2001) investigated whether problem-focused and emotion-focused coping styles influenced the impact of self-efficacy on work-related stress. They found that self-efficacy moderated the effect of some stressors when it was combined with problem-focused coping but not when emotion-focused coping was used. Emotion-focused coping negatively affected the relationship between work overload and psychological stress but had no impact on the relationship between role clarity and stress. In contrast, problem-focused coping positively affected the effects of low role clarity on psychological strain in people with high self-efficacy. However, the researchers concluded that if high self-efficacy was not combined with an effective coping style, then people with high self-efficacy may not have adapted to stress any more effectively than people with low self-efficacy. Thus, how well people cope with work stress seems to depend on the congruence between their coping style and ability beliefs.

While some studies suggested that emotion-focused coping is maladaptive (e.g., Beehr, Johnson & Nieva, 1995; Keoske, Kirk & Keoske, 1993) and is a strong predictor of psychopathology (Hooberman, 2008; Sasaki & Yamasaki, 2007; Watson & Sinha, 2008) and negative affect (O'Brien, Terry & Jimmieson, 2008), other studies have shown that an emotion-focused coping style can lead to adaptive action (e.g., Ross,

2008; Moskowitz, Folkman, CoUette & Vittinghoff, 1996; Stone, Kennedy-Moore & Neale, 1995; Yamasaki, Sakai & Uchida, 2006). For example, Moskowitz et al. found that higher levels of negative affect led to greater dependence on the seeking of emotional support, a form of emotion-focused coping that they considered was adaptive. Additionally, Yamasaki et al. found that negative affect enhanced emotion expression in women, another form of emotion-focused coping that is seen to be adaptive. Therefore, in some situations emotion-focused coping may lead to proactive and positive behaviour that could potentially enhance social and task performance. No research has examined the effects of emotion-focused coping on social and task competence and social and task performance. Therefore, it is not known if emotion-focused coping interacts with social and task competence to advantage or disadvantage social and task performance.

One implication of the findings from studies on emotion-focused coping is that it is necessary to examine self-competence in conjunction with the specific types of cognitive appraisals that people make in response to stressful work events. The extent that a situation is evaluated as being stressful depends on whether the negative influence is judged to exceed coping skills (Lazarus & Folkman, 1984). The evidence shows that cognitive appraisals of stressful events lead to different coping expectancies and in turn, different coping styles (e.g., Ozer & Bandura, 1990; Liltchfield & Gow, 2002). For example, Skinner and Brewer found that a challenge appraisal style (interpreting a stressful event as challenging rather than threatening) was associated with more confident coping expectancies and a proactive coping style. As people with high self-competence should expect that they can cope effectively, they should engage in

challenge appraisals and in turn, be more proactive solving problems than people with low self-competence, even if they are slightly anxious.

This idea is supported by research that has shown that threat and challenge can be experienced simultaneously (e.g., Carver & Scheier, 1994; Folkman & Lazarus, 1985; Lazarus & Folkman, 1984). When people expect that they can cope effectively, mild anxiety may motivate them to perform to a higher level (e.g., Carver, 1996; Carver & Scheier, 1988). For example, research has shown that athletes interpreted moderate levels of anxiety as slightly beneficial when coping and goal attainment expectancies were high and slightly harmful when the same expectancies were low (e.g., Jones & Hanton, 1996; Jones, Swain, & Hardy, 1993). One implication of this finding is that emotion-focused coping may function along a continuum from mild anxiety that signals the need to engage in proactive and adaptive self-protective action to severe anxiety that triggers loss of concentration and behavioural and mental disengagement from the stressful situation. More research is necessary in order to account for the potentially self-protective role of emotion-focused coping in social and task competence and work performance.

Evidence of Defence Mechanisms

According to Epstein (1994), defence mechanisms operate in the cognitive unconscious like most information processing. The cognitive unconscious parallels the conscious part of the mind and adaptively and automatically regulates behaviour (Epstein, 1994). Research has shown that an unconscious inference or attribution process underlies the subjective experience of perceiving (e.g., Marcel, 1983; Trope, 1986) and remembering (e.g., Jacoby, Kelley, & Dywan, 1989; Ross, 1989).

Isolation. Evidence from the social psychological literature indicates that the impact

of threatening information is substantially reduced by defensive selectivity, which

occurs when people unconsciously minimise the amount of time that they spend

attending to unpleasant thoughts (Baumeister & Cairns, 1992; Hansen & Hansen, 1988;

Weinberger, Schwartz & Davidson, 1979). Defensive selectivity resembles the defence

mechanism of isolation, which refers to a tendency to respond to threatening

information by dismissing it as an isolated incident that is irrelevant to the self-concept

or identity (Baumeister, Dale & Sommer, 1998).Baumeister and Cairns (1992) found

that repressors successfully minimised threatening information to the extent that they

failed to recall it[3]. Research has also shown that minimising threatening information

helped defend against negative affect (Baumeister, Stillwell & Wotman, 1990: Hixon &

Swann, 1993; Schul & Schiff, 1995; Simon, Greenberg & Brehm, 1995; Wegner,

Schneider, Carter & White, 1987; Vallacher & Wegner, 1985). For example, Hixon and

Swann (1993) gave people different amounts of time to process positive and negative

feedback and found that when people had to respond quickly they dismissed negative

feedback and embraced positive feedback about themselves, and so, protected their

positive self-appraisals. Schul and Schiff (1995) provided failure feedback either before

or after performance standards had been presented to participants and found that

participants' positive self-evaluations did not change when they received failure

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[3] Repressors are people who make unconscious cognitive efforts that facilitate the systematic, motivated avoidance of threatening information about the self by enabling them to perceive and interpret events in a way that promotes a favourable view of the self to be sustained (Baumeister, 1996).

performance feedback provided that they kept the feedback isolated from performance standards. Simon et al. (1995) found that participants used trivialization (a construct similar to isolation) to reduce inconsistency in their reported attitudes about an exam issue. Thus, it is possible that people may cope with threats to self-competence by mentally isolating them from other events in order to reduce their impact.

Denial. In addition to isolation, the defence mechanism of denial also has strong empirical support in the social psychology literature (for a review, see Baumeister, Dale & Sommers, 1998; Carver, Scheier & Weintraub, 1989; Furnham & Traynar, 1999; Thompson & Schlehofer, 2008; Wiebe & Korbel, 2003). Denial refers to "the simple refusal to face certain facts" (Baumeister et al., p. 1107). For example, studies have found that people make unrealistically positive reappraisals of themselves, their perceived ability to cope and their perceived degree of control as a way of denying threat to the self (for a review, see Blaine & Crocker, 1993; Taylor, 1989; Taylor & Brown, 1988, 1994). These cognitive biases are posited to be adaptive because they protect the self by maintaining, or even enhancing, self-esteem (Taylor; Taylor & Armor, 1996; Taylor & Brown, 1988, 1994).

Thompson and Schlehofer (2008) found evidence of two types of denial processes: *optimistic denial* and *avoidance denial*. Optimistic denial refers to the perception that one is generally at low risk for threat (Thompson & Schlehofer, 2008). An example of optimistic denial would be the belief that bad things will not happen. Avoidance denial refers to avoidance of threat (Thompson & Schlehofer, 2008). An example of avoidance denial would be the tendency to avoid anything that serves as a reminder of risky behaviour. These two types of denial are similar to the types of denial identified by other

researchers (e.g., Wiebe and Korbel, 2003). Wiebe and Korbel (2003) distinguished between denial of facts, denial of implications (similar to optimistic denial) and defensive avoidance (similar to avoidance denial). Thompson and Schlehofer (2008) found that high avoidance denial was associated with less dispositional optimism, more self-deception, less neuroticism and less worry about identity theft, whereas high avoidance denial was associated with less dispositional optimism, less self-deception, more neuroticim and more worry about identity theft[4].

Other research has shown that denying negative feedback by making external attributions for failure such as pointing out that a task was difficult or finding fault with a task is the most common excuse that people use to protect their positive self-evaluations (Pysczynski, Greenberg & Holt, 1985; Schlenker, Weigold & Hallam, 1990; Wyer & Frey, 1983). For example, Kernis, Cornell, Sun, Berry and Harlow (1993) found that people with unstable high self-esteem tended to blame a task as being unfair when they performed poorly on it in order to protect their self-esteem. Additionally, Martin, Marsh and Debus (2001) found that self-handicapping was positively correlated with external attributions of failure ($r = .43$, $p < .05$) and external attributions of success ($r = .42$, $p < .05$). Self-handicapping is defined as a strategy used to avoid negative evaluations by placing an obstacle (handicap) in the path of an evaluation so that possible failure can be attributed to the obstacle rather than the person (Jones & Berglas, 1978)[5]. A review of 38 studies on attributions by Zuckerman (1979) found that people

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[4] Optimistic denial formed the basis of the scale developed in this thesis.

[5] Self-handicapping is a strategy that is related to the impostor phenomenon (Want & Kleitman, 2006). The impostor phenomenon is experienced by people who belief that

made more external attributions for failure than they did for success. The tendency to make more external attributions after failure suggests a self-protective orientation.

Reaction Formation. Recall from Chapter 2 that reaction formation is the tendency to counteract negative feedback indicating the presence of an unacceptable trait by responding in the opposite way. Reaction formation occurs when self-reappraisals paradoxically rise in response to negative feedback (Baumeister, Heatherton & Tice, 1993; Greenberg & Pyszczynski, 1985; McFarlin & Blascovich, 1981). Support for the existence of reaction formation in the social psychology literature comes from research that shows that people with high self-esteem responded to failure by attempting to prove their superiority in other areas (Baumeister, 1982; Baumeister & Tice, 1985). For example, Baumeister et al. (1993) found participants with high self-esteem did not adopt a defensive position when they could not cope and set risky and inappropriate goals that exceeded their performance abilities instead. McFarlin and Blascovich (1981) found that people with high self-esteem made more optimistic predictions for future performance following initial failure on a task compared to task success. Greenberg and Pyszczynski (1985) showed that people positively inflated their self-ratings in response to negative feedback that was seen by other people or privately. There is even research that has shown that people with low self-competence who are motivated to perform successfully compensate for the self-doubt in their abilities by overachieving (Arkin & Oleson, 1998; Oleson, Poehlmann, Yost, Lynch, & Arkin, 2000). An assumption of overachieving is that overachievers worry about the negative implications of failure for their competence.

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their success is fake and attributable to bad luck, charm or extra hard work. Hence, they avoid situations where they may be "found out".

This evidence suggests that there is a need to consider reaction formation as a mechanism of self-protection for social and task competence beliefs.

The Lack of a Self-Protection Component in Contemporary Theories of Self-Competence

Self-Efficacy Theory

It is assumed in self-efficacy theory (Bandura, 1997) that all motivated behaviour is consciously controlled. Bandura (1997) dismissed the influence of unconscious processes in the relationship between self-efficacy and performance on the basis that irreconcilable differences exist between psychodynamic and social cognitive theories. Bandura (1997) argued that these differences render psychodynamic theory and social cognitive theories incompatible from the perspective of a unified conceptual framework. However, social psychological research suggests that the process of protecting self-efficacy beliefs may be both conscious (Kahn & Long, 1988; Kinicki & Latack, 1990; Lazarus & Folkman, 1984) and unconscious (Baumeister, Dale & Sommer, 1998; Taylor, 1989; Taylor & Armor, 1996; Taylor & Brown, 1988). Therefore, self-efficacy theory needs to account for the relationship between self-efficacy and unconscious cognitive processes.

Bandura (2000) also theorised that coping efficacy beliefs affect

"how much stress, anxiety and depression [people] experience in threatening or taxing situations. Those who believe they can manage threats and adversities view them as less inimical and act in ways that reduce their aversiveness or change them for the better. People have to live with a psychic environment that is largely of their own making. Many human distresses result from failures of control over perturbing thoughts. Beliefs

of coping efficacy facilitate the exercise of control over perturbing and dejecting rumination" (p. 213)

Bandura (2000) does not state what cognitive processes could be involved when people fail to control their perturbing thoughts. Furthermore, how people prevent perturbing thoughts or regain control over their perturbing thoughts is not clearly articulated in the underlying theory. According to Bandura (1997), defence mechanisms occur in a different self-regulatory system to self-efficacy. Hence, they are independent of self-efficacy. However, Bandura's own research on self-efficacy (e.g., Bandura et al., 1985) does not support this proposition. For example, a low self-efficacy expectation (I will not cope) combined with negative outcome expectations (I will not succeed) influenced catecholamine reactivity and subsequent avoidance of an interaction with a phobic object (Bandura et al., 1985). Results such as these imply that self-efficacy is directly associated with a self-protective orientation rather than being independent of it.

An Organisational Model of Self-Competence

According to the organisational self-competence model (Williams and Lillibridge, 1992), self-competence is at the centre of how people maintain personal control. Strong beliefs about abilities are predicted to instil a strong sense of personal control that not only equips people with the mental strength to regulate stress and anxiety but also motivates them to exercise environmental control. Indeed, the research findings support this proposition (e.g., Bandura, 1986, 1989; Bandura, Taylor, Williams, Mefford & Rarchas, 1985; Bhagat & Allie, 1989; Kahn & Long, 1988; Karasek & Theorell, 1990; Terry & Jimmieson, 2003; Terry, Tonge & Callan, 1995; Wood & Bandura, 1989).

However, their model fails to account for the processes that may be involved when people suddenly become fearful that they will lose control. Recall that Williams and Lillibridge (1992) proposed that the cognitive mechanisms of persistence, attributions, goals and coping mediate between self-competence and performance. It is arguable that attributions and coping mechanisms have a strong self-protective orientation. However, Williams and Lillibridge (1992) failed to clearly articulate that these mechanisms are self-protective components in their theory.

Williams and Lillibridge (1992) assume that people chronically set goals and adjust patterns of their behaviour to match those goals using reactive feedback from within the global self-evaluative system as a guide. Their idea that perceived input is sourced externally and consciously through performance feedback does not account for unconscious influences like the perception of threat sourced internally, and associative defensive self-regulation. Carver and Scheier (1998) make the point that feedback loop systems are dynamic and interrelated; components in each system are highly sensitive to changes in one or more components in the same and other systems. Therefore, each system is responsive to outputs in the same and other systems. For example, self-competence loops would be responsive to changes in performance and performance feedback which may affect other systems that self-competence interacts with, such as positive feedback loops for defensive processes. Williams and Lillibridge (1992) appear to overlook the potential reactive outcomes for self-competence created by multiple positive and negative feedback system interactions involving defensive processes.

Williams and Lillibridge (1992) also assume that goal pursuit is necessarily positive. Although they proposed that goals are modified through cognitive appraisals of

feedback about performance outcomes, they do not explain how negative emotional responding may be related to self-competence through these processes. That is, it is possible that self-competence is also responsive to unconscious defensive processes that are subject to the processes of self-regulation.

Self-Competence/Self-Liking Model

The self-competence/self-liking model (Tafarodi & Swann, 1995) does not link self-competence and self-liking to self-protection. Yet the results of research that has been prompted by this model suggest that there is a need for the model to account for defensive processes (e.g., Hixon & Swann, 1993; Tafarodi, Marshall & Milne, 2003; Tafarodi, Tam & Milne, 2001).

Tafarodi and Swann (1995) predict that self-evaluations of competence increase personal agency by acquiring a positive value that is experienced as part of personal identity. This reasoning contains the assumption that evaluations of performance failures diffuse without decreasing self-competence or identity. However, people who are weighed down by self-doubt and low sense of self-worth contradict the notion that failed performances are dismissed cursorily (for reviews, see Barnett, Raudenbush, Brennan, Pleck & Marshall, 1995; Campbell, 1990; Campbell & Lavallee, 1993; Chew, Scratchley, 1991; Kernis, Paradise, Whitaker, Wheatman & Goldman, 2000; Roberts & Monroe, 1994; Tennen & Hertzberger, 1987).

A study by Tafarodi, Tam and Milne (2001) manipulated participants' recognition memory on a word recognition task in order to measure the magnitude of memory biases in people with paradoxical self-esteem (low self-liking and high self-competence, high self-liking and low self-competence) and non-paradoxical self-esteem (high self-liking

and high self-competence and low self-liking and low self-competence). The results showed that a memory bias for trait words about low social worth was the most evident for people with low self-liking and high self-competence. The researchers speculated that the stronger the memory bias of people with low self-liking and high self-competence was, the more insulated and intractable their self-liking was from social influence. This raises the possibility that the process of denial was operating in this population. Denial processes could have protected people with low self-liking and high self-competence from the effects of social influence. The heightened selectivity processes of people with low self-liking and high self-competence could have enabled them to filter out negative information in a defensive effort to protect their self-esteem.

Another possibility is that beliefs in social and task abilities may be disproportionate in paradoxical low self-esteem (low self-liking and high self-competence and low self-competence and high self-liking). Thus, people with low self-competence and high self-liking may perceive themselves as "I am bad at what I do in team situations, good at what I do when I am alone and overall I like who I am". Whereas the belief "I hate myself even though I know that I am capable of working in a team situation and doing my job on my own" would be more representative of people with low self-liking and high self-competence. The paradox is that both types of beliefs fly in the face of evidence suggesting that the opposite was true (e.g., Hixon & Swann, 1993; Tafarodi, Marshall & Milne, 2003; Tafarodi, Tam & Milne, 2001). For example, the memory biases that have been observed in people in people with paradoxical self-esteem reduce the influence of social evaluation on identity threatening information through selective perception, interpretation and memory (Tafarodi, Tam & Milne, 2001).

The selective perception, interpretation and memory of people with paradoxically low self-liking are consistent with the defense mechanism of reaction formation. In support of this idea, Hixon and Swann (1993) found that when people thought about negative feedback for longer, they were more inclined to deny negative connotations and find merit in the negative feedback similar to paradoxical self-esteem.

Tafarodi, Marshall and Milne (2003) replicated Hixon and Swann's (1993) findings in two studies but in their third study they found that self-liking, independent of self-competence, was negatively associated with memory for failure-related trait words. However, the association occurred only when performance outcomes were described as diagnostic of social worth rather than ability, suggesting selective activation of self-liking. In contrast, when performance outcomes were perceived to reflect ability, self-competence, independent of self-liking, was negatively associated with memory for failure-related trait words, suggesting selective activation of self-competence.

These findings led the researchers to speculate that information and experiences related to low social worth or low abilities are most relevant to those who see themselves as embodying these deficits. Greater personal relevance appears to enhance the strength and efficiency of encoding such that the resulting memory traces are more easily retrieved in the future. However, these results are also consistent with the notion that the defence mechanism of reaction formation was activated. Recall that reaction formation is concerned with behaving oppositely whenever a threatening stimulus is perceived. The selective activation of self-competence or self-liking in people with paradoxical self-esteem is reminiscent of reaction formation processes. Therefore, there

is a need for these self-protective processes to be accounted for in the self-competence/self-liking model.

Conclusions

Cognitive processes are emphasised as determinants of performance that reciprocally influence each other in the three theories that have been reviewed in this chapter. The cognitive determinants of performance have received considerable attention in the literature. The research findings indicated that the self-competence mechanism plays a central self-regulatory role in goal setting, motivation, analytical thinking and self-evaluation (for reviews, see Multon, Brown & Lent, 1991; Sadri & Robertson, 1993; Stajkovic & Luthans, 1997; 1998).). However, the research on self-competence has largely been focused on understanding the basic processes and cognitive mechanisms that are involved in the relationship between task competence and task performance. Hence, the relationship between social competence and social and task performance has not been widely investigated. Research findings suggesting that the relationship between self-efficacy and task performance is not that robust (e.g., Sadri & Robertson, 1993; Stajkovic and Luthans, 1998) should encourage researchers to consider how social processes potentially shape beliefs about abilities, and in turn social and task performances.

The nature of self-protection and its relationship with self-competence was not clearly articulated in the self-efficacy theory (Bandura, 1977), self-competence theory (Williams and Lillibridge, 1992) or self-competence/self-liking theory (Tafarodi & Swann, 1995). However, the evidence on stress and coping (e.g., Bandura et al., 1985;

Lazarus & Folkman, 1984) and defensive mechanisms (for a review, see Baumeister, Dale & Sommer, 1998) suggested that there is a component of self-protection in the relationship between self-competence and performance. The idea that conscious cognitive processes may be interacting with unconscious cognitive processes through coping style and defensive mechanisms in order to protect self-competence needs to be accounted for in any self-competence theory. In addition, researchers need to design studies that are aimed at investigating the nature of any crossover effects that might exist between conscious and unconscious processes so that the interaction of social and task competence and self-protection can be better understood.

In the next chapter, the social and task competence model is described. The social and task competence model takes into account the research findings on self-competence and simultaneously attempts to elucidate the dimensions of social and task competence and self-protection as they may relate to social and task performances.

CHAPTER 4: THE SOCIAL AND TASK COMPETENCE MODEL

Summary

In Chapter 4, I present the social and task competence model. First, I define self-competence. Then, I discuss current conceptualisations of self-competence and the need for two distinct constructs: task and social competence. Next, I define task competence and clarify its dimensions. Then, I define social competence and clarify its dimensions. I then discuss the importance of self-protection in any model of self-competence. I define the construct of self-protection and its four dimensions: reaction formation, isolation, denial and emotion focused coping. Finally, I present the research questions and specify the hypotheses that I investigated in my research program.

Introduction

My review of the literature on self-competence in Chapter 3 showed that the relationship between self-competence and performance is not that well understood. One reason that the relationship between self-competence and performance may be unclear is that researchers have operationalised the construct differently. That there is a struggle among researchers to find a precise definition of self-competence is demonstrated by researchers who have treated the construct as a close empirical relative of self-esteem (Brockner, 1979; Brockner, Derr & Laing, 1987; Korman, 1970; Pierce, Gardner, Cummings & Dunham, 1989; Sandelands, Brockner, & Glynn, 1988; Tharenou & Harker), as a dimension of self-esteem (Harter, 1990; Tafarodi & Swann, 1995), as a subordinate of self-efficacy (Bandura, 1977, 1986) and as its superordinate (Williams

and Lillibridge) as well as a dimension of global self-concept (Epstein, 1994; Hattie, 1992).

The robustness of research on self-efficacy is further challenged by differences in how self-efficacy has been operationally measured (Lee & Bobko, 1994). Lee and Bobko (1994) extracted five operational definitions of self-efficacy from the literature and determined that self-efficacy's magnitude, strength, generality or combinations of these indices were the most popular measures. However, it is unclear which of these three indices exerted the most influence on self-efficacy and performance.

The magnitude of self-efficacy involves ordering tasks according to level of difficulty. Self-efficacy strength refers to the extent that a sense of mastery is experienced and self-efficacy generality refers to the broader scope of some efficacy expectations that allows people to feel competent in more than one situation. The strength and magnitude of self-efficacy are the most common forms of self-efficacy that researchers have measured (Stajkovic & Luthans, 1998). However, complex tasks are multifaceted and thus require a combination of skills and abilities for the task to be completed successfully (Bandura, 1997). Consequently, in order to estimate the full magnitude of the relationship between self-efficacy and performance, multidimensional self-efficacy predictors are needed. Because self-efficacy instruments do not encompass the behavioural, cognitive and affective dimensions of a task or interaction, the "true" relationship between self-efficacy and performance has probably never been measured.

In addition to these observations, the decision rules about which studies to include in meta-analyses on self-efficacy have been inconsistent and resulted in the inclusion of studies that have different definitions of self-efficacy and different measures of self-

efficacy based on overlapping constructs (e.g., Judge & Bono, 2001; Sadri & Robertson, 1993; Stajkovic & Luthans, 1998). Thus, it is difficult to know what self-competence is really referring to and what its dimensions really are. The first aim of Chapter 4 is, therefore, to provide a clearer definition of self-competence. The second aim of Chapter 4 is to describe a new model of self-competence, the social and task competence model, that takes into account my observations and conclusions from the literature that I reviewed in Chapter 3.

Defining Self-Competence

Problems with Defining Self-Competence

Though the research literature presents some compelling evidence that shows self-competence is a key mechanism involved in self-regulation (for reviews, see Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1997; Tharenou & Harker, 1991), the theoretical independence of the construct is obscured by the lack of a consistent operational definition (Gist, 1987; Hattie, 1992; Williams & Lillibridge, 1992). The struggle to find a precise definition of self-competence is demonstrated by researchers who have treated the construct as a close empirical relative of self-esteem (Brockner, 1979; Brockner, Derr & Laing, 1987; Korman, 1970; Pierce, Gardner, Cummings & Dunham, 1989; Sandelands, Brockner, & Glynn, 1988; Tharenou & Harker), as a dimension of self-esteem (Tafarodi & Swann, 1995), as a subordinate of self-efficacy (Bandura, 1977, 1986) and as its superordinate (Williams and Lillibridge) as well as a dimension of global self-concept (Epstein, 1994; Hattie, 1992).

Although self-competence research has proceeded with vigour, only a few researchers appear to have addressed the issue of conflicting definitions (e.g., Gist, 1987; Williams & Lillibridge, 1992). Despite the lack of conceptual clarity, the differences between the cognitive and behavioural aspects of the construct seem clear. First, there is a difference between perceiving one's own competence and actual competent behaviour per se (Bandura, 1997; Williams & Lillibridge, 1992). The perception of self-competence is that it is a belief that one is capable of producing goal behaviour whereas actual competent behaviour is the behaviour that is produced as a result of the self-competence belief (Williams & Lillibridge, 1992). Second, self-competence beliefs involve appraisals of performances that are influenced more by interpretations of those performances than by the actual performances themselves (Bandura, 1997). Finally, the behavioural side of self-competence involves the motivated pursuit of personal goals by actively engaging the environment whereas the thoughts, beliefs and expectations about self-competence constitute the cognitive side of self-competence (Bandura, 1997; Wood & Bandura, 1989a).

Motivational, Emotional and Cognitive Processes of Self-Competence

Researchers from different theoretical traditions have linked self-competence to motivational, emotional and cognitive processes (e.g., Bandura, 1997; White, 1959). The motivational theorist, White (1959) proposed that self-competence has both motivational and emotional components. Specifically, White argued that people are highly motivated to control their environments, and they experience a feeling of

satisfaction that is equivalent to a sense of competence when they exert control over their environments.

The social-cognitive theorist, Bandura (1997) argued that high self-efficacy motivates people to repeat their past performances more than low self-efficacy does. In contrast to White's (1959) emphasis on the relationship between self-competence and positive emotions, Bandura proposed that self-efficacy controls negative emotions by influencing how people evaluate threatening situations. For example, people with low self-efficacy think negative thoughts when they feel threatened (Bandura, 1997; Lazarus, 1991; Lazarus & Folkman, 1984; Morris, Davis, & Hutchings, 1981). However, research has shown that fears of negative evaluation and worries about poor performance (the hallmarks of a threat appraisal) have an unfavorable impact on performance only when the expected ability to avoid the threat is low. Furthermore, people with high self-efficacy are able to regulate the affective arousal from appraisals of threatening situations through thought suppression and the positive reframing of negative thoughts (e.g., Arch, 1992; Ozer & Bandura, 1990; Sanderson, Rapee & Barlow, 1989). Therefore, self-competence could also regulate people's emotional reactions to threatening situations through cognitive restructuring processes.

Conceptual Differences between Self-Competence and Self-Efficacy

Self-competence and self-efficacy have similar subject matter because they are both concerned with beliefs about personal abilities. However, having the same subject matter does not mean that self-competence and self-efficacy are identical constructs or involve identical processes. First, self-competence and self-efficacy have different reference scopes (Steel, Mento, Davis & Wilson, 1989; Williams & Lillibridge, 1992).

Self-competence refers to the complete set of abilities necessary to perform a specific task (Steel et al, 1989). For example, a complex task would involve developing, testing and selecting strategies, belief in ability to solve problems if they arise, ability to obtain and evaluate information about the problem and choose the best course of action. In contrast, self-efficacy either has a narrower scope and refers to a single ability (e.g., self-evaluated computer ability) in a specific situation (e.g., performance solving mathematical problems) or it has a much wider meaning incorporating shared judgements about group performance such as attributing a team's success to the collective efforts of the team members (Bandura, 1997).

Second, there are differences between the cognitive sides of self-competence and self-efficacy. According to Bandura (1997), self-efficacy involves cognitive appraisals of performances that are influenced more by a person's own cognitive interpretations of those performances than by other people's feedback about the performances. Although self-competence also involves cognitive appraisals of performance, both a person's own cognitive interpretations of performance and other people's performance feedback are likely to play a role in self-competence (e.g., Stone & Stone, 1984) For example, Ms Watson may have high self-competence in preparing her case, but she may also discover that her supervisors think that she has missed some important points. Consequently, although Ms Watson's sense of efficacy may be relatively high, her sense of competence may be relatively low because it is influenced by her own cognitive interpretations of her performance *and* her supervisors' performance feedback.

Conceptual Differences between Self-Competence and Self-Esteem

Self-competence has not only been confused with self-efficacy in the literature, but also with self-esteem. In Chapter 2, I pointed out that James (1890/1948) postulated that the ratio of self-competence to goals determined self-esteem. Additionally, I discussed evidence for the influence of self-competence over self-esteem when threatening thoughts are unconsciously repressed (e.g., Baumeister & Cairns, 1992; Baumeister, Dale & Sommer, 1998; Boden & Baumeister, 1997; Medolia, Moore & Tesser, 1999; Weinberger, Schwartz & Davidson, 1979). The idea that self-competence contributes to feelings of self-worth makes sense because beliefs about personal abilities contribute to people's sense of themselves. Williams and Lillibridge (1992) proposed that self-competence and self-esteem are related because self-competence informs people about their general effectiveness which, in turn, indicates their global self-worth. Tafarodi and Swann (1995, 2001) argued that as a source of self-esteem, self-competence informs people about their global strengths and weaknesses in a way that fosters a sense of control over their environments. Thus, the idea that self-competence contributes to self-esteem should be included in any definition of self-competence.

Summary of Conceptual Differences

Unlike self-efficacy, self-competence is concerned with beliefs about a complete set of abilities for specific situations and involves people's self-evaluations of their own performance *and* their interpretations feedback from other people about their performance. In terms of its relationship with self-esteem, self-competence is either a contributor to generalised self-esteem or else it is a component of self-esteem.

The Need for a Construct of Task Competence

In Chapter 3, I pointed out that task performance was one variable that researchers often measured in studies of the relationship between self-competence and work performance (e.g., Bandura & Adams, 1977; Bandura & Cervone, 1983; Bouffard-Bouchard, 1990; Cervone & Wood, 1995; Cervone, Jiwani & Wood, 1991; Chen et al., 2004; Gist, 1989; Lent, Brown & Hackett, 1994; Lent, Brown & Larkin, 1986; Parajes & Miller, 1994; Whyte & Saks, 1995; Wood & Bandura, 1989a). I argued that most studies of self-competence and work performance have therefore been focused on the study of task competence as it is related to the performance of work-related tasks.

Self-competence theory needs to distinguish between task competence and generalised self-competence. Williams and Lillibridge (1992) defined self-competence as self-appraisals of task abilities in specific work situations. In contrast, other self-competence researchers have defined self-competence in more general terms as "an individual's feelings and confidence about his [or her] abilities in mastering an organizational and work setting" (Wagner & Morse, 1979, p. 451). Hence, self-competence refers to beliefs about abilities generally and in specific situations. Task competence is concerned with task performance and depends on how people think about their task abilities than their general abilities per se. Therefore, task competence is a component of self-competence.

Research has shown that when people are confident in their task abilities, they work harder and longer, strive towards more difficult goals, and think more analytically than people with low task competence (for reviews, see Sadri & Robertson, 1993; Stajkovic

& Luthans, 1998). Thus, the evidence suggests that there is a need for the construct of task competence in self-competence theory.

<p style="text-align:center">*A Definition of Task Competence*</p>

I define *task competence* as beliefs about abilities to control task-related behaviour. A task is one component of a set of actions which accomplish a job, problem or assignment. Task competence is based on people's cognitive interpretations of their task performances and other people's performance feedback about their task performance. Task performance is defined as work-related behaviour that is able to be evaluated as either positive or negative from the perspective of a person's or organisation's effectiveness (Motowildo, Borman & Schmit, 1997). Task performance is a component of work performance (e.g., Borman & Motowildo, 1997; Viswesveran et al., 2005). Thus, task performance is not the same as work performance.

Unlike people with low task competence, people with high task competence should be more confident that they can control their task-related behaviour. As people may perform the same task in different situations and at different points in time, the strength of task competence should vary depending on the situation as well as the person (Williams & Lillibridge, 1992). Hence, the strength of the belief should depend on the particular task and situation as well as the particular person who is performing the task. For example, Ms Watson may have high task competence when it comes to arguing a point of law in the courtroom but low task competence when arguing the same point of law with her law professor. Thus, how task competent people believe that they are is dependent on both the task and the situation.

Possessing a belief that one is competent at performing a task should be distinguished from actual competent task performance (Williams & Lillibridge, 1992). Competent task performance involves effectively completing a task, whereas beliefs about task competence are cognitive processes involving self-evaluations and other people's evaluations of one's own task abilities. Thus, task competence is a psychological component of actual competent task behaviour, and actual competent task behaviour is a consequence of acting on task competence beliefs.

Task competence can also be distinguished from task knowledge and skills. Task knowledge refers to the information that a person has about a task, and skills are the actual abilities that a person possesses (Bandura 1990; Sternberg & Kolligan, 1990). Self-evaluations about task knowledge and skills may influence task competence and also directly affect performance. However, task knowledge and skills should not invariably predict task competence. To illustrate, Ms Watson may understand how to present case studies and yet she may still lose confidence in her ability to make case presentations because of factors that are beyond her control. For example, she may believe that people think that she is poor at case presentations if only one person shows up to listen to her presentation.

Task knowledge is related to the complexity of a task. Complex tasks require higher cognitive abilities (Bandura, 1986). Therefore, the completion of a complex task may fail if people lack the cognitive ability to complete the task even though they may have high task competence for that task. A lack of task knowledge is likely to be only one of many factors that could result in performance shortfalls. Other factors might include

mood, state of physical health and environmental factors. Thus, lack of task knowledge is one of several factors that can lead to low task competence.

In summary, self-competence is a malleable construct that refers to both situation-specific and generalised ability beliefs. Studies of the relationship between self-competence and task performance justify the need for a construct of task competence because they are focused on self-competence and task performance. Therefore, task competence is a component of self-competence. Task competence may be distinguished from actual task performance and task knowledge and skills because it refers to beliefs about specific abilities to control behaviour towards successful task performances.

Dimensions of Task Competence

The evidence from my literature review in Chapter 3 supports the idea that task competence consists of three cognitive components: planning, strategising and persistence (for a review, see Stajkovic & Luthans, 1998).

Planning

The first component of task competence is *planning*. Planning refers to the perceived ability to make plans about how to achieve successful task performance. People with high task competence are more likely than people with low task competence to plan their activities (e.g., Bandura & Cervone, 1983; Bandura & Jourden, 1991; Blustein, 1989; Button, Mathieu & Aikin, 1996; Cervone, Jiwani & Wood, 1991; Locke, Lee, Frederick & Bobko, 1984; Wood & Bandura, 1989; Wood, Bandura & Bailey, 1990). People with high task competence also believe that they can achieve successful performance outcomes when they plan to achieve difficult goals (e.g., Bandura & Wood,

1989; Locke et al., 1984; Lock, Shaw, Saari & Latham, 1981; Taylor, Locke, Lee & Gist, 1984; Wood & Bandura, 1989; Wood et al., 1990). Thus, there is evidence that shows that task competence influences task performance partly due to factors that are related to planning. It follows then that they should possess beliefs about their ability to plan the tasks that they intend to complete. People with high planning should be confident that they can plan how to perform a task successfully. People with low planning should lack confidence in their ability to plan a task successfully.

Strategising

The second component of task competence is *strategising*. Strategising refers to the perceived ability to analyse a task and test different strategies during task performance. When people plan task performance, they are guided by knowledge and metacognitive knowledge about the strategies that will be the most useful in specific situations or to meet specific goals (Flavell, 1979; Mischel, 1981; Sternberg, 1984). Metacognitive knowledge refers to a person's awareness of his or her own abilities and knowledge about how, when and why to use strategies and allocate cognitive resources (Kleitman & Stankov, 2007)[6]. As a belief about whether or not one possesses the ability to strategise effectively in a given situation, strategising is concerned more with a person's

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[6] Metacognitive knowledge is an important aspect of metacognition. Metacognition refers to a person's awareness of his or her own cognitive processes (Kleitman & Stankov, 2007). Theories of metacognition (e.g., Nelson & Narens, 1994; Schraw & Moshman, 1995) differentiate between metacognitive knowledge and metacognitive regulation. Metacognitive regulation is thought to involve planning (choosing the right strategies and allocating cognitive resources before a task), monitoring (awareness of self-understanding and performance during a task) and evaluation (appraisal of performance after a task is completed). As a belief about task abilities, task competence should influence metacognitive regulation processes.

confidence in strategising ability rather than simply noticing the presence of the cognitive process itself. Therefore, strategising is meaningfully related to, but conceptually distinct from metacognitive knowledge.

People with high self-efficacy think analytically about task-related problems and test complex task strategies when they encounter challenging tasks in order to achieve successful task performance (e.g., Bandura & Jourden, 1991; Latham, Winters & Locke, 1994; Wood & Bandura, 1989a). In contrast, people with low self-efficacy focus on their failure when they encounter challenging tasks (e.g., Campbell, 1988; Gist & Mitchell, 1992; Mitchell, Hopper, Daniels, George-Falvey & James, 1994; Ozer & Bandura, 1990; Wood & Bandura, 1989a). When people are focused on their failure, they are restricted in their ability to think analytically and test complex task strategies during task performance.

Research has shown that successful task performance is a question of not only having the right strategies but also knowing when to use them (Meichenbaum & Arsanov, 1979; Turk & Salovey, 1985). Hoffman and Schraw (2009) found that self-efficacy increased problem-solving efficiency through focused effort and strategy use. Locke et al. (1984) found that training in task strategies can affect performance even on a simple task. Locke, Smith, Erez, Chah and Schaffer (1994) found that people who articipated with others in formulating strategies performed significantly better and had higher self-competence than thos who did not participate with other people while formulating strategies. These results extended earlier findings that showed that spontaneously chosen strategies positively affected performance on a more complex task (e.g., Terborg, 1976). Thus, strategising is related to task competence and successful

task performance. It follows then that people should possess beliefs in their ability to strategise on tasks requiring the use of different strategies. People with high strategising should utilise a range of different strategies as part of their analytical thinking during task performance. In contrast, people with low strategising should be more self-focused on their personal deficiencies and should utilise fewer strategies during task performance.

Persistence

The third component of task competence is *persistence*. Persistence is defined as the extent to which a person believes that he or she is able to maintain an action during task performance. Therefore, persistence should influence the length of time that people spend completing a task and the cognitive, emotional and physical effort that they expend during task performance.

There is evidence that people with high self-efficacy persist for longer during task performance than people with low self-efficacy (e.g., Gist & Mitchell, 1992; Multon, Brown & Lent, 1991). Thus, people with high persistence should persist for longer and increase their effort during complex task performance. In contrast, people with low persistence are likely to give up easily when they encounter a challenging task.

Research has shown that high persistence can also be the source of inappropriate persistence on a task (Whyte, Saks & Hook, 1997). Sometimes people may want to disengage from a task but are prevented from disengagement because of social constraints. For example, they may feel embarrassed as a result of disengagement. Research has also shown that the more people there are in a group, the less hard a person is likely to work (Harkins, Latane & Williams, 1980; Latane, Williams & Harkins,

1979). People expend less effort in groups if they think that individual performances will not be identified because they think that they will receive little or no credit or blame for their performance (Latane et al., 1979). Thus, how long people persist during task performance is influenced by the social situation.

People may also be reluctant to give up on a task due to the importance of the task (Carver & Scheier, 1998). However, the result of failure to disengage and disengagement from an important goal is the same: distress (Carver & Scheier, 1998). A solution for this downside of task persistence is for people with high persistence to develop ways to identify strategies that are effective.

In summary, task competence is a multidimensional construct that has three components: planning, persistence and strategising. These cognitive processes exert both independent and combined effects on task performance.

In the next section, I discuss the need to include the construct of social competence in any theory of self-competence. I define social competence and describe its three dimensions: communication, cooperation and identification.

The Need for a Construct of Social Competence

The notion of social competence is not a new idea (Broom, 1928; Gough, 1968; James, 1871/1948; Keating, 1978; Thorndike, 1920; Schneider, Ackerman & Kanfer, 1996), but it is yet to become the subject of its own theory. Existing models of self-competence (e.g., Williams & Lillibridge, 1992) are inadequate because they are focused on the relationship between task competence and task performances and do not address the potential influence of social competence on either task or social

performances. However, people engage in social situations in their workplaces frequently, and often, simultaneously with task performances. For example, people interact with others when they use their Blackberries to write or read email, when they consult supervisors or colleagues about a task and when they work in partnership on a task. Thus, people engage in social performances as well as task performances at work. Social performance refers to any behaviour that takes into account to other people (Higgins, 1992). Social performance is related to contextual performance (Borman & Motowildo, 1997) and involves observing and anticipating other people's behaviour and adjusting one's own social behaviour accordingly. It follows that people need to be socially competent in order to participate in work-related social interactions successfully. Therefore, any theory of self-competence theory needs to explain the effects of social competence on task and social performances.

<div align="center">Definition of Social Competence</div>

Early definitions of social competence equated social competence to the concept to *social intelligence,* the ability to act wisely in interpersonal interactions (Thorndike, 1920). However, by the late 1950s, social intelligence came to be viewed as general intelligence applied to social situations (Goleman, 2006). Later research revealed that while social intelligence may be associated with general intellectual ability (e.g., Gilbert, Pelham & Krull, 1988; Srull, 1981; Srull & Wyer, 1989), it is still differentiable from cognitive abilities (e.g., Ford & Tisak, 1983).

Recently, Goleman (2006) proposed that social intelligence consists of two major ability domains: *social awareness* and *social facility*. Social awareness refers to the

conscious and unconscious cognitive processes that enable a person to (a) sense and understand how another person is feeling and thinking, (b) listen attentively, and (c) know how the social world works. Social facility refers to the conscious and unconscious cognitive processes that enable a person to (a) interact smoothly at a nonverbal level with another person, (b) present themselves effectively, (c) shape outcomes of social situations and (d) feel concern about others' needs. Although Goleman (2006) does not reference social competence directly, his theorising on social intelligence leaves room for the idea that social competence may be a cognitive mechanism that moderates social intelligence. Hogan and Shelton (1998) argued that social abilities moderate between people's intentions and other people's evaluations. It follows that people would not possess intentions to utilise their social skills without perceiving their social competence. There is support for this idea in studies that have shown that social abilities moderate supervisor ratings of workers' social performance (e.g., Witt & Ferris, 2003).

Schneider, Ackerman, and Kanfer (1996) defined social competence as socially effective action that contains elements of social insight, social appropriateness, social influence, social openness, social maladjustment, warmth and extraversion (Schneider, Ackerman & Kanfer, 1996). In contrast, Millers, Omens and Delvadia (1991) defined social competence in terms of the cognitive, perceptual and behavioural skills that enable people to adapt to social situations. They found that social competence was negatively correlated, or uncorrelated, with neuroticism and social anxiety (Millers, Omens & Delvadia, 1991). Thus, social competence has been defined in terms of traits, skills and abilities.

An alterative definition of social competence is the definition of the construct that I adopt in this thesis: beliefs about ability to control social behaviours towards successful social performances. As such, social competence is based on subjective self-evaluations of social performances and other people's feedback about one's social performances. This definition takes into account the perceptions that people have about their actual social competence that give rise to socially competent behaviour. Social competence should moderate the relationship between social abilities and social performance because social competence is beliefs about abilities to control social performances.

Social competence is the psychological component of actual social behaviour that assists people to utilise their social skills and adapt them to their social surroundings. As people encounter social situations from birth and are involved in innumerable social situations throughout the lifespan, they need to learn different social skills and how to utilise them in the social situations that they encounter. Research has shown that the ability to predict the behavior that is needed in a social situation is associated with successful social performance (Snyder, 1974; 1987). Hence, the ability to recognize the emotions, intentions, and thoughts that a social situation requires is an important aspect of social competence (Realo, Allik, Nolvak, Valk, Ruus, Schmidt & Eilola 2003).

Self-presentation is another important aspect of social competence. Research has shown that people present themselves in different ways in social situations (e.g., Banaj & Prentice, 1994; Linville, 1985, 1987; Markus & Wurf, 1987; Snyder, 1974). Furthermore, they closely monitor and utilise feedback about their social behaviour, which in turn influences how they behave in future social situations (Festinger, 1954;

Furnham & Capon, 1982; Stone & Stone, 1984). Thus, how people present themselves depends on the social situation.

Research has shown that people use different *self-presentation strategies* in social situations (Fleming & Rudman, 1993; Leary & Kowalski, 1990; Snyder, 1987). Self-presentation strategies are the behaviours that people use to create, modify or maintain a positive impression of the self in the minds of others in order to maintain self-esteem (Baumeister, 1982; Snyder, 1974). However, the extent that people utilise self-presentation strategies varies (Gangestad & Snyder, 2000; Krosnick & Sedikides, 1990; Turnley & Boline, 2001). For example, high self-monitors utilise more self-presentation strategies in social situations than low self-monitors because they are more sensitive to social cues (Snyder, 1974). Sensitivity to social cues, such as the appropriateness of one's self - presentation depends on both the ability to control the desired social behaviour as well as monitor the impression that is being made. However, people may be able to predict the desired social behaviour and simultaneously not posses the ability to modify or change that behaviour if he or she does not possess the necessary social skills (Pendleton & Furnham, 1980). Social competence provides an explanation for some of the cognitive process that could potentially influence the choice of self-presentation strategies and social behaviour.

Argyle and Kendon (1967) proposed the motivation for self-presentation is to impart information, to confirm self-image or self-esteem and to project a certain role. They proposed that self-presentation is integrally connected with social competence and skill. Argyle, Bryant and Trower (1974) maintained that self-presentation is a social skill that requires the sending of special social signals, such as in one's appearance, accent, the

manner of speaking and style of interaction. Argyle (1978) stressed the importance of feedback and corrective action in interpersonal behaviour. Thus, people with high social competence should recognise and utilise corrective feedback about their social behaviour. In contrast, people with low social competence should have difficulty recognising or utilizing feedback from others about their own and others' social behaviour, which should reduce the frequency of any corrective actions that could be made. They should appear insensitive to the effect that their particular self-presentation has on others and unable to take corrective action should feedback be successfully monitored. This translates to less vigilance about situationally-appropriate self-presentation and less developed repertoires of self-presentation skills. Therefore, social competence may be related to self-presentation through its effect on people's ability to control the self-presentation strategies that they use in social situations.

In summary, there is a need for a construct of social competence because people develop beliefs about their social abilities in social situations. The traditional definitions of social competence have created a loosely defined construct with multiple and hazy dimensions. Additionally, the causal mechanisms that potentially underlie the construct remain unclear. However, it seems that social competence is likely to vary according to the situation, because different social situations represent different social arenas for self-evaluation and interpretation. I defined social competence as beliefs about abilities to control behaviour in social situations. Self-monitoring research supported this idea because it showed that people utilised different self-presentation strategies in social situations (e.g., Snyder, 1974, 1987). Finally, the evidence on self-monitoring pointed to

the possibility that concern over impression management and adaptation in social situations was related both social skills and social competence.

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Dimensions of Social Competence

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Based on my literature review in Chapter 3, I propose that there are three dimensions of social competence: communication, cooperation and identification.

Communication. The first dimension of social competence is *communication*. Communication is defined as the beliefs that people have about their abilities to effectively send and receive verbal and nonverbal messages between themselves and other people. A verbal message refers to the content and manner of a person's speech whereas a nonverbal message refers to a person's physical appearance, style of interaction, rate of gesturing and time spent talking (Baumeister & Leary, 1995). Research has shown that people monitor and adjust their verbal and nonverbal messages in social situations (Snyder, 2001). A person's belief in their abilities to communicate effectively using verbal and nonverbal messages should influence how confident they are at monitoring and adjusting their verbal and nonverbal messages in social situations. Hence, perceptions of ability to communicate should underlie how effective people believe they are at communicating in social situations.

People are likely to evaluate their communication abilities on the basis of their cognitive judgements about how well their ideas, thoughts and feelings are received. If people perceive that they have successfully communicated, then they are likely to feel confident about their communication abilities in social situations. In contrast, judgements of poor communication in social situations may lead to low confidence in personal abilities to communicate in social situations.

Cooperation. The second component of social competence is *cooperation.* Cooperation is defined as perceptions of ability to be flexible and open to change in order to provide practical and emotional support to others. Research has shown that people experience their work environments as more pleasant and satisfying when their co-workers provide practical and emotional support (Schaubroeck, 1998)[7].

The extent that people are motivated to cultivate positive social contact depends on the value or importance that they assign to the interaction. When people are focused on their goals, they are likely to cooperate with other people and work together in order to achieve group goals (Bandura & Jourden, 1991). However, it is their ability to work cooperatively as part of a team that largely determines the success of their social and task performances (Beck, 1983).

Identification. The third dimension of social competence is *identification.* Over the past decade, *organizational identification* has emerged as an important variable (Kreiner & Ashforth, 2004). Organisational identification is "a perceived oneness with an organization and the experience of the organization's successes and failures as one's own" (Mael & Ashforth, 1992, p. 103). Organisations utilize strategies to enhance organizational identification so that their members will act in ways that are perceived to benefit the organization (Fuller, Marler, Hester, Frey & Relyea, 2006). However, people

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[7] Australians are thought to be particularly good at cooperating with their team members because of their ability to communicate and their ability to develop mateship, which assists them to harmonise group processes and encourage team members (http://www.abfoundation.com.au/research_knowledge/opinions/153). Therefore, cooperation with team members appears to facilitate social attachments that are affectively pleasant and lead to positive social interactions.

will not act in ways that they consider will benefit the organization unless they believe in their ability act to so. Therefore, identification is defined as the beliefs that people have about their abilities to act in ways that are perceived to benefit the organisation and includes and includes the beliefs that people have about their ability to commit to the collective identity of organisations.

The ability to identify with a group can be seen as reflecting a broader need to belong to a specific group (e.g., Baumeister & Leary, 1995; Hogg, 1992; Leary & Baumeister, 2000; Tafjel & Turner, 1979) and the social context in which they function (Tajfel, 1978; Tajfel & Turner, 1979). Research on organisational turnover has shown that employees are more likely to remain loyal to an organisation if they identify with the organisation (Abrams, Ando, & Hinkle, 1998; Mael & Ashforth, 1995). Research has also shown that people who are seen as competent tend to enjoy greater social approval and acceptance (Tafarodi & Swann, 1995). Thus, shared perceptions of competence enable people to identify with, and experience a sense of belonging to a group.

In summary, social competence has three components that influence social performance: communication, cooperation and identification. Communication requires people to possess a belief in their ability to communication successfully with other people through verbal and non-verbal messages, whereas cooperation requires that people collaborate with and support other people. Finally, identification is related to the extent that people believe that they can develop and maintain interpersonal ties with significant social groups in the workplace and their ability to commit to the collective identity of organisations.

The Need for a Construct of Self-Protection

Self-protection is an elusive construct because of how it has been defined and measured (Black, 2006). However, self-protection seems to involve (1) people's motivation to promote, maintain and defend a positive view of themselves and (2) protective behaviours that arise from threatening appraisals (Taylor & Brown, 1988; Sedikides, 1993).

Social psychological researchers have found that self-protection processes protect self-esteem (e.g., Baumeister, Dale & Sommer, 1998; Cramer, 2000). The protection of self-esteem involves defending one's self against negative emotional states and is accomplished by maintaining consistency with positive self-conceptions and presenting a positive self-image in social situations (Markus & Wurf, 1987). People tend to feel guarded if they perceive that they are being blamed for their actions, and their self-esteem may be deflated if they accept other people's criticisms (Buss, 1996). When people feel threatened, they react emotionally and generate excuses to convince themselves and others of their righteousness in order to protect themselves from the uncomfortable feelings that are associated with loss of self-esteem (Snyder, 1987). They gather information about themselves that is positive and deny information that is negative (Greenwald, 1980).

Threats to the self may be either directly accessible to conscious awareness or inaccessible because they have been encountered so frequently that people come to expect them, and so they have become automatic (Singer & Salovey, 1984; Silverman & Weinberger, 1985). When people receive information suggesting that their perceptions

of themselves may be wrong, (e.g., perceiving that they are not as competent as they thought), the structure of their self-concept is threatened and they may experience negative changes to their affective state (e.g., they may suddenly feel anxious). Experiencing a negative emotion can cause some people to become emotionally focused and think irrationally (Ben-Zur, 2001; Lazarus, 1990; Terry, 1994; Tversky & Khaneman, 1983). However, experiencing a negative emotion is not always maladaptive (Epstein, Lipson, Holstein & Huh, 1992). In some instances, the function of negative emotions may be extremely useful, despite the psychological discomfort that they cause. For example, Ms Watson's anxiety when making case presentations could motivate her to obtain help to reduce her fear of public speaking. Thus, if negative feelings warn people that something is wrong in their environment, then people should respond to negative feelings by focusing on their causes.

The most obvious response to threat is to try to reaffirm that existing self-perceptions are correct (Markus & Kunda, 1986) or maintain stability of the self-concept by interacting with others who provide support for prevailing self-conceptions (Crocker, 1987). Consistent with this perspective, Baumeister, Dale and Sommers' (1998) literature review revealed evidence in the social psychological literature that supported the defence mechanisms of denial, isolation and reaction formation. The existence of these defence mechanisms suggests that information that threatens the self-concept involves cognitive processes that may not be revealed in global measures of personality (e.g., the NEO-FFI, Costa & McCrae, 1992).

Self-protection processes have not previously been linked to self-competence, even though self-competence is thought to be a vital component of self-esteem (Tafarodi &

Swann, 2001) and performance (Bandura, 1997). In order to develop a more sophisticated measure of self-competence, the issue of how people deal with information that threatens their self-competence beliefs needs to be addressed in the underlying theory. One reason that self-competence theorists (e.g., Williams & Lillibridge, 1992) may not have considered the role of self-protection in the relationship between self-competence and performance is that "defence mechanisms pry open the Pandora's box of assumptions that underlie self-report methodology" (Norem, 1998, p. 896). More specifically, people are only able to report on conscious processes whereas self-protection processes are assumed to be unconscious. Hence, it is difficult to develop well controlled studies that can access unconscious self-protection processes. However, the potential influence of unconscious cognitive processes needs to be addressed if any self-competence theory is to provide a comprehensive account of performance.

Research on attention has shown that stimuli may be attended to consciously and unconsciously (for a review, see Paulhus, 1991). In other research, unconscious memory influenced both conscious memory and task performance (for reviews, see Roediger, 1990; Schacter, 1987). The social psychological literature is also interlaced with evidence supporting the existence of unconscious cognitive processes in the self-regulation of human behaviour (Bargh, 1989; Higgins, 1989; Swann, 1984; Tversky & Kahneman, 1974; 1983). The difficulties that researchers have encountered in the empirical measurement of unconscious self-protection processes is well documented (for a review, see Cramer, 1998). However, a self-report measure that requires people to access memories of their behaviour in threatening situations provide some insight into their unconscious self-protection processes.

In summary, the evidence points to the idea that self-protective processes enable people to process threatening information unconsciously (e.g., Baumeister & Cairns, 1992; Baumeister et al.,1998, Cramer, 1991; Crocker & Park, 2004; Newman, Duff & Baumeister, 1997; Paulhus et al., 1997; Weinberger, Schwartz & Davidson, 1979). If unconscious cognitive processes that perform a self-protective function govern some human information processing then this must have important implications for self-competence theory and measurement. In particular, self-protective processes could protect people from losing confidence in their task and social abilities when they are threatened by task and social failure. Furthermore, self-protective processes could increase the possibility that people remain focused on solving task related problems, rather than become overly emotionally-focused as a result of the negative emotions that are associated with the realisation of task and social failure.

In the next section, I provide a definition of self-protection based on my literature review of the literature in Chapter 3.

Definition of Self-Protection

There have been very few attempts to define self-protection in the literature (Black, 2006). Self-protective processes are likely to be activated when people receive feedback that they are not performing as well as they would like to be (Black, 2006). When inconsistent or unexpected negative information is perceived, an alarm response is activated that signals threat. Biologically, subcortical processes in the brain activate the parasympathetic nervous system to prepare the system for fight or flight (Black). Psychologically, people experience anxiety that is activated by painful memories or

feelings linked to past failure. They become emotionally focussed, and their cognitive interpretations distort reality in self-protective efforts that aim to maintain homeostasis (Black). Thus, self-protection is concerned with the self-protective efforts that people engage in when they receive threatening feedback such as information indicating that they may not be as competent as they perceived themselves to be.

Self-protection appears to involve at least some of the cognitive processes that have been linked to the defence mechanisms of denial, isolation and reaction formation (for a review, see Baumeister et al., 1998). The term "defence mechanism" refers to an unconscious mental operation that functions to protect the ego from the severe anxiety that would be experienced should a threat be perceived (Freud, 1922/1961). It is an abstract conception that explains *self-protective behaviours*, which are overt representations of defence mechanisms that function to protect self-conceptions from threat. Defence mechanisms cause people to behave self-protectively by selectively processing threatening information (e.g., Bargh, 1990; Baumeister & Cairns, 1992; Boden & Baumeister, 1997; Jacoby & Kelley, 1990; Newman, Duff & Baumeister, 1997). Therefore, defence mechanisms distort reality by filtering out threatening information (Cramer, 1998).

Research indicates that when self-esteem is threatened in the laboratory, the use of defence mechanisms is heightened (Baumeister & Cairns, 1992; Boden & Baumeister, 1997; Cramer, 1991, 1997; Cutler, Larsen & Bunce, 1996; Furnham & Traynar, 1999; Mendolia, Moore & Tesser, 1996; Taylor & Brown, 1994). Taylor and her colleagues found that when people are threatened they often exhibit positive illusions in relation to themselves, their ability to cope and the degree of control they have over environmental

events and their future (Taylor, 1989; Taylor & Brown, 1988, 1994). The positive illusions function to protect them from perceiving threat. Such cognitive biases are considered to be adaptive on the grounds that they protect the self by maintaining or even enhancing self-esteem (Taylor; Taylor & Armor, 1996; Taylor & Brown, 1988

Similarly, people who make downward social comparisons often adopt a strategy that enables them to either ignore or minimize the differences between themselves and others in order to protect their self-esteem (Brickman & Bulman, 1977; Major, Testa & Blysma, 1991). Recall that downward social comparison is a defensive strategy that involves people who are threatened comparing themselves to a comparison group who is less fortunate in order to make them feel better (Suls, Martin & Wheeler, 2002). Minimising attention afforded to negative stimuli has been shown to be an unconscious self-protective process (e.g., Baumeister & Cairns; Hughes, Uhlmann & Pennebaker, 1994; Newman, Duff & Baumeister, 1997; Wegner, Schneider, Cater & Wright, 1987). Thus, there appears to be a cognitive unconscious that is, as Epstein (1994) has suggested, "a fundamentally adaptive system that automatically, effortlessly, and intuitively organizes experience and directs behavior" (p. 714). It is possible that defence mechanisms may protect people from perceiving unfavourable self-evaluations that could deplete their social and task competence beliefs. There is no research that has examined whether self-protective processes protect self-competence beliefs.

Based on my literature review in Chapter 3, self-protection is defined as the self-protective strategies that people consciously and unconsciously use when they receive feedback indicating that they may not be as competent as they perceived themselves to be. Self-protection processes appear to be engaged when people feel threatened that they

could lose control of their behaviour and/or the situation. At least some of the processes involved in self-protection are likely to be unconscious. These processes include three Freudian defense mechanisms: isolation, denial and reaction formation. In the next section, I describe the dimensions of self-protection in more detail.

Dimensions of Self-Protection

Following Baumeister, Dale and Sommer (1998) and Lazarus and Folkman (1984), I propose that there are four self-protective processes: emotion focused coping, isolation, denial and reaction formation.

Emotion Focused Coping

The first self-protective process is emotion focused coping. Emotion focused coping refers to the tendency to respond to threatening stimuli by focusing on personal deficiencies and task failure (Lazurus & Folkman, 1984). Research has shown that people with low self-efficacy are likely to focus their attention on feelings of personal incompetence, which leads to psychological distress and failure to deal with the situation (Bandura, 1977; 1982; Bandura, Taylor, Williams, Mefford & Barchas, 1985). In contrast, people who believe that they are competent are likely to devise problem focused coping strategies that assist them to manage the problem situation (Lazarus & Folkman, 1984; Terry & Jimmieson, 2003; Tonge et al., 1995). The emotion focused coping behaviour of people with low self-efficacy may be maladaptive because it leads to irrational thinking (Ben-Zur, 2005; Lazarus, 1989; Terry, 1994; Tversky & Khaneman, 1983). However, emotion focused coping may also be adaptive because it

alerts a person that there is a problem (Epstein et al., 1992). Therefore, it is in this sense that emotion focused coping is self-protective.

Isolation

The second self-protective process is isolation. Here, people respond to threatening information by dismissing it as an isolated incident that is irrelevant to the self-concept or identity (Baumeister et al., 1998). As a defence mechanism, isolation minimises the impact of the threatening idea rather than removing it from conscious awareness. Hence, the threatening information is remembered if associative connections occur.

Isolation has been renamed in the social psychological literature as dissonance reduction (e.g., Schul & Schiff, 1995) and bad memories (e.g., Boden & Baumeister, 1997). Other research has shown that when people distract themselves quickly to dismiss negative feedback they reduced the associative processing of unpleasant events (Hixon & Swann, 1993; Schul & Schiff, 1995; Simon Greenberg & Brehm, 1995). Trivialising the importance of negative feedback is another form of isolation that protects the self from threatening stimuli (Baumeister et al., 1998). In self-regulation terms, people seem to be able to minimise the emotional impact of threatening events by isolating negative feedback from the standard (Baumeister et al., 1998). For example, imagine that Ms Watson dismissed her supervisor's critical appraisal of her case presentation performance as an isolated incident. The supervisor's criticism is an external event that threatens Ms Watson's social and task competence beliefs. However, Ms Watson's dismissal strategy may protect her social and task competence beliefs from disturbing thoughts that suggest that she is not as competent at making case presentations, as she perceived herself to be.

Denial

The third self-protective process, denial, refers to the reduced encoding of threatening information (Baumeister & Cairns, 1992). Here, people respond to unexpected or threatening events by refusing to accept their negative implications. External attributions for failure such as bad luck, task difficulty or flawed sources are thought to be common forms of denial that prevent the realisation of any lack of ability or failure of other good traits (Kernis, Cornell, Sun, Berry & Harlow, 1993; Zuckerman, 1979). Denying the possible implications of threatening information suggests that people are regulating the interpretative meaning that is assigned to the information. It is not certain whether this means that they are preventing it from entering into the conscious decision process (Baumeister & Newman, 1994). Although denial has been shown to have little impact on reducing negative emotions (Carver & Scheier, 1994), it is quite adaptive in other circumstances. For example, high self-esteem has been associated with denial of personal responsibility for failure (Taylor & Brown, 1988).

Reaction Formation

The fourth self-protective process, reaction formation, refers to people responding to threatening information a way that shows them to have the opposite trait (Cramer, 1991).For example, Baumeister, Heatherton and Tice (1993) found that people with high self-esteem made more unrealistically optimistic predictions about their future performance after experiencing an initial failure on a task. Their unrealistically optimistic predictions about their future performance were in the opposite direction of the emotional and physical sensations that they would have experienced when they experienced task failure). People with high self-esteem have also been observed to

inflate their self-ratings in response to unfavourable personality feedback (Baumeister, 1982; Baumeister & Jones, 1978). Again, their positive self-ratings were in the opposite direction to those that would be expected after receiving negative personality feedback. Greenberg and Pyszczynski (1985) observed that inflated self-ratings in response to unfavourable personality feedback were greater when there was a threat that the negative evaluations would be made public. This evidence suggests that some people behave in a opposite direction to the implications of negative feedback in order to protect their self-esteem.

In summary, self-protection is an elusive construct because it has not been clearly defined and empirically measured. One reason that self-protection is difficult to study is that it is likely to involve unconscious cognitive processes that are difficult to measure. However, there is a need for self-protection because people are motivated to maintain a positive view of themselves. People are biologically driven towards self-protection because they are hard wired to respond to respond to threat through the experience of anxiety. The experience of anxiety may lead to an emotionally focused coping style that is maladaptive or adaptive depending on the situation. Isolation, denial and reaction formation are the three Freudian defense mechanisms that are thought to comprise the remaining dimensions of self-protection. I proposed that these self-protection processes enable people to filter out threatening stimuli and in turn, protect self-competence beliefs and social and task performances.

The Social and Task Competence Model

My decision to divide self-competence into two dimensions is based on the inability of the current definitions of self-competence to account for the research findings that indicated self-competence is concerned with beliefs about both social and task abilities. My view of the relationships between social competence, task competence and self-protection and social and task performance is shown in Figure 4.1. The relationships between constructs are proposed relationships based on my theoretical model and have not previously been studied. The circles represent each construct and its dimensions. The arrows show the direction of the relationship between social competence, task competence and self-protection and social and task performance.

Task competence may influence task performance directly or through self-protection. The bidirectional arrow between task competence and task performance indicates that task competence influences task performance, and the outcomes from task performance influence task competence. For example, if Ms Watson has high task competence for litigation, her high task competence would influence her task performance in court. Hence, she should feel confident litigating. Her high task competence indicates that she would be likely to plan how to win her case and strategise and persist in the face of difficulties. If she wins the court case, then this outcome of her task performance should reinforce her high task competence for these types of cases and litigation.

Figure 4.1. The Social and Task Competence Model.
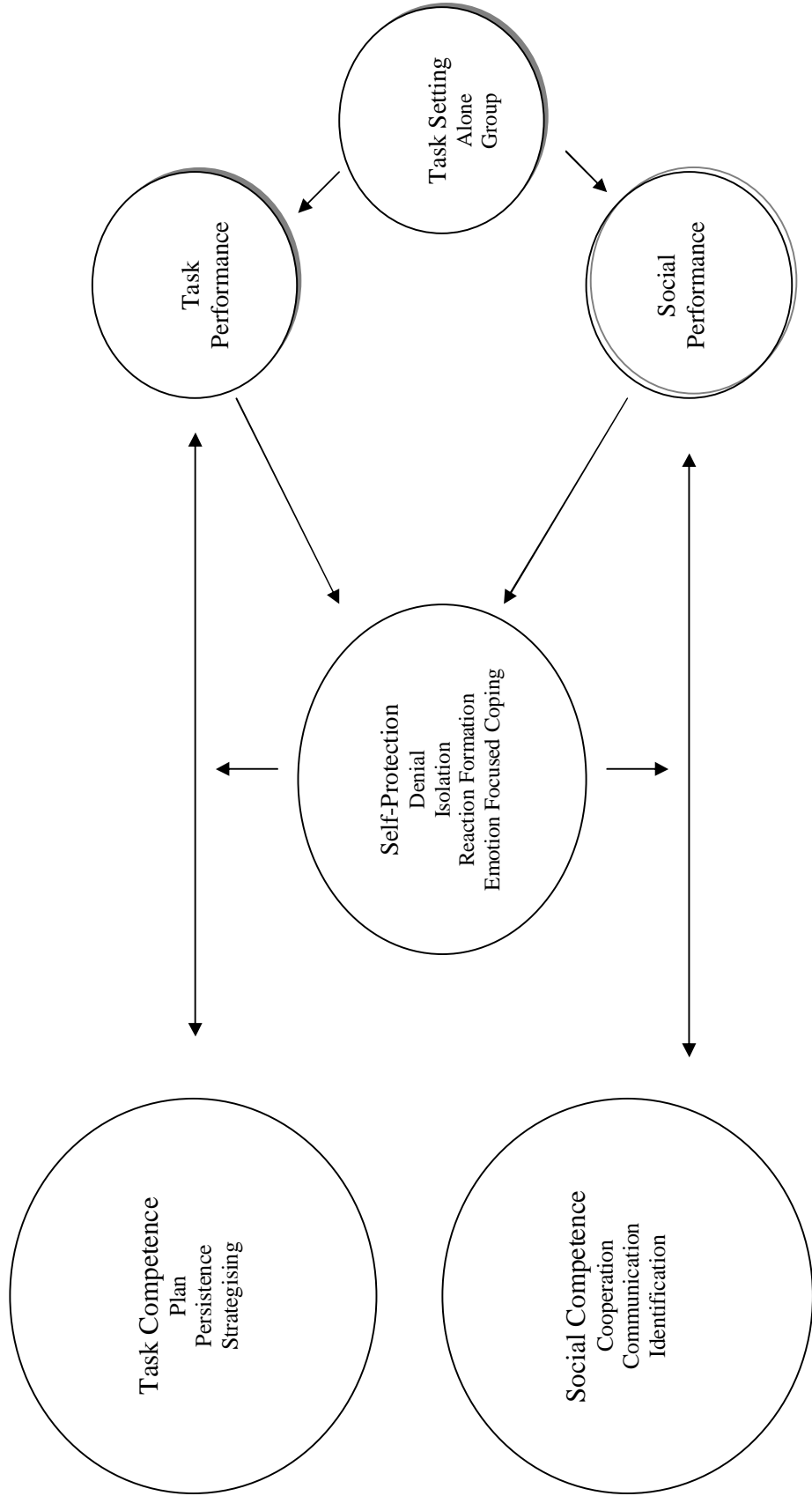
The arrows between task setting and task and social performance indicate that task setting influences task and social performance respectively. The arrow between task performance and self-protection indicates that task performance influences self-protection. The arrow between self-protection and the bidirectional arrow between task competence and task performance indicates that self-protection moderates the effects of task competence on task performance. That is, task competence will be positively related to task performance among people with high self-protection and negatively related to task performance among people with low self-protection. For example, if Ms Watson has high self-protection, then her task competence for litigating should assist her to manage the complexities of her case successfully. If she has low self-protection, then she should not cope as well with the complexities of her case and should produce a poorer performance.

The bidirectional arrow between social competence and social performance indicates that social competence influences social performance and social performance also influences social competence. For example, Ms Watson may clarify with her supervisors a point of law that is relevant to her case. If Ms Watson is confident about her communication abilities, she should communicate her question effectively, and her supervisors should understand the question. Knowing that she has been understood should influence her social competence by reinforcing that she has the ability to communicate effectively with her supervisors.

The arrow between social performance and self-protection indicates that social performance may trigger self-protection processes. The arrow between self-protection and the birdirectional arrow between social competence and social performance indicate that self-protection should moderate between social competence and social performance. That is, social competence will be positively

related to social performance among people with high self-protection and negatively related to social performance among people with low self-protection. For example, Ms Watson might deliver her closing arguments in front of a jury. If she has high self-protection, then she should not notice that many of the jurors are looking confused while she is making her closing arguments and her confidence in her ability to communicate her closing arguments effectively should not deteriorate. Her failure to notice that the juror's are looking confused (denial) should prevent her from perceiving that she is not communicating effectively. If she has low self-protection, then she should notice that the jurors are looking confused and in turn, she should lose confidence in her ability to communicate her closing arguments effectively.

Both a person's own cognitive interpretations and others' feedback about a person's performance are emphasised in the social and task competence model because they are both considered to play a role in determining social and task competence beliefs. It was not appropriate to consider the potential interaction between social and task competence given the close empirical relationship between these two aspects of self-competence. It was not appropriate to consider the potential interaction between social and task competence given the close empirical relationship between these two aspects of self-competence.

Hypotheses Derived from the Social and Task Competence Model

The Effects of Social Competence

Hypothesis 1

People with high social competence should perform better than people with low social competence in social situations. I make this prediction because self-monitoring research has shown that people's effectiveness in social situations depends on how successfully they use their social skills to project their desired self-

images (e.g., Barry & Stewart, 1997; Jones & George, 1998; Marks, 1999; Leach, Wall, Rosellberg & Jackson, 2005; Leary, 1989; Snyder, 1974, 1979; Turnley & Boline, 2001; Webb, Marsh, Schneidermann & Davis, 1989). For example, high self-monitors predict, understand and control their social behaviour better than low self-monitors in social situations (e.g., Snyder, 1974, 1979; Turnley & Boline, 2001). It follows then that high self-monitors should have high social competence. Therefore, people with high social competence should perform better in social situations than people with low social competence.

Hypothesis 2

Social competence should be positively correlated with self-protection. I make this prediction because social comparison research has shown that people make downward social comparisons when they feel threatened in order to bolster their self-esteem (e.g., Bandura & Jourden, 1991; Bouffard-Bouchard, 1990; Festinger, 1954; Goethals & Darley, 1977; Hoyt, Murphy, Halverson & Watson, 2003; J.V. Wood, 1989; Jacobs, Prentice-Dunn & Rogers, 1984; Jaina & Tyson, 2004; Suls & Miller, 1977; Stapel & Tesser, 2001; Prussia & Kinicki, 1996; Tafarodi, Tam & Milne, 2001). By comparing themselves to people who are worse off, the threatening implications of their own circumstances do not feel as bad. It follows then that threats to social competence should also heighten the use of self-protection processes. Therefore, social competence should be positive correlated with self-protection.

<div align="center">

The Effects of Task Competence

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Hypothesis 3

High task competence participants should perform better than low task competence participants. I make this prediction because evidence showing that

people with high task competence set more challenging goals, persist for longer and use more complex analytical strategies has been widely report in the self-competence literature (for a review, see Sadri & Robertson, 1993; Stajkovic & Luthans, 1998).

Hypothesis 4

Task competence should be positively correlated with self-protection. I make this prediction because people with high self-esteem have been shown to respond to failure by invoking the defence mechanism of reaction formation and attempting to prove their superiority in other areas in order to counteract the perception that they have failed (e.g., Baumeister, 1982; Baumeister & Tice, 1985). Therefore, there should be a positive correlation between task competence and self-protection.

The Effects of Self-Protection Strategies

Hypothesis 5

Self-protection should moderate the relationship between task competence and problem solving such that the relationship between task competence and performance should be stronger for high self-protection participants and less or non-existent for low self-protection participants. I make this prediction because research has shown that when people perceive threat, self-protection processes (e.g., isolation, denial and reaction formation) are activated that protect their self-esteem (for a review see Baumeister et al., 1998. Therefore, high self-protection should protect task competence. That is, high self-protection, high task competence people and high self-protection, low task competence people should have high protection for threatening tasks, and so produce better task performances. For high task competence people, high self-protection should help them to stay focused on tasks performances, whereas high self-protection should motivate low task competence people to try harder to succeed on tasks. In contrast, low self-protection, high task

competence people and low self-protection, low task competence people should have low protection for threatening tasks. However, the effects of low self-protection should be different for high and low task competence. For high task competence people, low self-protection should not mean that they produce inferior task performance because they are already confident in their task abilities. In contrast, for low task competence people, low self-protection should mean that they are not protected for threatening tasks and so they should produce poorer performances because they already have low confidence in their task abilities. Therefore, self-protection should be a moderator variable in the relationship between task competence and task performance.

Hypothesis 6

Self-protection should moderate the effects of social competence on social performance such that the relationship between social competence and social performance should be stronger for high self-protection participants and less or non-existent for low self-protection participants. I make this prediction because research has shown that when people feel threatened in social situations, they behave self-protectively in order to protect themselves from the uncomfortable feelings that are associated with loss of self-esteem from negative other-appraisals (Briggs & Snyder, 1988). They gather information about themselves that is positive and deny information that is negative (Greenwald, 1980; Quattrone & Tversky, 1984). Furthermore, they make downward social comparisons that enable them to overlook the differences between themselves and others, and in turn protect their self-esteem (e.g., Brickman & Bulman, 1977; Major, Testa & Blysma, 1991). Therefore, high self-protection should protect social competence beliefs by preventing people from

absorbing negative other-appraisals in social situations and in turn, assist them to focus on delivering their best social performances.

High self-protection, high social competence people and high self-protection, low social competence people should have high protection in threatening social situations, and so produce better social performances. In contrast, low self-protection, high social competence people and low self-protection, low social competence people should have low protection in threatening social situations. However, the effects of low self-protection should be different for high and low social competence. For high social competence people, low self-protection should not mean that they produce inferior social performance because they are already confident in their social abilities. In contrast, for low social competence people, low self-protection should mean that they are not protected in threatening social situations and so they should produce poor performances because they already have low confidence in their social abilities. Therefore, self-protection should be a moderator variable in the relationship between social competence and social performance.

Summary

In my discussion to this point, I proposed that there is a need to reconceptualise self-competence by distinguishing two theoretically distinct but related constructs: task and social competence. Next, I defined task and social competence and described their dimensions. Then, I defined self-protection and described its dimensions.

Task competence is concerned with the beliefs that people have about the extent that they can control their task-related behaviour. On the other hand, social

competence involves the beliefs that people have about the extent that they can control their social-related behaviour. The social and task performances that people are likely to produce depend on whether they are high or low in task and social competence. People with high task competence should plan their task performances, use analytical strategies and persist when problems are encountered. People with high social competence should communicate effectively with other people, be cooperative in their social interactions and identify strongly with both their colleagues and organisations. People with high self-protection should utilise the self-protective processes of emotion-focused coping, isolation, denial and reaction formation in order to protect them from perceiving that they are not as task and socially competent as they believed.

The social and task competence model raises some interesting questions about self-competence, self-regulation and affect regulation that, if answered, could increase psychologists' ability to predict task performance. The idea that self-competence should be split into two theoretically related but distinct constructs reflects a need for self-competence theory to account for the role of social competence in social performance situations. The notion that self-protection is involved in the regulation of social and task performances reflects a need for self-competence theory to explain the variation in how people cope with the demands and pressures of negative feedback in social and task performance situations.

It will be necessary to construct a psychological test that is able to predict task and social performance on the basis of task competence, social competence and self-protection in order to answer some of the research questions. The four studies reported in the following chapters report on the development of a new measure of self-competence that is based on the social and task competence model.

In Chapter 5, I report the findings of Study 1 that examined the reliability and factor structure of the Social and Task Competence Scale (STCS, Version 2). In Chapter 6, I report the findings of Study 2 that also examined the reliability and factor structure of the STCS (Version 3) and its predictive validity with performance on a problem solving task in an alone and group setting. In Chapter 7, I report the findings of Study 3, in which I examined the convergent and discriminant validity of the STCS (Version 4) with valid and reliable measures of self-competence, self-esteem, personality, self-monitoring and social desirability. Finally, in Chapter 8, I report the findings of Study 4, in which I examine the construct validity of the STCS (Version 5) by examining its predictive validity with performance on a word search task and its convergent validity with a reliable measure of emotional intelligence.

CHAPTER 5: AN EXPLORATIONOF THE PRELIMINARY RELIABILITY AND

FACTOR STRUCTURE OF THE SOCIAL AND TASK COMPETENCE SCALE

Summary

In Chapter 5, I describe the results of Study 1. The aim of Study 1 was to explore a new approach to self-competence scale construction through an examination of the reliability and factor structure of the STCS (Version 2). This version of the STCS consisted of two scales that measured social and task competence. The social competence scale consisted of three subscales: identification, communication and cooperation. The task competence scale consisted of three subscales: plan, persistence and strategising. Results of factor analyses revealed two factors that measured the dimensions of social and task competence. The social competence factor contained items from the communication and identification subscales, but not from the cooperation subscale. Therefore, the cooperation subscale was deleted from the analysis. The task competence factor contained items from the planning, persistence and strategising subscales. The final reliabilities showed that the STCS (Version 2) had low to moderate reliability. It was concluded that further scale revisions were necessary in order to improve the reliability of the measure.

Introduction

Researchers need to identify the best predictors of work performance and develop models of work performance that differentiate between criterion constructs if they are to predict work performance successfully (Bartram, 2004; Borman & Hedge, 1997; Hough & Oswald, 2000; Smidt & Hunter, 1998). In the past, psychologists have assumed that personality tests are valid predictors of work

performance because they measure the stable patterns of behaviour that people bring with them to most situations (Barrick & Mount, 1991). This assumption is supported by research that has shown that personality variables are important criterion measures of work performance (e.g., Barrick, Mount, & Judge, 2001; Borman, Penner, Allen, & Motowildo, 2001; Hermelin & Robertson, 2001). In particular, some of the Big Five personality traits (McCrae & Costa, 1992), particularly conscientiousness and measures of general ability, appear to be valid predictors of performance for all jobs (Bartram, 2004).

The assumption underlying personality tests is that people manifest the same personality traits in different situations. However, researchers have realised that people do not always behave consistently, even in the same situations (Chen et al., 2004). There is evidence that people make judgements about their self-worth and self-competence generally (e.g., Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs & Rogers, 1982), and that these general self-evaluations influence behaviours in specific contexts (e.g., Chen et al., 2000). In turn, situation-specific judgements about self-competence may be direct predictors of work performance in different situations. Consequently, there has been a shift towards the use of competency based measures of work performance over the past ten years.

The assessment of competencies is based on identifying, defining and measuring individual differences in specific work-related constructs that are relevant to successful work performance (Bartram, 2004). There seems to be considerable confusion in the research literature about what constitutes a competency and how competencies should be measured (Bartram, 2004). However, there does seem to be general agreement that competencies are sets of behaviours that are linked to desired outcomes and incorporate both social and task behaviours (Bartram, Robertson &

Callinan, 2002; Goleman, 1998). For example, the ability to record the minutes of a committee meeting would be a competency in a specific context, and taking comprehensive notes would be a generalized competency.

Self-competence may be understood as the psychological component of a competency and the perceptual component of work performance. In other words, self-competence represents a belief about personal competencies, rather than the actual competencies per se. As self-competence beliefs are cognitive interpretations based on observations of actual performance, self-competence is the perceptual component of work performance.

There are strong theoretical and empirical links between self-competence and work performance in the research literature (for reviews, see Bandura, 1997; Gully, Incalcaterra, Joshi & Beaubien, 2002; Multon, Brown & Lent, 1991; Judge et al., 2007; Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1997, 1998; Tharenou & Harker, 1991; Wood, Mento & Locke, 1987). The robustness of this relationship between self-competence and work performance provides a solid foundation for the development of a measure of self-competence. A measure of self-competence could assist organisations to identify high performers on the basis of social and task competence beliefs.

Despite there being strong research evidence that supports the existence of social and task dimensions of self-competence (e.g., Bandura & Wood, 1989; Bandura & Jourden, 1991; Wood and Bandura, 1989a), there are still significant gaps in our knowledge about self-competence, particularly with respect to how self-competence interacts with other cognitive mechanisms in the self-regulation of behaviour. For example, research has shown that some people lose confidence in their abilities to complete a task when they perceive that other people are performing the same task to

a higher standard than them (e.g., Bandura & Jourden, 1991; Wood & Bandura, 1989a). However, how social factors interact with self-competence to affect performance is not that well understood. Given the lack of research into the relationship between social competence and performance, it is not surprising that there are very few measures of social competence in the research literature (e.g., Burhmester, Furman, Wittenberg & Reiss, 1988; Stricker, 1982). Therefore, the development of a valid and reliable measure of social competence that could predict work performance was warranted. The purpose of constructing the STCS (Version 2) was to explore a new approach to self-competence scale construction. In Study 1, I examined the psychometric aspects of the Social and Task Competence Scale (STCS, Version 2).

Constructing the Social and Task Competence Scale

Competency based research has tended to focus on the cognitive and behavioural components of task performances (for reviews, see Sadri & Robertson, 1993; Stajkovic & Lee, 2001; Stajkovic & Luthans, 1997, 1998; Vancouver, Thompson & Williams, 2001). However, researchers have increasingly come to realise that organisations require their employees to perform effectively at an interpersonal level as well as executing competent task performances (Motowildo & Borman, 1997; Coleman & Borman, 1999). The STCS (Version 2) is based on my model of self-competence that reconceptualises self-competence into two theoretically distinct but behaviourally interrelated constructs: social and task competence.

As components of self-regulation, social and task competence are the product of acting on goals and assessments of outcomes (e.g., Williams & Lillibridge, 1992). For most people, social and task competence increase when there is close

correspondence between goals and outcomes or outcomes exceed expectations. Likewise, social and task competence are threatened or decrease when outcomes are less than goals. An increase in social and task competence reflects confidence about one's personal abilities in social and task situations that manifests itself as positive feelings about the self generally (Tafarodi & Swann, 1995). In contrast, a decrease in social and task competence raises self-doubt about personal abilities and causes negative feelings such as anxiety and depression (Tafarodi & Swann, 1995). The STCS (Version 2) was constructed to measure the social and task dimensions of self-competence. The version of the STCS in Study 1 consisted of two scales: the Social Competence Scale (SCS) and the Task Competence Scale (TCS).

Social Competence Scale

The SCS is based on the idea that people possess beliefs about their ability to control their behaviour in social situations. The ability to predict, understand and control social behaviour has interested psychologists for some time (e.g., Sneider, Ackerman & Kanfer, 1996; Thorndike, 1920). Research has shown that concerns about social abilities among peers have an effect on the social performances of adults (e.g., Lassiter, Stone & Weigold, 1987; Marsh & Craven, 2000; Snyder, 1974) and children (Altermatt & Pomerantz, 2003). It is possible that people may evaluate their ability to participate in social situations on the basis of their judgements about how well the behavioural expression of their thoughts and feelings are received by significant others. People develop high social competence if they are able to (a) communicate their thoughts, feelings and ideas effectively (b) support, collaborate and cooperate with their colleagues, and (c) feel committed to, and identify with salient groups. The SCS attempts to tap people's perceptions of these social abilities through three subscales: *communication, cooperation and identification*. Each SCS

item describes common work situations and behaviours consistent with communication, cooperation and identification.

In my model, social competence beliefs have perceptual and behavioural components that may not always correspond with one another. That is, although people may be able to perceive which behaviour is required in a social situation, they may not be able to produce that behaviour unless they possess the relevant behavioural component of the social skills that are required *and* the belief that they have the abilities to perform the behaviour successfully for that social situation. For example, one might be able to prepare an interesting talk to colleagues, but simultaneously doubt one's skills to remember the material and successfully deliver it without seeming anxious. The SCS aims to differentiate among people who are confident in their social abilities and those who lack confidence about their abilities in social situations at work.

Task Competence Scale

The TCS measures the planning, persistence and strategising dimensions of task competence. Prior research has established that these three dimensions capture the aspects of work performance that are the most related to task performance (e.g., Bandura, 1977, 1986; Bandura & Jourden, 1991; Bandura & Wood, 1989; Wood & Bandura, 1989a). Specifically, there is strong evidence that high task competence results in people (a) setting more difficult and specific goals, (b) persisting for longer in order to finish a task successfully and (c) using complex analytical strategies to achieve their task goals (e.g., Bandura & Cervone, 1983; Bandura & Jourden, Cervone, Jiwani & Wood, 1991; Cervone & Peake, 1986; Locke, Lee, Frederick & Bobko, 1984). Each TCS item describes common work situations and behaviours cconsistent with planning, persistence and strategising in the workplace. The job of

the TCS is to differentiate between people who are high and low in task competence along each of these three dimensions.

General versus Situation-Specific Measures

Self-report is the most suitable method for measuring self-competence because self-competence is a belief or perception. However, some researchers have questioned the structure of the self-report instruments that have been developed to measure ability beliefs (e.g., Lee & Bobko, 1994). For example, there seems to be a general lack of agreement among researchers about whether a narrow or a broad measure of self-efficacy is the best predictor of performance. This lack of agreement has led to different measures of self-efficacy (Sadri & Robertson, 1993). These can be classified according to whether they measure generalised or situation-specific beliefs. Research suggests that generalized and situation-specific self-efficacy differ conceptually (Bandura, 1986; 1997; Eden & Zuk, 1995) and psychometrically (e.g., Bandura, 1997; Cervone, 1997; Eden & Aviram, 1993; Sherer & Adams, 1983; Sherer et al., 1982).

Generalised self-efficacy instruments measure the belief about abilities generally based on an estimate of one's overall ability to perform in the achievement situations (e.g. Chen, Gully & Eden, 2001; Riggs, Warka, Babasa & Betancourt, 1994; Sherer et al, 1982). In contrast, task- and situation-specific self-efficacy measures task and situation specific perceptions of abilities in certain situations such as the fields of leadership (Murphy, 1992), counselling (Dillon & Worthington, 2003; Larson, Suzuki, Gillespie, Potenza, Bechtel & Toulouse, 1992), teaching (Denzine, Cooney & McKenzie, 2005) or career choice (Hackett, Betz, O'Halloran & Romac, 1990; Phillips & Gully, 1997).

There are no studies that have compared generalised and situation-specific measures of self-efficacy in order to identify which are the best predictors of performance. However, the psychometric differences between general and situation specific self-efficacy indicate that using a general self-efficacy measure to assess specific performance is incompatible with predicting specific performance due to the high discriminant validity between the general and situation-specific self-efficacy constructs (Stajkovic & Luthans, 1998). Furthermore, as tasks and situations are multifaceted, it is unlikely that either a generalized or situation-specific measure of self-efficacy will assess all of the aspects of a task and situation fully (Stajkovic & Luthans, 1998). Nonetheless, situation-specific self-efficacy beliefs are better predictors of specific performance than generalised self-efficacy beliefs because they address the cognitive and behavioural aspects of tasks and situations more closely (Stajkovic & Luthans, 1998).

The cognitive and behavioural aspects of tasks and situations tend to vary with respect to the different attributes of situations, which are known to change over time (Steel & Van Scotter, 2003). Although work performance is often measured at a single point in time, it is not a constant event. Rather, work performance is responsive to changes in the environment as well as temporal mechanisms (Steel & Van Scotter, 2003). Situation-specific self-efficacy beliefs are directly linked to feedback about performance (Bandura, 1982, 1986), and reflect the evaluations and re-evaluations that people make about their abilities in line with changing outcomes. Therefore, unlike generalised self-efficacy measures, situation-specific self-efficacy measures may be better placed to predict situation-specific work performance.

Structure of Self-Report Measures

The structure of self-report measures constructed to assess ability beliefs has also been questioned (e.g., Lee & Bobko, 1994). Self-report instruments that consist of single self-contained statements often lead to a first response of "it depends on the situation". An "it depends" response occurs because the statements are vague and abstract in their content. For example, Wagner and Morse's (1975) Self-Competence Scale consists of 13 single self-contained statements about generalised self-competence, such as "if anyone at my work can find an answer, I can" and "even when others give up, I keep trying to find a solution". The generality of these statements tends to elicit an "it depends on the situation" answer which means that the response that is provided is likely to be variable because respondents will tend to apply the statement to different situations.

A Vignette Approach to Measuring Social and Task Competence

An alternative approach to single self-contained statements is vignettes. Vignettes have not been widely used in test construction because they also suffer from methodological weaknesses (de Vaus, 1995; King, Murray, Salomon & Tandell, 2004). First, there may be ambiguity within the vignettes that could lead to different interpretations of subtle meanings. Such ambiguity contributes to differential item functioning (DIF). DIF means that equally able individual have unequal probabilities of answering the same question correctly. Therefore, the goal of any psychological test is low DIF.

King et al. (2004) developed a method of survey construction that enables verification that item responses are interpersonally comparable and not subject to DIF. The goal of their approach was not to design DIF free vignettes but rather to achieve response consistency and vignette equivalence. King et al.'s approach was

not adopted in the present research because their method assumes response consistency between and within individuals. That is, people are assumed to use the scales in the same way when providing their responses to the vignettes. However, self-competence beliefs cause variations in perceptions and behaviour within individuals over time and cross-situationally (Bandura, 1997). Therefore, self-competence beliefs are likely to cause response inconsistency rather than response consistency.

According to King et al. (2004), "*vignette equivalence* is the assumption that the level of the variable represented in any one vignette is perceived by all respondents in the same way and on the same unidimensional scale, apart from random measurement error. In other words, respondents may differ with each other in how they perceive the level of the variable portrayed in each vignette, but any differences must be random and hence independent of the characteristic being measured. ("Of course, even when respondents understand vignettes in the same way on average, different respondents may apply their own unique DIFs in choosing response categories." King et al., p. 194). I used factor analysis of items to examine how respondents had perceived the vignette and to reduce random measurement error. Considerable attention was paid to refining the language in the vignettes so that the variable that was represented in the vignettes was likely to be perceived in the same way and on the same unidimensional scale. It is emphasized, however, that the research was exploratory and as such it was essentially feeling its way towards a new methodology.

To conquer the DIF problem, I adopted the more traditional approach of using common anchors (standard 7-point Likert scales) that individuals could respond to differently (e.g., Cantrill, 1965). I considered removing those items with extreme

response sets. However, it is arguable that items with extreme responses provide an indicator of individual differences in the sample population and are not necessarily a sign of DIF. Therefore, due to the exploratory nature of my research, items with extreme responses were retained and only excluded if they did not load satisfactorily in the exploratory factor analysis.

King et al.'s (2004) idea was also to use vignettes containing examples of the behaviour being measured in order to estimate each person's unique DIF and then correct for it statistically. They use the same language for self-assessment in the vignettes and describe the behaviour of five to seven hypothetical people to the *same* situation. The behaviour of the hypothetical people falls on an ordinal scale from least to most efficacious. Individuals respond to a standard scale indicating how similar/dissimilar their own behaviour would be in that situation. This method is similar to an earlier approach to vignette construction developed by Smith and Kendall (1963) whereby good, average and poor behaviour are described in separate vignettes to define levels of the characteristic being measured and as operational definitions of the dimension being rated. These behavioural descriptions are linked to positions on continuous rating scales that were determined by supervisor ratings and arranged vertically on a page. In contrast, the vignettes that I constructed used the same language for self-assessment but described a *single* behaviour (consistent with high/low social/task competence) of a *single* hypothetical person (with high/low task/social competence) and *different* (work) situations. The effects of self-competence on work performance vary across time and situations. Therefore, it was important to construct vignettes that described people with high/low task competence/social competence in different work situations and then measure people's responses (similar/dissimilar) to these situations.

The STCS (Version 2) consisted of 25 vignettes that described common work situations in a few sentences. Focus groups were not used to collect data because the usefulness of the data may have been limited by a moderator who asked questions in a leading manner, which would have biased the findings (Vogt, King & King, 2004). Additionally, if one of the participants was extremely dominant, the results would not reflect the entire group's experiences and perspectives (Vogt et al., 2004). Finally, group interaction may have produced pressure to conform, thereby distorting an individual's genuine perceptions and limiting the information that they are willing to provide (Vogt et al., 2004). There was no word limit. However, every effort was made to ensure that the vignettes were as brief as possible. The vignettes are specific enough to create an easy impression of the situation and general enough that such situations could occur in most workplaces.

A final issue that influenced the decision not to use King et al.'s (2004) approach was concerned with test administration times. The length of the measure would have increased beyond what is practical for test administration times had King et al.'s (2004) approach been adopted for each situation due to the number of variables being measured because it would have been necessary to construct at least two vignettes (high/low social/task competence) for each behaviour and (work) situation being measured.

A second methodogical weakness of vignettes is that words, or even entire sentences, may be inadvertently overlooked when they are being read. Third, the reading age of respondents may be incompatible with the language in the vignette (de Vaus, 1995). However, I reasoned that these issues could be addressed by improving the face, content, construct, criterion, and external validity of the vignettes through repeated test administrations across different populations. The key

advantage of vignettes is that, unlike single self-contained statements, they provide a more specific context that functions to minimise individual differences in interpretation (de Vaus, 1995). Therefore, it is possible that vignettes may increase the ecological validity of a measure.

An example of a social competence vignette along the dimension of communication is "your boss asks you to take charge of a new project, but he is not very clear about exactly what he wants you to do. You could try to fill in the details yourself later, but you ask your boss for a clearer explanation instead". High social competence would be indicated by endorsement of the behaviour (asking the boss for a clearer explanation) because it shows that the person is confident in her communication abilities. On the other hand, doubt about communication abilities would be indicated by a lack of endorsement of the behaviour.

An example of a task competence vignette for the dimension of persistence is "you have been unfairly blamed by your manager for losing sales. You could easily find another job, but try to improve your sales instead". Endorsement of the behaviour (trying to improve sales) would indicate high persistence because the person would be persisting on a difficult task (e.g., Wood & Bandura, 1989a), whereas a low score would indicate low persistence.

Actual and Ideal Measures

Each vignette was linked to an actual scale question: "how would you have behaved in this situation?" and an ideal scale question: "how ideal is the behaviour in the scenario, in your opinion". The ideal scale was based on James's (1890) idea that situation-specific self-evaluations are integrated as essential components of self-esteem according to their perceived level of importance, salience, certainty and ideals. Ideal standards of behaviour have been associated with actual positive

outcomes (e.g., Higgins, 1987; Roney & Sorrentino 1995). Respondents compared the behaviour that was described in the vignette to their own actual behaviour and their own ideal behaviour. Thus, self-competence for a particular task would result from a combination of how important the task was, the standard for excellence that was set for the task and whether the task was viewed as achievable or not. For example, task competence should be high for people who perceived themselves as competent at that task relative to their prevailing standards, but low for people who perceived themselves as incompetent at that task and/or who did not value that task highly.

The purpose of the actual scale was to elicit responses through a comparative process whereby respondents compared the behaviour described in the vignette to how they predicted that they would behave if they were in the same situation. The purpose of the ideal scale, which is more altruistic in nature, was to elicit judgements of the behaviour in the vignettes on the basis of what respondents perceive to be the optimum behaviour for that situation[8]. It is argued that the ideal scale measures a person's ideal aspirations. That is, how capable they would like to be.

For my fourth year honours research, I determined high and low task and social competence by comparing the mean of the actual scale score (dependent variable) to the mean of its Ideal Scale score (Independent variable). ANOVAs were used to determine whether any differences between the means existed. If f was significant,

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[8] King et al.'s (2004) assumption of response consistency would also be violated if people who felt inferior to the hypothetical person in the vignette had higher standards/expectations than the hypothetical person in the vignette (King et al., 2004). This is true for the STCS. However, as the ideal scale in this study was measuring standards of performance, it is the differences in respondent's standards/expectations between high and low social and task competence and self-protection that the STCS was actually seeking to measure.

then differences in actual and ideal beliefs were assumed to exist. That is, the distances between the scores on the two scales are larger than they would be if there were no differences between the means as would be evidenced by a non-significant result. Therefore, no significant differences in the means was conceived to be indicative of high social and task competence whereas significant differences in the means were considered to reflect low social and task competence.

One of the most common uses of difference scores is to operationalise a concept (Cronbach & Furby, 1970). However, the use of difference scores has been criticized because their statistical and psychometric properties are problematic (e.g., Carusso, 2004; Cattell, 1982; Cronbach & Furby, 1970; Lord & Novick, 1968). One problem with the reliability of difference scores is that the reliability of a difference score is less than the average reliability of its component parts (Cronbach & Furby, 1970). That is, the variance is masked because the effects of the independent variable on the components in the differences are confounded. Therefore, use of difference scores prevents determining which component is responsible for an effect.

A second problem with difference scores is that it is difficult to know what weight should be assigned to the difference score and whether such an arbitrarily weighted function of two variables is able to properly define a construct. In their influential paper, Cronbach and Furby (1970) proposed that it is better to use the two variables separately in the analysis so as to allow for complex relationships to be investigated through correlations and multiple regression procedures using true scores. Thus, while difference scores have often been used in psychological research (Carusso, 2004), Cronbach and Furby (1970) argued in their influential paper that

they are unreliable[9]. Therefore, while the ideal scales provided useful information about how standards of performance may influence social and task competence, it was not appropriate to use these scales to generate a composite difference score.

Response Format

Questions have arisen concerning which response format is the best predictor of ability beliefs (e.g., Lee & Bobko, 1994). The most common methods for operationally measuring self-efficacy are to ask people (1) whether they can perform at specific levels on a specific task (responses are "yes" or "no") and (2) for the degree of confidence in that endorsement at each specific performance level (rated on a scale from total uncertainty to total certainty). Self-efficacy *magnitude* is formed by summing the "yes" responses and represents how important the belief is. Self-efficacy *strength* is formed by summing the confidence ratings across all performance levels and represents the extent that a sense of mastery is experienced.

It is unclear from the research literature whether the magnitude, strength or combinations of these factors are the best predictors of ability beliefs (Lee & Bobko, 1994; Ones & Viswesvaran, 1996; Schneider, Hough & Dunnette, 1996). Lee and Bobko (1994) found that a combination score, generated either by summing raw scores for strength across self-efficacy levels that answered "yes" or converting strength and magnitude raw scores to *z* scores and then summing them, had better predictive validity than either strength or magnitude alone. However, self-efficacy

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[9] Proponents of difference scores (e.g., Williams & Zimmerman, 1996) have argued that Cronbach and Furby (1970) failed to consider the potential for growth indicated in the standard deviations of the scores. That is, the more the standard deviations of each score deviate from 1.00, the greater is the possibility of acceptable difference score reliability. Additionally, supporters of difference scores propose that the emphasis should be on individual differences in change scores and not individual differences in the scores themselves (Williams & Zimmerman, 1996).

strength seems to be the most popular measure of self-efficacy (Bandura, 1991; Lee & Bobko, 1994).

Lee and Bobko (1994) defined self-efficacy strength as the mean confidence rating, using a scale ranging from completely unconfident to completely confident. They computed self-efficacy strength by summing all of the scores across items and then dividing by the total number of items. A problem with self-efficacy strength is that rating the degree of confidence to perform at a specific level confounds (a) predictions of the level of performance, (b) intentions and (c) outcome expectancies (Vancouver & Day, 2005). Bandura (1997) suggested that items should be phrased in terms of "can do" rather than "will do" in order to avoid the confound with intentions. Furthermore, replacing items measuring various levels of performance with items asking more directly about ability beliefs should avoid the confound with outcome expectancies (Vancouver & Day, 2005).

I adopted an alternative approach in order to address the confounds that arise when measuring the strength of ability beliefs. I asked directly about ability beliefs using a question measuring actual beliefs and a question measuring ideal standards of competence. I avoided the confound with intentions by having respondents compare the similarity of their own behaviour to the behaviour described in the vignette. I linked the scale questions to seven point Likert-type scales ranging from 1 (very differently) to 7 (very similarly) for the actual question and 7 (not ideal at all) to 1 (very ideal) for the ideal question. Likert scales have been used in other research to measure self-efficacy (e.g., Barling & Beattie, 1983; Bores, Rangel, Church, Szendre & Reeves, 1990; Holahan & Holahan, 1987; Jones, 1986; Sherer et al., 1982). More recently, a meta-analysis by Maurer and Pierce (2005) found that Likert-type scales performed as well as magnitude and strength measures. I

computed similarity scores by summing all of the scores across items and then dividing by the total number of items.

A common method of controlling for social desirability has been to reverse-score items (Liebert & Liebert, 1995). Social desirability refers to the practice of responding to items in the direction that is perceived to be the most socially acceptable, regardless of whether the response accurately represents the respondent's true attitude. Social desirability is a methodological problem that has been widely debated in the literature (Barrick & Mount, 1996; McCrae & Costa, 1992; Scandell & Wlazelek, 1999). Many researchers believe that the effects of social desirability invalidate test results because respondents are responding to the specific content of the test items in a socially desirable way (e.g., de Vaus, 1995). McCrae and Costa (1992) have made a strong case that social desirability does not necessarily invalidate test results. They argued that social desirability is a self-presentational style and personality trait. If this is the case, then social desirability may be an important indicator of individual differences in behaviour that should be measured rather than controlled and ignored (Scandell & Wlazelek, 1999). An assumption underlying social competence is that people are motivated to behave in socially desirable ways in work situations. Therefore, the SCS should identify people whose social behaviour is motivated by a desire to obtain favourable social feedback by identifying people with high and low social competence.

Summary and Overview

Self-report measures seem to be the most suitable method for assessing social and task competence because social and task competence are beliefs rather than measurable behaviours. There are several methodological issues affecting the

measurement of ability beliefs. First, it is unclear from the research literature whether a generalised approach to measuring ability beliefs is a better predictor of performance than a situation-specific approach. I highlighted the point that general and situation-specific self-efficacy differ both conceptually and psychometrically. I argued that a situation-specific measure is likely to be better than a generalised measure for predicting performance on the basis that work situations are unique and complex. Second, the generality of items consisting of single self-contained statements leads to variability in responses because respondents will tend to apply the statement to different situations. I suggested that a vignette approach to measuring social and task competence could reduce the variability in responses because a more exact description of the behaviour could be provided. Third, there is confusion among researchers over the best method for predicting ability beliefs: magnitude, strength or a combination of these factors. I suggested that comparing the similarity of one's own behaviour or ideal to the behaviour or ideal described in the vignette could possibly overcome the confound problems of the other predictors.

The aim of Study 1 was to explore the vignette approach to self-competence scaleconstruction by investigating the structural validity of the STCS (Version 2) through item selection and psychometric evaluation. The questionnaire consisted of 25 vignettes measuring social and task competence. Participants were instructed to read each vignette twice. On the first reading, participants were required to respond to the actual scale question and on the second reading they were required to respond to the ideal scale question.

Method

Participants

Participants were first year and second year undergraduate students at the University of Newcastle, Australia. Two hundred and fifty questionnaire One hundred and ninety-one participants participated in this study. I recruited participants by giving brief verbal presentations to groups of students at lectures with an invitation to obtain a questionnaire package from the researcher at the end of the lecture. Due to an error that occurred during the printing of the questionnaires, demographic information about the age and gender of participants was not collected. From the 250 questionnaire packages that were collected, 193 were returned, representing a response rate of 77.6%. Three questionnaires had been partially completed and were not used in the statistical analyses.

Materials

Each questionnaire package contained an introductory letter explaining the purposes of the study, the STCS (Version 2) and a stamped self-addressed return envelope. The letter introduced the study with a standard protocol assuring confidentiality and anonymity and explaining the purpose of the study in general terms.

The version of the STCS (Version 2) that was used in the present study contained vignettes from the STCS (Version 1) that I piloted in earlier research (Gold & Dermody, 2000). I shortened the vignettes from the STCS (Version 1) in order to improve their face and content validity. Seven new items were also written so that, in total, 25 vignettes were included in the STCS (Version 2; see Appendix A). Each vignette was worded in a positive direction, and participants responded using two Likert-type scales that measured actual and ideal social and task competence beliefs.

The Likert scale for the actual question was positioned to the left and the Likert scale for the ideal question was positioned to the right of the vignette. Respondents were instructed to respond to the actual scale first and the ideal scale second. In order to control for social desirability, the direction of the ideal scale was the reverse wording of the direction of the actual scale. That is, the scale points for the actual scale were coded such that 1 equalled "very differently" to 7 equalled "very similarly" whereas the scale points for the ideal scale were coded such that 1 equalled "very ideal" to 7 equalled "not ideal at all".

As mentioned previously, the STCS (Version 2) consisted of two scales: the SCS and the TCS. The SCS consisted of four identification (Items 10, 14, 15, 20), four communication (Items 11, 16, 19, 24 and five cooperation (Items 3, 12, 13, 17, 18). Each SCS item describes common work situations and the behaviours that my supervisors and I considered are associated with communication, cooperation and identification in the workplace. An example of an identification item is "Everyone in the office is going out for drinks. You are not dressed right so you make an excuse that you have a lot of work to finish and you do not go". A higher score on the actual scale indicated confidence in ability to identify with other people whereas a lower score indicated low confidence in identification abilities. A lower score on the ideal scale indicated that respondents valued identifying with other people, whereas a higher score indicated that identifying with others was not a preferred standard of behaviour. For the identification items, a high social competence person endorsed a rating of 6 or 7 on the actual scale and 1 or 2 on the ideal scale whereas a low social competence person responded with a 1 or 2 on the actual scale and 6 or 7 on the ideal scale.

An example of a communication item is "Imagine arriving at a conference and there is nobody there you know. Although you feel nervous, you look confident as you approach some people to introduce yourself". A higher score on the actual scale indicated high confidence in communication abilities, whereas a lower score indicated low confidence in communication abilities. For the ideal scale, a higher score indicated that respondents valued communicating competently, whereas a lower score indicated that communicating competently was not a valued standard of social behaviour. A high social competence person endorsed a rating of 6 or 7 on the actual scale and 1 or 2 on the ideal scale for the communication items. On the other hand, a low social competence person endorsed a rating of 1 or 2 on the actual scale and 6 or 7 on the ideal scale for the communication items.

Lastly, an example of a cooperation item is "A co-worker is promoted instead of you. You are disappointed and think how unfair it is, but you act as if it does not bother you as you do not want people to think you are upset". A higher score on the actual scale indicated confidence in ability to cooperate whereas a lower score indicated low confidence in ability to cooperate. In contrast, a lower score on the ideal scale indicated the person valued cooperating with other people whereas a higher score indicated cooperating with other people was not a valued standard of social behaviour. A high social competence person endorsed a rating of 6 or 7 on the actual scale and 1 or 2 on the ideal scale and a low social competence person endorsed a rating of 1 or 2 on the actual scale and 6 or 7 on the ideal scale for the cooperation items.

The TCS consisted of four planning items (Items 4, 5, 16, 22), four persistence items (6, 7, 23, 25), and four strategising items (Items 1, 8, 9, 21). Each SCS item describes common work situations and the behaviours that my supervisors and I

considered are associated with communication, cooperation and identification in the workplace. An example of a planning item is "Imagine you are a sales manager, sales are down 25% and you have been offered another job. You keep trying to improve sales in your present job". A higher score on the actual scale indicated confidence in planning ability, whereas a lower score on the actual scale indicated low confidence in planning ability. A higher score on the ideal scale indicated that planning was a valued task behaviour, whereas a lower score indicated that planning was not a valued task behaviour. An example of a persistence item is "Imagine you are at work and you have a headache. You decide to keep working because if you go home, you might not finish your share of the work in time". A higher score on the actual scale indicated confidence in ability to persist with a difficult task, whereas a lower score indicated low confidence in ability to persist with a difficult task. A lower score on the ideal scale indicated that persisting with a difficult task was a valued task behaviour, whereas a higher score indicated that persisting with a difficult task was not a valued task behaviour. A high task competence person endorsed 6 or 7 on the actual scale and 1 or 2 on the ideal scale. A low task competence person endorsed 1 or 2 on the actual scale and 6 or 7 on the ideal scale.

An example of a performance strategy is "You have submitted a tender and you think you made a mistake that nobody else has noticed. You are not sure so you check the calculations before you tell anyone". A higher score on the actual scale indicated confidence in ability to use this performance strategy whereas a lower score indicated low confidence in ability to use this performance strategy. A lower score on the ideal scale indicated this performance strategy was valued whereas a higher score indicated that it was not valued. A high task competence person endorsed 6 or 7 on the actual scale and 1 or 2 on the ideal scale. In contrast, a low

task competence person endorsed 1 or 2 on the actual scale and 6 or 7 on the ideal

scale.

Results

Reliability of the Social and Task Competence Scale

Responses on the ideal scale were reversed coded so that high scores indicated

ideal social and task competence. The preliminary reliability of the STCS (Version

2) was then computed using the Spearman-Brown prediction formula (Nunnally &

Bernstein, 1994)[10]. Researchers commonly use this formula to make alphas

comparable for differing length subscales when they are examining the reliability of

a scale (Nunnally & Bernstein, 1994). Alphas for the actual and ideal scores of the

social, task and overall scale are shown in Table 5.1.

Table 5.1

Alpha Coefficients for the STCS (Version 2)

Scale	Item	Alpha	
		Actual Scale	Ideal Scale
STCS	1…25	.63	.78
Task competence	1, 2, 4, 5, 6, 7, 8, 9, 21, 22, 23, 25	.56	.75
Social competence	3, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 24	.51	.61

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[10] The STCS (Version 1) was found to have good preliminary reliability, with Cronbach (1951) alphas ranging from .64 for the total scale and .37 to .87 for the five subscales (Gold & Dermody, 1999). Consistent with Williams and Lillibridge's (1992) model, the 18 items loaded onto five interpretable factors in the factor analysis. The measure was also found to have good discriminant reliability with the NEO personality inventory (McCrae & Costa, 1995) and the self-monitoring scale (Snyder, 1987).

Factor Structure

There is considerable debate in the organisational literature over the use of
Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA)
(Brannick, 1995; Gerbing & Hamilton, 1996; Kelloway, 1995; Hurley, Scandura,
Schriesheim, Brannick, Seers, Vandenberg & Williams, 1997; Stone-Romero,
Weaver & Glenar, 1995; Williams, 1995). EFA is appropriate when there is no
hypothesised factor structure for the observed data (Russell, 2002). Furthermore,
EFA is often considered to be more appropriate than CFA in the early stages of scale
development because CFA does not show how well items load on the
nonhypothesised factors (Kelloway, 1995). Additionally, CFA requires specification
of which items load onto each factor. That is, CFA assesses the researcher's explicit
predictions about the number of factors that may underlie a set of measures and
which measures load on the hypothesised factor(s) (Russell, 2002). CFA also
requires that there is a strong theory underlying the measurement model or a priori
hypotheses before anlaysing the data to increase the likelihood that there will be
goodness-of-fit (Williams, 1995). The STCS (Version 2) is based on a new
theoretical model of social and task competence. Therefore, the relationship between
the observed variables and the underlying latent constructs was unclear. A problem
with CFA is that sometimes the theory being tested does not 'fit' the model being
tested and requires modification to the data parameters to help the misspecified CFA
become a good representation of a data set (Hurley et al., 1997). This would mean
that the CFA becomes an EFA (Hurley et al., 1997). Therefore, I concluded that EFA
was the appropriate procedure to be performed at this stage of scale development.

A principal axis factor analysis with promax rotation was performed in order to
analyse the factor structure of the STCS (Version 2). A principal axis factor

extraction method was used because principal axis factoring has been shown to be more accurate in reproducing population loadings (Russell, 2002). An oblique method of rotation was used because the social and task competence items were expected to be correlated. Separate factor analyses were computed for the actual and ideal scales because these scales were linked to the same items. Hence, the power of the factor analysis would have been reduced if the data for the actual scales was included in the same analysis as the data for the ideal scale scale. For the actual scale, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was .50 indicating that the data was not suitable for factoring (The KMO statistic needs to be .60 for the data to be suitable for factoring [Coates & Steed, 1996]). Furthermore, the scree plot of the actual scale did not display an elbow. Therefore, it was not possible to determine the number of factors to be extracted. In contrast, for the ideal scale, the KMO statistic was .72 indicating that the data was suitable for factoring. The scree plot of the ideal scale indicated that a two-factor solution was appropriate.

The factor analysis of the ideal responses of the 190 participants to the 25 items in the STCS (Version 2) resulted in a Cattell's scree criterion that showed a two factor structure. The Bartlett's Test of Sphericity was significant, χ^2 (df 300) = 922.80, p < .01 indicating the data was suitable for factoring. The two factors accounted for 20.29% of the total variance. The first factor had an eigenvalue of 16.78 and explained 13.67% of the total explained variance. Table 5.2 shows that 15 items loaded at .30 or above on this first factor. The second factor had an eigenvalue of 9.50 and explained 6.62% of the total explained variance. Looking at Table 5.2, six items loaded on the second factor that did not have higher loadings on the first factor. Items with loadings ≥ .30 were retained. Items that loaded to approximately the same extent (+/- .20) on both factors were eliminated from scale. After these

items were removed, twelve items (Items 1, 4, 5, 6, 7, 8, 9, 16, 21, 22, 23 & 25)

loaded ≥ .30 on Factor 1. These items represented the task competence component of

my model. Four of the items (Items 4, 5, 16, 22) came from those generated for the

planning dimension of task competence, four of the items (Items 6, 7, 23, 25) came

from among those generated for the persistence dimension of task competence and

four of the items (Items 1, 8, 9, 21) came from among those generated for the

strategising dimension of task competence.

Six items (Items 10, 13, 14, 15, 19 & 20) loaded ≥ .30 on Factor 2. These items

represented the social competence component of my model. Two items (Items 10,

20) came from among those generated for the identification dimension of social

competence, two items (Items 13, 14) came from among those generate to measure

cooperation and two items (Items 15, 19) came from among those generated to

measure communication.

The remaining items (Items 2, 3, 11, 12, 17, 18 & 24) were dropped from the

scale because they loaded < .30 and/or loaded onto more than one factor to

approximately the same degree (+/- .20). The 25 STCS (Version 2) items are shown

in Appendix A.

Table 5.2

Rotated Factors Loadings from the Pattern Matrix for the STCS (Version 1)

			Factor	
Item		Communality	1	2
1	You are an insurance claims officer and your computer program has stopped working. You check the manual for the problem.	.28	.38	.03
2	You think you have made a mistake in a tender that you submitted. You check your calculations to see if there is a problem.	.20	.27	.04
3	You feel pleased that you have solved a client's problem, even though it took you longer than expected.	.21	.28	.03

4	You are a sales manager and the profits are down by 25%. You keep trying to improve sales.	.26	.33	.13
5	Imagine that you are a secretary who has deleted a report on the computer. You decide to make backups of all your files.	.42	.59	-.08
6	You cancel your holidays because there is an emergency at work.	.33	.34	.34
7	You keep working with a headache because you have a deadline to make.	.33	.43	.15
8	A colleague asks for your help while you are reading an email. You log off and help.	.30	.55	-.07
9	You are a bank teller. You try to find some missing money for an hour alone, and then you ask for some help.	.37	.51	.02
10	You buy an expensive outfit for your work Christmas party.	.28	.13	.35
11	You are the only person who does not laugh at a joke that your colleague has made. You explain that you did not understand the joke.	.20	.26	-.01
12	Everyone at your work is going to the cricket. You hate cricket and so you give your ticket away.	.18	.27	.05
13	You are anxious because you have promised to play golf with a client and you do not know how to play.	.24	-.10	.44
14	You take a colleague out to lunch to discuss a problem. You want to help and you know that your actions will look good to colleagues.	.26	-.04	.47
15	You stay at work while everyone else goes out for drinks because you are not dressed appropriately.	.38	-.09	.62
16	You try to look confident when you arrive at a conference full of strangers.	.38	.50	-.17
17	You feel worried that you may have upset your colleagues when you hear that they think that you have been irritable lately.	.25	.23	.22
18	You try and not look upset when you learn that you have missed out on a promotion.	.33	.34	.23
19	You tell your colleagues what they want to hear instead of giving them your opinion.	.41	-.07	.60
20	You have just begun a new job. You observe your colleagues to see if you will fit in.	.33	.25	.33
21	You are a hairdresser. You have received a complaint and so you allow a colleague to check your haircut because you know it is straight.	.25	.44	.07
22	You are a stock broker. Your colleagues are discussing a market crash but you return calls from worried clients instead.	.34	.55	-.21
23	Your boss thinks you talk too much to customers and so you try and cut down the time that you spend.	.29	.40	.20
24	You are a lawyer. You are surprised that you won your case.	.18	.14	.22
25	You have quarterly reports to do. You put in a big effort to get them done instead of getting some help from your colleagues.	.33	.34	.28

Reliability of the Retained Items

Reliability was computed for the 18 items retained from the factor analysis. Alpha coefficients for the actual and ideal scales for the retained items are shown in Table 5.3. The results of the factor analysis showed that there were two higher-order factors that contained items that measured task competence (Factor 1) and social competence (Factor 2). Therefore, items that loaded onto Factor 1 formed the Task Competence Scale and the items that loaded onto Factor 2 formed the Social Competence Scale.

Subscales were formed on the basis of the underlying latent constructs from my social and task competence model. From the point of view of construct validation, a measure has theoretical uncertainty built in if single score is correlated with a criterion when the singe score includes multiple dimensions of a construct (Smith, McCarthy & Zapolski, 2009). First, the nature of the different dimensions contributions to the single score cannot be known with a single score (Smith et al., 2009). The single score could reflect each dimension equally (Smith et al., 2009) or or else it could reflect the average of strong and weak relationships between the different dimensions of a construct and the criterion (Smith, Fischer & Fister, 2003; Smith & McCarthy, 1995). The meaning of a single score representing a construct that has different dimensions is then, basically unknown (McGrath, 2005). However, studies comparing the predictability of a single score and hetergoneous scores show that prediction of the criterion improves when the different dimensions of the construct are represented individually (e.g., Paunonen, 1998; Paunonen & Ashton, 2001). Hence, social and task competence should predict work performance better when their different facets are studied rather than averaging across the different dimensions before predicting.

Table 5.3

Alpha Coefficients for the Revised STCS (Version 2)

Scale	Item	Alpha	
		Actual Scale	Ideal Scale
STCS	1, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 19, 20, 21, 22, 23 & 25	.52	.75
Task competence	1, 4, 5, 6, 7, 8, 9, 16, 21, 22, 23 & 25	.52	.76
Plan	4, 5, 16, 22	.45	.63
Persistence	6, 7, 23, 25	.31	.61
Strategising	1, 8, 9, 21	.27	.59
Social competence	10, 13, 14, 15, 19, 20	.52	.63
Identification	10, 20	.27	.30
Cooperation	13, 14	.18	.44
Communication	15, 19	.49	.61

A second source of uncertainty from a composite single score is that the same score will reflect different combinations of the dimensions of a construct for different individuals in a sample (Smith et al., 2009). For example, one person could be high in planning but low in persistence and low in strategising, whereas another person could be low in planning, but high in persistence and strategising. Thus, covariation of an overall task competence score with a criterion would lack clear meaning. Therefore, the best approach to construct validation would appear to be to test hypothesised relationships among what are thought to be homogeneous, precisely defined constructs.

According to Clarke and Watson (1995), it is appropriate to form subscales when the items for the subscales load onto a single general factor providing that the intrasubscale (interitem) correlations are systematically higher than the intersubscale correlations. That is, the correlations among items within the subscales must be higher than the correlations between the subscales. Therefore, subscales were formed

from the items that loaded onto each higher-order factor on the basis of a priori theory and then the intrasubscale and intersubscale correlations were examined.

The intrasubscale (interitem) and intersubscale correlations for each subscale are shown in Appendix B. Overall, the intrasubscale (interitem) correlations of the actual and ideal scales were higher than the intersubscale correlations. Therefore, it was appropriate to form subscales from the items that loaded onto the general factors in the factor analysis.

Corrected Item-Total Correlations

The corrected item-total correlations were calculated for the actual and ideal STCS (Version 2) scales and subscales (see Appendix C). The corrected item-total correlations for all STCS (Version 2) items were low to moderate ranging from .08 to .35 for the actual scale and .14 to .40 for the ideal scale.

The corrected item-total correlations for the SCS were low ranging from .21 to .36 for the actual scale and from .28 to .49 for the ideal scale. The corrected item-total correlations between the two items from the communication subscales were moderate: .32 for the actual scale and .43 for the ideal scale. The corrected item-total correlations for the two items from the cooperation subscales were low: .10 for the actual scale and .28 for the ideal scale. Finally, the corrected item-total correlations for the two items from the identification subscales were also low: .15 for the actual scale and .19 for the ideal scale.

The corrected item-total correlations for the TCS ranged from .10 to .32 for the actual scale and from .33 to .50 for the ideal scale. The item-total correlations for the planning subscale ranged from .24 to .26 for the actual scale and .35 to .50 for the ideal scale. The corrected item-total correlations for the persistence subscale ranged from .34 to .46 for the actual scale and .30 to .44 for the ideal scale. The corrected

item-total correlations for the strategising subscale ranged from .10 to .15 for the actual scale and .33 to .50 for the ideal scale.

The deletion of items with very low item-total correlations did not lead to a substantial improvement in the overall reliability of the STCS scales. Therefore, I decided to retain these items.

Interitem Correlations

The interitem correlations for the scales and subscales were examined next in order to ascertain whether they fell within the range recommended by Clark and Watson (1995) of .15 and .50. Referring to Appendix C, it is can be seen that the number of interitem correlations that fell within the recommended range for the retained actual and ideal items was less than desirable, with only 37.5% of interitem correlations falling within the desired range**.** The average interitem correlations were .22 for the overall actual scale and .20 for the overall ideal scale. The average interitem correlations for the social subscales were -.26 for the actual scale and .10 for the ideal scale. The average interitem correlations for the task subscales was .07 for actual and .03 for ideal.

Discussion

The aim of Study 1 was to explore a new approach to self-competence scale construction through an examination of the reliability and factor structure of the STCS (Version 2). Given the exploratory nature of the research, the results from this study should be view as tentative rather than definitive. The factor analysis revealed that there were two factors underlying the STCS (Version 2). Items from the TCS loaded onto Factor 1, and items from the SCS loaded onto Factor 2. The percentage of variance explained by Factor 1 and Factor 2 was not ideal: 13.67% and 6.62%

respectively. There are two possible explanations of this finding. First, it is possible that the items from the STCS (Version 2) were not really tapping social and task competence. Second, it is possible that the items captured more than two dimensions. However, the conceptual parsimony of the items that loaded onto each factor and the strength of their factor loadings influenced the decision to retain these items for the STCS (Version 3). These results can tentatively be viewed as indicating that the STCS (Version 2) items are assessing two underlying constructs.

The reliability of the STCS (Version 2) and its subscales was low to moderate. The actual scales had the lowest reliabilities (alphas ranged from .18 to .56). The ideal scales faired better and showed mostly moderate to high reliabilities (alphas ranged from .30 to .76). There are several possible explanations for the lower reliabilities of the actual scales.

First, the format of the STCS (Version 2) may have been confusing to the participants. The actual scale question and its scale points were positioned to the left of each item and the ideal scale question and its scale points were positioned to the right of the item. The scale points of the ideal scale ran in the opposite direction to the scale points of the actual scale from 1 (very differently) to 7 (very similarly) for the actual scale and 1 (very ideal) to 7 (not ideal at all) for the ideal scale. Participants responded to the actual scale first and the ideal scale second. Hence, it is possible that participants became confused with the scale points for each scale. That is, participants could have remembered the scale points from the actual scale when they answered the ideal scale question.

Second, the actual scale may have had lower reliabilities than the ideal scale because there was more variability in participants' actual behaviour than in their standards for performance. That is, the standards of performance that participants

valued may have generalised across different situations more than their actual behaviour did.

A third explanation for the lower reliabilities of the actual scale can be attributed to the wording of the actual scale question. By asking 'How would you have behaved in this situation?' the respondent was asked to reflect on past performances rather than make a prediction about any future performance. There may have been variability in these past performances that caused respondents to reply differentially to items from the same scales. Thus, the low reliabilities could have reflected the variability of participants' past experiences rather than heterogeneity of items within scales. The idea that cross-situational variability in performance affects the consistency of performance ratings has been used before in order to justify the low reliabilities of personality scales (Epstein, 1979; Mischel, 1968). A reliability of .30 has often been found for measures of personality traits (Epstein, 1979). A similar case could be made for actual social and task competence beliefs. That is, as different people may have been consistent along different dimensions, the variance in behaviour across situations could have lowered the scale reliabilities. The variability in behaviour would not have affected the ratings for the ideal scales because goals and standards tend to be more generalised rather than situation-specific.

A fourth explanation for the low reliabilities is that the items themselves may not have tapped the construct that they were supposed to measure. It is possible that respondents interpreted the meaning the items differentially due to poor item development.

The results of this study raised a number of important issues about the future development of the STCS (Version 3). First, the position of the actual and ideal scale

questions and their scale points to the left and right of the vignettes and the reversal of the scale points on the ideal scale may have lead to variability within participants' responses. Second, the low to moderate reliabilities that were obtained indicated that the language that was used in the scale questions and to describe the behaviours in the vignettes needed to be refined.

One limitation of this study was that participants were asked to compare the similarity of their behaviour and ideals to complex task and social situations. The complexity of requiring participants to reduce numerous skills and motivations to a single similarity answer could have increased the variability in their responses.

Summary

This study provided preliminary results for the factor structure and reliability of the STCS. The data analysis showed two factors interpreted as social and task competence. However, the reliabilities of the retained items were lower than expected. The results of this study suggested that the STCS (Version 3) needed to be restructured and the language used in the vignettes refined before the predictive, convergent and discriminant validity of the STCS (Version 3) could be examined.

CHAPTER 6: A TEST OF THE PREDICTIVE VALIDITY OF THE SOCIAL AND
TASK COMPETENCE SCALE AND SELF-PROTECTION SCALE

Summary

In Chapter 6, I describe Study 2, which had two aims. The first aim was to further investigate the reliability and factor structure of the Social and Task Competence Scale (Version 3). The second aim was to examine the predictive validity of the STCS (Version 3) in an experiment that examined the effects of task setting and self-protection on social and task competence and performance. The results indicated that the reliabilities of the STCS (Version 3) were better overall than the reliabilities of the earlier versions of the STCS (Gold & Dermody, 2000; Gold, Rubin & Munro, in progress). Several subscales had less than desirable reliabilities, low item-total correlations and low average interitem correlations and indicated that further scale revisions were required. The results showed support for the hypothesised relationships between task setting, self-protection, self-competence and task performance. In line with the exploratory nature of the research, it was tentatively concluded that the STCS (Version 3) had predictive validity.

Introduction

Psychologists have long been interested in how human interaction in social situations influences human behaviour. Research has shown that human interaction causes some people to make *social comparisons* in order to evaluate the success of their own behaviour (e.g., Baumeister, Cooper & Skib, 1979; Festinger, 1954; Gardner, Gabriel & Hoschild, 2002; Goethals, 1986; Snyder, 1974, 1979; Wood,

1989). Social comparisons are the cognitive evaluations that people make about their own behaviour when they compare their behaviour to the behaviour of other people (Festinger; Goethals & Darley, 1977; Suls & Miller, 1977).

Research has shown that social comparisons increase self-esteem when people compare themselves to less successful people and decrease self-esteem when people compare themselves to more successful people (Aspinwall & Taylor, 1993; Suls, Martin & Wheeler, 2002). Furthermore, research has shown that people avoid social situations if they make unfavourable social comparisons, in order to protect their self-esteem from the harmful effects of the negative feedback (e.g., Gibbons, Benbow & Gerrard, 1994; Marsh, 1987; Mussweiler, Gabriel & Bodenhausen, 2000; Swann, 1987; Taylor & Lobel, 1998; Tesser, 1988). Thus, the social comparisons that people make could have positive and negative effects on the relationship between self-competence and performance.

Review of Research Investigating Social Comparisons and Self-Competence

Research has shown that social comparisons affect people's self-competence in various life roles (e.g., Ahrens, Zeiss & Kanfer, 1988; Begue, 2005; Bogart, Grey-Bernhardt, Catz, Hartmann & Otto-Salaj, 2002; Ebbers, 2008; Hutchison, 2008). Several organisational studies that manipulated self-competence through social comparative processes found that unfavourable social comparisons caused people to doubt their self-competence and produce poorer performances (e.g., Bandura & Jourden, 1991; Bandura & Wood, 1989a).

Bandura and Jourden (1991) examined the impact of social comparisons on self-regulatory factors and task performance. Participants were randomly assigned to one of four treatment conditions that were defined by the pattern of social-comparative

information that was presented: superior capabilities, similar capabilities, progressive

mastery and failure. In the superior capabilities condition, the performance of

participants consistently surpassed a comparison group. In the similar capabilities

condition, participants performed as well as a comparison group. In the progressive

mastery condition, successful performance of participants increased with practice. In

the failure condition, participants experienced a progressive decline in performance

outcomes compared to a comparison group. The experimental task required

participants to allocate a group of employees to production tasks by matching

employee attributes to the subfunctions of the tasks. Participants made decisions

about the allocations based on goals and social incentives that were set by the

experimenters. The results revealed that participants in the superior capabilities

condition doubted their competence when they saw the comparison group

performing better than them. In contrast, when participants saw themselves

performing better than the comparison group, their self-competence beliefs

strengthened, they were able to think more analytically and they evaluated

themselves more positively as their progress increased.

Bandura and Jourden's (1991) study demonstrated that task performance can be

positively and negatively affected when participants made favourable and

unfavourable social comparisons respectively. The favourable social comparisons

that participants made led to a feeling of satisfaction and higher performances. In

contrast, the unfavourable social comparisons that participants made led to a feeling

of dissatisfaction and lower performances. The researchers concluded that self-

competence mediated participants' affective reactions to the social comparisons.

However, it is unclear whether or not the affective reactions that participants

experienced were experienced by participants with low task competence and low

social competence, high task competence and high social competence, low task competence and high social competence and/or high task competence and low social competence.

Prussia and Kinicki (1996) arrived at a similar conclusion to Bandura and Jourden (1991) when they investigated group performance as a function of the group's beliefs in their collective capabilities. Two groups of participants received bogus feedback that they were better or worse than a fictitious norm. A third group received no information about their performance. Half of the groups watched a videotape showing people modelling brainstorming strategies. All participants received accurate feedback about their own performance but the bogus feedback led them to believe that their group had performed above or below the normal productivity standard. The researchers measured the types of strategic measures that participants used and the number of novel solutions that they generated. The results revealed that collective efficacy mediated the effects of positive and negative bogus feedback on group goals and partially mediated effects of modelling on group effectiveness. Collective efficacy made a unique contribution to performance after controlling for prior group performance, supporting the hypothesis that social comparisons influence affective processes and subsequent task performance.

Implications for Self-Competence Theory

The results of these studies (Bandura & Jourden, 1991; Prussia & Kinicki, 1996) are important for self-competence theory for three reasons. First, they provide evidence of a relationship between task competence, task performance and task setting. In Bandura and Jourden's (1991) study, participants' were performing in the presence of other participants and receiving bogus feedback about the other participants' performance. In Prussia and Kinicki's (1996) study, participants

watched strangers model how the task should be performed on a videotape and they received bogus feedback about the performance of fictitious participants. The findings revealed that social comparison processes affect performance. However, it is unclear to what extent social comparisons processes affected self-competence. Following my social and task competence model, low task competence participants should perform worse than high task competence participants because they should make more social comparisons.

Second, the results from Bandura and Jourden's (1991) and Prussia and Kinicki's (1996) studies show that there is a social dimension to performance that is related to cognitive comparisons of competencies, performances and evaluations and involves social abilities and social performances. The social abilities in these studies would have included initiating discussions, providing information and giving opinions, keeping the group together and on track, cooperating and encouraging other group members. Following my social and task competence model, low social competence participants should perform worse in the presence of other people than high social competence participants because they are less confident in their social abilities.

Third, these studies (Bandura & Jourden, 1991; Prussia & Kinicki, 1996) provide evidence of a relationship between task competence, task performance and positive and negative affect. When participants were induced to believe that they were performing better than other participants, they experienced positive affect and their performances increased. In contrast, when the same participants were induced to believe that they were performing worse than other participants, they experienced negative affect and their performances decreased. This result contradicts research on social facilitation effects that showed that the mere presence of an audience increased both motivation to perform and performance outcomes (e.g., Cottrell,

Wack, Sekerak, & Rittle, 1968; Guerin, 1993; Zajonc, 1965; Zajonc & Sales, 1966).

One possible explanation for these incongruities in the research findings is that when

people are making social comparisons their attention shifts from an external focus on

task performance to an internal focus on evaluating their self-competence. Following

my social and task competence model, self-protection mechanisms potentially

influence this process.

Overview of Study 2

The first aim of Study 2 was to investigate the reliability and factor structure of

the STCS (Version 3). The second aim of this study was examine the predictive

validity of the STCS (Version 3) by exploring how task setting and self-protection

may affect the relationship between self-competence and performance.

The study consisted of an experiment involving an anagram task. The experiment

had a 2 (task setting: alone/group) x 2 (task competence: high/low) x 2 (social

competence: high/low) between-subjects factorial design. Participants in the *alone*

condition participated in the experiment without any person present in the laboratory

except for the researcher. Participants in the *group* condition participated in the

experiment in small groups of three or four people. All participants completed the

STCS (Version 3), pre- and post-test measures of performance, and the anagram

task. There were four performance measures: the number of plans that participants

made before they commenced the task, the length of time that participants persisted

solving the anagrams, the number of anagrams that they solved and the number of

analytical strategies that they used during the task. Three of the anagrams were

insoluble in order to obtain an accurate measure of the length of time that

participants persisted in trying to solve the anagrams.

Predictions for Study 2

Following my social and task competence model, I predicted that:

1. There should be significant positive correlations between the social and task competence scales and self-protection scales[11].

2. Task setting should affect performance among high and low social competence participants such that high social competence participants should perform better in the group condition than in the alone condition and low social competence participants should perform better in the alone condition than in the group condition. People with high social competence should perform better in social situations, whereas people with low social competence should perform better when they are working alone. I make this prediction because research has shown that people frame their abilities in relation to performance feedback and other people's performances (e.g., Bandura & Jourden, 1991). People with high social competence should, therefore, perform better in social situations because they are more confident that they can control their social behaviour, even when they are performing tasks. In contrast, people with low social competence should perform better when they are working alone because they lack confidence in their social abilities. Hence, their attention is likely to shift from an external focus on the task to an internal focus on how to control their social abilities when they are required to work in social situations.

3. Task setting should affect participants' problem solving such that high task competence participants should perform better in the alone condition and low task competence participants should perform better in the group condition. I

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[11] This hypothesis follows Hypothesis 1 and Hypothesis 3 from Chapter 4.

make this prediction because high task competence participants should not be distracted by social comparisons when they are performing in the alone condition. The group condition should however, increase low task competence participants' performance by motivating them to try harder to succeed.

4. Task setting should affect the performance of high and low self-protection participants such that high self-protection should lead to more problem solving than low self-protection in the alone and group condition. High self-protection participants should be protected from negative feedback from either the task or social situation more than low self-protection participants. In the alone condition, the main source of feedback was performance on the anagram task. Three of the anagrams were insoluble and should have triggered more self-protection processes in high self-protection participants than low self-protection participants. High self-protection participants should be more sensitive to threats to their task competence than low self-protection participants. In the group condition, the presence of other participants should trigger high self-protection participants to utilise more self-protection processes than low self-protection participants. . Therefore, high self-protection participants should be more sensitive to threat to their social and task competence than low self-protection participants[12].

5. Self-protection should moderate the effects of social competence on performance such the relationship between social competence and performance should be stronger for high self-protection participants and less or non-existent for low self-protection participants.

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[12] Hypothesis 4 is a prediction for Study 2 and not an overarching hypothesis from Chapter 4.

6. Self-protection should moderate the relationship between task competence and
   problem solving such that the relationship between task competence and
   performance should be stronger for high self-protection participants and less or
   non-existent for low self-protection participants[13].

Method

Participants

Participants were first year undergraduate students from the School of
Psychology at the University of Newcastle, NSW, Australia. Participants received
course credit in return for their participation. One hundred and twenty participants
(92 females, 28 males) completed the experiment in separate sessions. Participants
were randomly assigned to an alone or group condition. Fifty-six participants (41
females, 15 males) took part in the alone condition and 64 participants (51 females,
13 males) took part in the group condition. The average age of all participants was
20.44 years ($SD = 5.0$). Participants were required to be 18 years of age or older.

Procedure

The experiment was advertised by placing posters on the University of
Newcastle's School of Psychology First Year Participant Pool webpage and
noticeboard. Participants who were interested in participating in the experiment
contacted the researcher by email in order to make arrangements to attend a
laboratory session. On arrival at the laboratory, participants sat at tables and chairs
that were arranged in two rows. Each row had four tables and a space was left in the

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[13] I did not make any predictions about the relationship between task competence
and social competence because social and task competence given the close empirical
relationship between these two aspects of self-competence.

middle of the row to allow participants to enter and leave the room with ease. The chairs and tables faced the experimenter so that participants who sat next to each other would have had to look sideways to make eye contact. Participants in both groups were permitted to sit wherever they chose to. The researcher sat at a desk positioned at the front of the laboratory.

The researcher introduced the experiment as an investigation into "self-evaluations and task performance". The researcher informed participants that the experiment consisted of three parts. Participants were informed that they would complete several questionnaires relating to self-evaluations and task performance in *Part 1;* an anagram task in *Part 2* and a few more questionnaires in *Part 3*.

The researcher instructed each participant to complete the first questionnaire in Part 1 and to raise their hand when finished in order to indicate that they were ready to move on to the next part of the experiment. The researcher discreetly recorded the time that each participant began and ended the anagram task (Part 2) on a separate piece of paper marked with the participant's participation number. Once participants had finished Part 3, they were given a debriefing sheet and feedback questionnaire and any further questions about the research were answered.

Experimental Materials

*Materials for Part 1.*In Part 1 of the experiment, participants completed the STCS (Version 3; see Appendix D) and a Plans questionnaire (see Appendix E). The STCS (Version 3) consists of 60 items measuring social and task competence and self-protection. The old items from the STCS (Version 2) were rewritten in order to improve face and content validity and one new social competence item and one new task competence item were constructed and added to the scale in order to make a 20-item scale.

The format of the STCS (Version 2) was changed so that in the STCS (Version 3) respondents were required to read each vignette and rate how similar their own behaviour was compared to the behaviour described in the vignette. Next, participants were required to read each vignette again and rate how ideal the behaviour described in the vignette was in their opinion. The actual scale question was rewritten for the present study to address a limitation of the actual scale question that was used in Study 1. The actual scale question that was used in Study 1 ("How would you have behaved in this situation?") asked respondents to respond to test items on the basis of evaluations of their past performances. However, the purpose of the actual scale question was to engage respondents to make a prediction about their future performance on the basis of judgements about their past behaviour in the same situations. Changing the actual scale question to "how similar would you behave if you were in this situation?" placed more emphasis on the prediction of future behaviour[14]. Thus, for the SCS (Version 3) and TCS (Version 3), respondents were asked to make predictions about their future behaviour by comparing their predicted behaviour to the behaviour described in the vignette for the actual scale and to reference their standards of behaviour for the ideal scale. The ideal question that was used in Study 1 was "in your opinion, how ideal is the behaviour described in the scenario". This question was retained in Study 2 because it requires respondents to compare the behaviour in the vignette to their own standard for the same behaviour.

The new format of the STCS (Version 3) required participants to read each item and respond to the actual scale question first and then read each item again and respond to the ideal scale question second. The direction of the wording of the ideal

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[14] The reader is referred to my discussion of response formats (p. 186 – 188) for an explanation of the advantages of similarity responses.

scale was the reverse of the actual scale in order to control for response sets. That is, 1 equalled "very differently" and 7 equalled "very similarly" for the actual scale and 1 equalled "very ideal" and 7 equalled "not ideal at all" for the ideal scale.

The SPS (Version 1) was piloted in this study. The SPS (Version 1) aims to measure the self-protective strategies that people use when they are high, medium or low in social and task competence. The scale contains items that measure emotion focused coping, denial, isolation and reaction formation. The SPS (Version 1) has a slightly different response format to the SCS (Version 3) and TCS (Version 3) in that it uses short statements that are linked to the vignettes that contain detailed descriptions of social and task performances. Respondents are asked to read each vignette and subsequent self-protective strategy and then rate the strategy according to whether it is how they would actually and ideally behave in the same situation.

The method of linking several self-protective statements to the same vignette as each other represents a modification of Smith and Kendall's (1963) procedure of anchoring examples of expected behaviour to evaluative rating scales. Smith and Kendall (1963) used examples of good, average and poor behaviour to define levels of the characteristic being measured and as operational definitions of the dimension being rated. These behavioural descriptions were linked to positions that were determined by supervisor ratings on continuous rating scales and arranged vertically on the page. In the SPS (Version 1), however, this method was modified by using the vignettes to define the dimensions of self-competence that have been identified in the literature as influencing performance. The vignettes also served as operational definitions of the dimensions of the social and task competence beliefs being rated. That is, the examples of social and task performance that are described in the vignettes defined levels of social and task performance in the same way that Smith

and Kendall's good, average and poor examples of behaviour defined levels of the

behaviour characteristic being measured.

The Plans questionnaire instructed participants as follows: "Shortly, you will

be asked to rearrange the letters in 15 anagrams using the clues provided. Here's an

example:

RIATA

Jewelled crown

TIARA
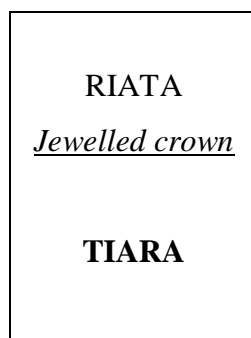
Before you begin, please write down how you plan to complete the task. Please

write down one plan next to each number. For example: "*I plan to read all of the

anagrams and clues first.*" Five blank spaces were available for participants to write

down their plans.

Materials for Part 2. The experimental task was operationalised using 15

anagrams that I created. The anagram sheet (see Appendix F) instructed participants

to use the clues in italics to rearrange the letters in each of the anagrams to make a

new word. A blank space was provided underneath the anagram for participants to

write their answers. Twelve of the anagrams (1, 2, 3, 4, 5, 7, 9, 10, 12, 13, 14 and 15)

were soluble and three anagrams (5, 8 and 11) were insoluble. The inclusion of the

insoluble anagrams enabled the length of time that participants persisted to be

measured. Participants were informed about this manipulation after they had finished

participating in the study.

Materials for Part 3. The third questionnaire was a posttest measure of strategies

(see Appendix G). This questionnaire asked participants to indicate the extent to

which they used a series of strategies during the anagram task. Ideas for the strategies were obtained from an online word search puzzle website (http://www.word-buff.com/word-search-puzzles.html). An example of a strategy is "I used the clues only." A five point Likert-type scale ranging from "never" to "always" was used to record how often respondents used each strategy during the task.

<div align="center">Experimental Manipulation of Task Setting</div>

The alone/group aspect of the research represented the experimental manipulation in this study. This manipulation enabled the effects of the task setting on performance to be ascertained. Participants in the alone condition participated in the experiment in the presence of the experimenter only. Participants in the group condition participated in small groups of four or five participants.

<div align="center">Results</div>

Reliability of the Social and Task Competence Scale

I computed the preliminary reliability of the STCS (Version 4) using Spearman-Brown prediction formula (Nunnally & Bernstein, 1994). Alphas for the actual and ideal scales of the STCS (Version 3) and SPS (Version 1) are shown in Appendix D. Alpha for the actual and ideal scales of the STCS (Version 3) were .65 and .71 respectively. Alphas for the actual and ideal scales of the SPS (Version 1) were .69 and .80 respectively. These preliminary subscale reliabilities were acceptable. However, the reliabilities of some of the subscales were less than desirable (see Appendix H). The reliability of the Social Competence Scale and its subscales were problematic and ranged from -.13 to .24 for the actual scales and -.02 to .35 for the ideal scales.

Factor Structure of the Social and Task Competence Scale

The factor structure of the STCS (Version 3) was examined using a principal axis factor analysis with promax rotation (see Appendix H). The factor analysis produced three interpretable factors. Factor 1 contained eight items (Items 1, 3, 5, 8, 9, 11, 18 and 20) that measured the three dimensions of task competence (plan, persistence, strategising). Therefore, this factor was named Task Competence. Factor 2 contained three items (Items 4, 6, and 16) that measured the identification dimension of social competence. Therefore, this factor was named Social Competence. Factor 3 contained four items (Items 12, 14, 15 and 17) that measured the communication dimension of social competence. Therefore, this factor was named Communication. Notably, the items from the cooperation dimension of social competence did not load onto any of the factors. Therefore, the cooperation subscale was excluded from the subsequent statistical analyses.

Factor Structure of the Self-Protection Scale

The factor analysis of the SPS (Version 1) produced four interpretable factors that represented the four dimensions of self-protection (see Appendix H). Factor 1 contained 16 items (Items 23, 24, 25, 31, 33, 34, 36, 40, 42, 44, 51, 54, 55, 57 and 59) that measured the emotion-focused coping dimension of self-protection. Therefore, this factor was named Emotion-Focused Coping. Factor 2 contained eight items (Items 21, 26, 27, 29, 30, 32, 35 and 49) that measured the denial dimension of self-protection. Therefore, this factor was named Denial. Factor 3 contained four items (Items 37, 38, 41 and 53) that measured the isolation dimension of self-protection. Therefore, this factor was named Isolation. Factor 4 contained five items (Items 28, 43, 48, 52 and 56) that measured the reaction formation dimension of self-protection. Therefore, this factor was named Reaction Formation.

Reliability of the Retained Items

Next, I formed new scales from the items that loaded onto the four factors in the factor analysis of the STCS (Version 3) and the four factors in the factor analysis of the SPS (Version 1). The overall reliability estimates for the STCS (Version 3) included the SPS (Version 1) because this was consistent with my theoretical model. The reliability of these scales was established using the Spearman-Brown formula (see Table 6.1). The reliabilities for the STCS (Version 3) and SPS (Version 1) were an acceptable .62 and .66 respectively for the actual scale and .63 and .71 respectively for the ideal scale. The reliabilities for the Task Competence Scale (Version 3) and Social Competence Scale (Version 3) were .36 and .55 respectively for the actual scale but dropped for the subscales, and ranged from .16 to .21 for the actual task competence subscales. The reliabilities for the SPS (Version 1) subscales were better. The reliabilities of the emotion focused coping and denial subscales were .71 and .66 respectively for the actual scale and .85 and .50 for the ideal scale, but the reliabilities of the reaction formation and isolation subscales were lower and was .43 and .45 respectively for the actual scale and .42 and .61 for the ideal scale respectively. The reliabilities of most of the scales were acceptable because they were above the .60 that is recommended for psychological research (Clarke & Watson, 1995).

Next, I examined the interitem correlations of the STCS (Version 3; see Appendix H). The average interitem correlation for the STCS (Version 3) was .22 for the actual scale and .09 for the ideal scale. Therefore, only the interitem correlation for the actual scale fell within the range of .15 and .50 that Clark and Watson (1995) recommended. Examination of the interitem correlations (see Appendix H) revealed that only 16.6% of the interitem correlations for the actual

STCS scale and 39.5% of interitem correlations for the ideal STCS scale, fell within

the desired range.

Table 6.1

Alpha Coefficients for the Revised STCS (Version 3)

Scale	Items	Actual	Ideal
		Alpha	
STCS	1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 15, 16, 17, 18, 20, 21, 23, 24, 25, 26, 28, 29, 30, 31, 32, 33, 34, 35, 36, 38, 40, 41, 42, 43, 44, 48, 49, 51, 52, 53, 55, 56, 59	.62	.63
Task competence	1, 3, 5, 8, 9, 11, 18, 20	.36	.60
Planning	1, 11, 18	.16	.38
Persistence	5, 8	.22	.28
Strategising	3, 9, 20	.21	.16
Social competence	4, 6, 10, 12, 15, 16, 17	.55	.38
Identification	4, 6, 10, 16	.40	.42
Communication	12, 14, 15, 17	.46	.47
Self-protection	21, 23, 24, 25, 26, 28, 29, 30, 31, 32, 33, 34, 35, 36, 38, 40, 41, 42, 43, 44, 48, 49, 51, 52, 53, 55, 56, 59	.66	.71
Emotion focused coping	23, 24, 25, 31, 33, 34, 36, 40, 42, 44, 51, 55, 59	.71	.85
Denial	21, 26, 29, 30, 32, 35, 49	.66	.50
Reaction formation	28, 43, 48, 52, 56	.43	.42
Isolation	38, 41, 53	.45	.61

Examination of the interitem correlations of the SPS (Version 1; see Appendix

H) revealed that the average interitem correlation was .11 for the actual scale and .13

for the ideal scale. Again, the average interitem correlations fell outside of the

recommended range of .15 to .50 (Clark & Watson, 1995). Furthermore, 19.6% of

the interitem correlations for the actual SPS scale and 39.6% of interitem

correlations for the ideal SPS fell within the desired range.

Correlational Relationships between the STCS Scales and Subscales

In Hypothesis 1, I predicted that there should be significant positive correlations between the Task Competence Scale (Version 3), Social Competence Scale (Version 3) and SPS (Version 1). I computed correlations between the actual and ideal scales from the Task Competence Scale (Version 3), Social Competence Scale (Version 3) and SPS (Version 1) in order to examine this hypothesis (see Table 6.2). The results showed that there were significant and positive medium-sized correlations between actual task competence and actual social competence ($r = .40$, $p < .01$, $N = 120$) and actual task competence and actual self-protection ($r = .38$, $p < .01$, $N = 120$). Thus, the more actually task competent participants believed they were, the more actually socially competent and self-protective they believed that they were.

There was a small correlation between actual social competence and actual self-protection ($r = .23$, $p < .01$, $N = 120$). There were also small correlations between ideal task competence and actual social competence ($r = .20$, $p < .05$, $N = 120$), and ideal task competence and actual self-protection ($r = .28$, $p < .01$, $N = 120$) and ideal task competence and ideal protection ($r = .25$, $p < .01$, $N = 120$). Overall, these results supported Hypothesis 1.

Table 6.2

Correlations between the STCS (Version 3) Scales

	1	2	3	4	5	6
1. Actual Task Competence	-	.57**	.40**	.07	.38**	.02
2. Ideal Task Competence		-	.20*	.14	.28**	.25**
3. Actual Social Competence			-	.48**	.23**	.09
4. Ideal Social Competence				-	.07	.19*
5. Actual Self-Protection					-	.45**
6. Ideal Self-Protection						-
M	5.16	4.68	4.41	4.13	4.03	3.34
SD	.64	.78	.74	.69	.62	.54

Note: * = $p < 0.05$; ** = $p < 01$; $N = 120$.

To further examine Hypothesis 1, I computed correlations between the STCS (Version 3) subscales (see Table 6.3). For the task competence subscales, there were significant small and medium-sized positive correlations between actual planning and actual persistence ($r = .23$, $p < .05$, $N = 120$), ideal planning and actual persistence ($r = .23$, $p < .01$, $N = 120$) and ideal planning and ideal persistence ($r = .49$, $p < .05$, $N = 120$). Furthermore, there were positive correlations between ideal planning and actual strategising ($r = .27$, $p < .05$, $N = 120$) and ideal planning and ideal strategising ($r = .32$, $p < .05$, $N = 120$). Actual persistence was positively correlated with actual strategising ($r = .26$, $p < .05$, $N = 120$) and ideal strategising ($r = .39$, $p < .01$, $N = 120$). These results supported Hypothesis 1. The more participants believed that they had the ability to plan, the more they thought that they would persist and strategise and the more they valued planning, persisting and strategising.

For the task competence and social competence subscales, there were significant small positive correlations between actual planning and actual communication ($r = .35$, $p < .01$, $N = 120$) and actual planning and ideal communication ($r = .23$, $p < .01$, $N = 120$). There were also significant small positive correlations between actual identification and actual persistence ($r = .22$, $p < .01$, $N = 120$) and actual identification and actual strategising ($r = .26$, $p < .05$, $N = 120$). These results provided further support for Hypothesis 1.

Table 6.3

Correlations between the STCS (Version 3) and SPS (Version 1) Subscales

Subscale	1	2	3	4	5	6	7	8	9	10
1. Actual Planning	-	.41**	.23*	.13	.16	.06	.17	-.07	.35**	.23*
2. Ideal Planning		-	.23*	.49**	.27**	.32**	.16	.15	.16	.20*
3. Actual Persistence			-	.45**	.26**	.39**	.22*	-.03	.06	-.02
4. Ideal Persistence				-	.22*	.37**	.10	.03	.01	-.09
5. Actual Strategising					-	.54**	.26**	.13	.17	.03
6. Ideal Strategising						-	.12	-.02	.10	.19*
7. Actual Identification							-	.45**	.10	.14
8. Ideal Identification								-	.00	.06
9. Actual Communication									-	.44**
10. Ideal Communication										-
M	5.53	5.20	4.90	3.77	4.95	4.77	3.61	3.19	5.51	5.44
SD	.78	.96	1.70	1.31	.91	.86	1.02	.88	.78	.84

Note: $* = p < 0.05$; $** = p < 01$, $N = 120$.

Table 6.3 cont

Correlations between the STCS (Version 3) and SPS (Version 1) Subscales

Subscale	11	12	13	14	15	16	17	18
1. Actual Planning	.17	-.12	.18	.10	.11	.14	-.06	-.13
2. Ideal Planning	.14	.18*	.15	.12	.15	.20*	.13	.12
3. Actual Persistence	.33**	.05	.10	-.05	-.13	-.01	.17	.00
4. Ideal Persistence	.21*	.18*	.13	.15	.00	.18*	.21*	.20*
5. Actual Strategising	.23*	-.04	.28**	.13	.06	.06	.14	.03
6. Ideal Strategising	.21*	-.01	-.01	-.06	.06	.20*	.07	.08
7. Actual Identification	.27**	.08	.23*	.24*	.07	.15	.14	.12
8. Ideal Identification	.05	.28**	.12	.12	.04	.15	.14	.02
9. Actual Communication	-.18*	-.26**	.07	-.04	.14	.18*	-.10	-.15
10. Ideal Communication	-.05	-.18*	-.14	-.15	.17	.27**	-.15	-.11
11. Actual Emotion-Focused Coping	-	.31**	.28**	.13	.15	.10	.29**	.12
12. Ideal Emotion-Focused Coping		-	.00	.12	-.01	.03	.22*	.29**
13. Actual Denial			-	.59**	.23*	.12	.28**	.19*
14. Ideal Denial				-	.13	.18*	.16	.23*
15. Actual Isolation					-	.61**	.17	.21*
16. Ideal Isolation						-	-.01	.13
17. Actual Reaction Formation							-	.68**
18. Ideal Reaction Formation								-
M	3.99	3.02	3.60	3.26	2.93	2.73	4.56	4.65
SD	.80	.79	.86	.84	1.17	1.01	.82	.89

Note: $* = p < 0.05$; $** = p < 01$, $N = 120$.

There were also significant small positive correlations between actual identification and actual emotion focused coping ($r = .27$, $p < .01$, $N = 120$), actual identification and actual denial ($r = .23$, $p < .05$, $N = 120$) and actual identification and ideal denial ($r = .24$, $p < .05$, $N = 120$). Similarly, ideal identification and ideal emotion focused coping ($r = .28$, $p < .01$, $N = 120$) were positively correlated. These results indicated that the more participants identified, the more emotionally focused they were, the more they denied negative feedback and the more that valued emotion focused coping and denial as self-protective strategies. There were significant small positive correlations between actual communication and actual isolation ($r = .18$, $p < .05$, $N = 120$) and actual communication and ideal isolation ($r = .27$, $p < .01$, $N = 120$), which provided further support for Hypothesis 1. The more participants thought that they could communication, the more likely they were to minimise negative feedback, and the more that they valued minimising negative feedback as a self-protective strategy.

In contrast to these findings, there were negative correlations between actual communication and actual emotion focused coping ($r = -.18$, $p < .05$, $N = 120$) and actual communication and ideal emotion focused coping ($r = -.26$, $p < .01$, $N = 120$). Thus, the more confident participants were about their communication abilities, the less emotionally focused they predicted that they would be, and the less that they valued emotion coping as a self-protective strategy. Although the direction of the relationship between these subscales was negative, these results still provided further support Hypothesis 1.

For the task competence and self-protection subscales, ideal planning was positively correlated with ideal isolation ($r = .20$, $p < .01$, $N = 120$). There was also a significant small positive correlation between ideal persistence and ideal isolation (r

= .18, *p* <.01, *N* = 120) and ideal strategising and ideal isolation (*r* = .20, *p* <.01, *N* = 120). The more participants valued planning, persisting and strategising, the more important they thought that minimising negative feedback was. Further, a significant small positive correlation was observed between actual strategising and actual denial (*r* = .23, *p* <.01, *N* = 120), indicating that the more participants thought that they would strategise, the more they thought that they would deny any negative feedback. Finally, there were significant positive correlations between actual persistence and actual emotion focused coping (*r* = .33, *p* < .01) and actual strategising and actual emotion focused coping (*r* = .23, *p* <.05, *N* = 120). The more participants thought that they had the ability to persist and strategise, the more emotionally focused they thought that they would become.

<center>*Predictive Validity of the STCS*</center>

Effects of Task Setting on Social Competence and Problem Solving

I predicted in Hypothesis 2 that task setting should affect problem solving among high and low social competence participants such that high social competence participants should perform better in the group condition and low social competence participants should perform better in the alone condition. To examine this hypothesis, I performed a 2 (task setting: alone/group) x 2 (social competence: high/low) analysis of variance (ANOVA) on the four performance factors: plans, persistence [time], number of anagrams solved and strategies used.

ANOVAs assume that independent variables are orthogonal. If there is a lack of independence, then the ratio of the between to within variances will not follow the F distribution assumed for significance testing, and this will invalidate the ANOVA. Some researchers argue that this approach will lead to more Type II errors (i.e., not

finding something when something is actually there) due to a lack of power of the predictor measures (e.g., MacCallum, Zhang, Preacher & Rucker, 2002). However, Maxwell and Delaney (1993) argue that researchers who justify their use of bivariate median splits cannot fall back on the argument that their results were statistically significant in spite of their taking a conservative approach. When two (or more) continuous predictor measures are dichotomized, the resulting 2×2 analysis is not necessarily conservative. Instead, there is the potential for an effect that is truly zero for a continuous measure to be estimated as a small to medium effect in the 2×2 factorial design. The extent of bias worsens as the continuous measures become more highly correlated (p. 188).

My correlational analyses revealed that there were small to medium-sized positive correlations between the social and task competence scales and subscales indicating that they are part of the same overall construct. Because these scales were not independent from each other, and ANOVAs assume that independent variables are orthogonal, I could not enter them into the same analysis without violating the assumptions of ANOVAs. That is, I could not perform a 2 (task setting: alone/group) x 2 (social competence: high/low) x 2 (task competence: high/low) ANOVA. Therefore, I performed separate 2 (task setting: alone/group) x 2 (social competence: high/low) and 2 (task setting: alone/group) x 2 (task competence: high/low) ANOVAs instead. I entered task setting (alone/group) into the analysis as the first factor. I entered each of the actual and ideal social competence scales and subscales

(identification and communication) as second factors and plans, persistence, number of anagrams and number of strategies as the dependent variables[15].

To ascertain whether participants were high or low on a particular self-competence dimension, I transformed the initial continuous scale scores into high and low scores using median scale scores such that participants who had the lowest scores through to the median score - .02 were categorized as having low self-competence and participants who had the median + .02 through to the highest score were categorized as having low self-competence. The deviation of .02, as opposed to ± 1.0 standard deviation (Aiken & West, 1991), increased the likelihood that an equal number of participants would be assigned to each cell. I excluded participants who had the median scores from the analysis ($N = 239$). The deviation of .02 took into account rounding of scores.

Researchers often form dichotomous scores from continuous scores obtained from psychological tests in order to form distinct groups of participants because they believe that these distinct groups exist (e.g., Bem, 1977; Spence & Helmreich, 1979). A second advantage of dichotomous measures is that data analysis procedures are simpler to calculate and interpret than continuous measures and the results are easier to present (MacCallum, Zhang, Preacher & Rucker, 2002). However, two disadvantages of dichotomisation are that (1) it underestimates the strength of relationships and reduces statistical power (e.g., Cohen, 1983; 1990; Humphreys, 1978; McNemar, 1969), and (2) it can lead to an increase in Type 1 errors (Maxwell & Delaney, 1993). That is, dichotomous scores can be misleading because they can reduce the statistical power of a test to detect true interactions and also show an

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[15] Recall from Chapter 4 that I pointed out that task competence and general cognitive ability (g) are unrelated constructs. Therefore, g was not included as a variable in this study. The anagram task was also insoluble. Therefore, it is not a true measure of general cognitive abililty (g).

interaction when none exists. Furthermore, people within a dichotomised subgroup are treated as if they are identical with respect to the attribute in question, even when there is evidence to the contrary (Cohen, 1978). Therefore, information about individual differences is potentially lost as a result of artificially assigning people to two different subgroups. In order to take the negative consequences of dichotomous measures into account, I also analysed my data using the more powerful approach of multiple regression on undichotomized variables as a way of confirming the results that I obtained from the ANOVAs.

I predicted in Hypothesis 2 that task setting should affect problem solving among high and low social competence participants such that high social competence participants should perform better in the group condition and low social competence participants should perform better in the alone condition. High social competence participants were expected to perform better in the group condition than in the alone condition because they should be confident in their social abilities. Hence, they should feel less threatened participating in the group condition. In contrast, low social competence participants were expected to perform better in the alone condition than in the group condition because they should feel uncomfortable or awkward in social situations and so, more likely to be making social comparisons. Additionally, low social competence participants were expected to perform better in the alone condition than low social competence participants in the group condition because they should be less concerned about social factors and more focused on the experimental task.

The results revealed a significant two-way interaction between task setting and
ideal identification on number of anagrams, $F(1, 116) = 5.11$, $p = .03$[16]. The mean
values and simple effects for this two-way interaction are presented in Table 6.4.

Table 6.4

Number of Anagrams Solved as a Function of Task Setting and Ideal Social

Competence

	Ideal Identification	
Condition	Low	High
Alone	9.25_{a*}	7.42_b
Group	8.18_b	8.36_b

Note. Means with different subscripts are significantly different within columns ($p <$
.05) and rows ($p < .05$).

Looking at Table 6.4, the pattern of means and simple effects in this two-way
interaction revealed that in the alone condition the difference between low ideal
identification ($M = 9.25$) and high ideal identification ($M = 7.42$) was significant,
$F(1, 54) = 7.08$, $p = .01$. In contrast, the difference between the means in the group
condition was not significant, $F(1, 54) = .10$, $p = .75$. Consistent with this interaction
effect, an examination of the correlations between ideal identification and anagrams
in each condition (see Appendix H) revealed a significant negative correlation in the
alone condition, $r = -.31$, $p < .05$, but no significant effect in the group condition, $r =
.01$, $p = .96$. Thus, when participants were in the alone condition, the extent that they
wanted to identify influenced their problem solving such that the less they wanted to

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[16] The multiple regression analyses revealed that number of anagrams was significantly predicted by
ideal identification, $\beta = -.44$, t (119) = -1.95, $p = .05$, explaining 23% of the variance in number of
anagrams. However, the interaction effect of ideal identification and condition (task setting) on
number of anagrams was nonsignificant $\beta = .38$, t (119) = 1.66, $p = .10$.

identification, the more anagrams they solved. In contrast, when participants were in the group condition, the effect of ideal identification on number of anagrams solved was nonsignificant. Hence, Hypothesis 2 was partially supported.

The remainder of the ANOVAs that I performed with task setting (alone/group) as the first factor, actual/ideal identification/communication as the second factor and plans, persistence (time), number of anagrams solved and strategies used as the dependent variables were nonsignificant (*ps* > .27).

Effects of Task Setting on Task Competence and Problem Solving

I examined the interactions between each of the task competence scales and subscales and task setting next in order to test Hypothesis 3. Recall that in Hypothesis 3, I predicted that task setting should affect the problem solving of high and low task competence participants such that high competence participants should perform better in the alone condition and low task competence participants should perform better in the group condition. Following my social and task competence model, the presence of other people in the group condition should distract high task competence participants to perform worse and motivate low task competence participants to perform better. A significant two-way interaction between ideal planning and task setting on task planning provided partial support for Hypothesis 3, $F(1, 104) = 5.26$, $p = .04$. [17] The mean values and simple effects for this two way interaction are presented in Table 6.5

A test of the simple effects of task setting at each level of ideal planning revealed that the difference in the means between the group condition ($M = 4.55$) and the alone condition ($M = 4.04$) was significant for low ideal planning participants, $F(1,$

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[17] When the more robust multiple regression approach was used, the two-way interaction between ideal planning and condition (task setting) on task planning was nonsignificant, $\beta = -.14$, t (119) = -1.38, $p = .17$.

53) = 4.54, p = .04. In contrast, the difference in the means for high ideal planning

participants was nonsignificant, $F(1, 51)$ = 1.05, p = .31. Consistent with these

findings, there was a significant negative correlation between ideal planning and task

planning in the group condition, r = -.34, p =.01 (see Appendix I), but no significant

effect was found in the alone condition, r = .06, p = .69 (see Appendix I). Thus, the

less that low ideal planning participants in the group condition wanted to plan, the

more plans they actually made. Adding to these findings, a test of the simple effects

of ideal planning at each level of task setting revealed that the difference in the

means between low ideal planning (M = 4.55) and high ideal planning (M = 3.80)

was significant in the group condition, $F(1, 57)$ = 7.42, p = .01. In contrast, the

difference between the means for low and high ideal planning participants in the

alone condition was nonsignificant, $F(1, 47)$ = .16, p = .69. Thus, low ideal planning

participants made more plans than high ideal planning participants in the group

condition.

Table 6.5

Task Planning Means as a Function of Task Setting and Ideal Planning

	Ideal Planning	
Condition	Low	High
Alone	4.04_b	4.17_b
Group	$4.55\,_a*$	$3.80\,_b$

Note. Means with different subscripts are significantly different within columns ($p <$

.05) and rows ($p < .05$).

In further support of Hypothesis 3, the results revealed a marginally significant

two-way interaction between actual persist and task setting on number of plans, $F(1,$

116) = 3.52, $p = .06$. [18] The mean values and simple effects for this two way

interaction are presented in Table 6.6.

Table 6.6

Number of Plans as a Function of Task Setting and Actual Persist

Condition	Actual Persist	
	Low	High
Alone	3.97_b	4.24_b
Group	4.48_a*	3.97_b

Note. Means with different subscripts are significantly different within columns ($p < .06$) and rows ($p < .06$).

A test of the simple effects of actual persist at each level of task setting revealed

that the difference in the means between low actual persist ($M = 4.48$) and high

actual persist participants ($M = 3.97$) was marginally significant in the group

condition, $F(1, 62) = 3.72$, $p = .06$. In contrast, the difference between the means in

the alone condition was not significant, $F(1, 54) = .67$, $p = .42$. Consistent with this

finding, there was a marginally significant negative correlation between actual

persist and number of plans in the group condition, $r = -.24$, $p = .06$ (see Appendix I),

but no significant effect was found in the alone condition, $r = .05$, $p = .42$ (see

Appendix I). Thus, participants in the group condition who lacked confidence in

their ability to persist actually made more plans than high actual persist participants.

These results supported Hypothesis 3.

The remainder of the ANOVAs that I performed with task setting (alone/group)

as the first factor, actual/ideal planning/persist/strategise as the second factor and

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[18] When the more robust multiple regression approach was used, the two-way interaction between actual persist and condition (task setting) on number of plans was nonsignificant, $\beta = -.12$, t (119) = -1.09, $p = .28$.

plans, persistence (time), number of anagrams solved and strategies used as the dependent variables were nonsignificant ($ps > .14$).

Effects of Task Setting on Self-Protection and Problem Solving

I predicted in Hypothesis 4 that task setting should affect the performance of high self-protection participants such that they should perform better than low self-protection participants in both the alone and group condition. To examine this hypothesis, I examined the interaction between the SPS (Version 1) and task setting in predicting problem solving. A significant two-way interaction between task setting and actual denial on number of strategies supported Hypothesis 4, $F(1, 104) = 6.52$, $p = .01$.[19] The mean values and simple effects for this two-way interaction are presented in Table 6.7.

Table 6.7

Number of Strategies as a Function of Task Setting and Actual Denial

Condition	Actual Denial	
	Low	High
Alone	1.77_b	2.14_a*
Group	2.14_c*	1.94_b

Note. Means with different subscripts are significantly different within columns ($p < .05$) and rows ($p < .05$).

A test of the simple effects of actual denial at each level of task setting revealed that the difference in number of strategies between high actual denial participants ($M = 2.14$) and low actual denial participants ($M = 1.77$) was significant in the alone

[19] When a more robust multiple regression approach was used, the two-way interaction between actual denial and condition (task setting) on number of strategies was also significant, $\beta = -.14$, t (119) = -2.63, $p = .01$.

condition, $F(1, 48) = 6.13$, $p = .02$. In contrast, the difference between the means in the group condition was nonsignificant, $F(1, 56) = .1.49$, $p = .23$. Consistent with these results, I found a positive correlation between actual denial and number of strategies in the alone condition, $r = .35$, $p = .008$ (see Appendix 6.7), but no significant effect was observed in the group condition, $r = -.13$, $p = .30$ (see Appendix I). Thus, as predicted, the more that the high actual denial participants denied negative feedback from the task in the alone condition, the more strategies they used.

Adding to these findings, a test of the simple effects of task setting at each level of actual denial revealed that the difference in the number of strategies for low actual denial participants in the group condition ($M = 2.14$) was significantly more than low actual denial participants in the alone condition ($M = 1.77$), $F(1, 56) = 6.67$, $p = .01$. In contrast, the difference between the means for high actual denial participants was nonsignificant, $F(1, 48) = .1.30$, $p = .26$. The presence of other participants in the group condition was expected to affect the problem solving of high self-protection participants. Therefore, Hypothesis 4 was only partially supported.

A marginally significant two-way interaction between task setting and ideal denial on number of strategies provided more support for Hypothesis 4, $F(1, 109) = 3.30$, $p = .07$.[20] The mean values and simple effects for this two-way interaction are presented in Table 6.8.

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[20] When a more robust multiple regression approach was used, the two-way interaction between ideal denial and condition (task setting) on number of strategies was also significant, $\beta = -.14$, t $(119) = -2.66$, $p = .01$.

Table 6.8

Number of Strategies as a Function of Task Setting and Ideal Denial

	Actual Denial	
Condition	Low	High
Alone	1.73_b	2.10_a*
Group	2.03_a*	2.00_b

Note. Means with different subscripts are significantly different within columns ($p <$ .05) and rows ($p <$ .05).

A test of the simple effects of ideal denial at each level of task setting revealed that the difference in number of strategies between high ideal denial participants ($M = 2.10$) and low ideal denial participants ($M = 1.73$) was significant in the alone condition, $F(1, 49) = 5.65, p = .02$. In contrast, the difference between the means in the group condition was nonsignificant, $F(1, 60) = .06, p = .80$. Consistent with these results, I found a positive correlation between ideal denial and number of strategies in the alone condition, $r = .32, p = .02$ (see Appendix H), but no significant affect was observed in the group condition, $r = -.03, p = .80$ (see Appendix H). Thus, the more that participants wanted to deny negative feedback in the alone condition, the more strategies they used. Further, a test of the simple effects of task setting at each level of ideal denial revealed that the difference in the number of strategies that low ideal participants used in the alone condition ($M = 1.73$) and the group condition ($M = 2.03$) was significant, $F(1, 56) = 4.17, p = .04$. In contrast, the difference between the means for the high ideal denial participants was nonsignificant, $F(1, 53) = .37, p = .55$. Therefore, as predicted, high ideal denial participants in the alone condition used more strategies than low ideal denial participants and low ideal denial participants in the group condition used more strategies than low ideal denial participants in the alone condition.

The remainder of the ANOVAs that I performed with task setting (alone/group) as the first factor, actual/ideal self-protection/emotion focused coping/denial/isolation/reaction formation as the second factor and plans, persistence (time), number of anagrams solved and strategies used as the dependent variables, were nonsignificant ($ps > .13$).

The Relationship between Social and Task Competence and Self-Protection

In Hypothesis 5, I predicted that social competence should moderate the effects of self-protection on problem solving such that high self-protection should be associated with low social competence and more problem solving. In Hypothesis 6, I predicted that task competence should moderate the effects of self-protection on problem solving such that high self-protection should be associated with high task competence and more problem solving.

I conducted separate hierarchical regression analyses in order to examine these hypotheses. I entered the main effect terms in Step 1 and interaction terms in Step 2 (Cohen & Cohen, 1983) in order to predict number of plans, task persistence [time], number of anagrams and number of strategies. For example, the main effect terms: actual social competence, ideal social competence, actual self-protection and ideal self-protection were entered simultaneously in Step 1, their two-way interaction terms (i.e. actual social competence × actual self-protection, ideal social competence x actual self-protection, actual social competence × ideal self-protection, ideal social competence x ideal self-protection,), their three-way interaction terms (i.e. actual social competence x actual self-protection x ideal self-protection, ideal social competence x actual self-protection x ideal self-protection) and their four-way interaction term (i.e. actual social competence x ideal social competence x actual self-protection x ideal self-protection) were entered simultaneously in Step 2. The

actual and ideal scores were entered in the same analyses due to a priori theory. Self-competence for a particular task results from a combination of how important the task was, the standard for excellence that was set for the task and whether the task was viewed as achievable or not (e.g., Wood & Bandura, 1989). Therefore, the interaction terms for the actual and ideal scales were entered in the same analysis. I substituted social competence with each of its subscales and self-protection with each of its subscales in separate regression analyses.

These analyses were followed by simple linear regression analyses to describe the interaction of the continuous variables. To ensure that multicollinearity did not affect the results, each variable was centered and interaction terms were based on the centered product scores (Aiken & West, 1991). As the predictor variables that I included in each analysis were related to each other, I computed the variance inflation factors (VIFs) to detect the severity of multicollinearity. Multicollinearity is present when VIFs have a value more than 10 (Neter, Kutner, Nachtsheim, & Wasserman, 1996). In all cases, the VIFs that I obtained were less than or equal to 6.72, indicating that multicollinearity did not affect the results.

Number of Plans

The first hierarchical multiple regression analysis involved the dependent variable: number of plans. I regressed number of plans onto the actual social competence scales (IV1), ideal social competence scales (IV2) actual self-protection scales (IV3) and ideal self-protection scales (IV4) in Step 1 and their two-way interaction terms in Step 2, three-way interaction terms in Step 3 and four-way interaction term in Step 4). Next, I substituted social competence with each of its subscales and self-protection with each of its subscales in separate regression analyses.

The results revealed that actual emotion focused coping, ideal emotion focused coping, actual social competence and ideal social competence did not independently predict number of plans in Step 1, ps ≥ 30. However, entry of the interaction terms in Step 2 of the analysis significantly improved the prediction of number of plans. A disordinal three-way interaction between ideal social competence, actual emotion focused coping and ideal emotion focused coping predicted number of plans, $\beta = .35$, t (119) = 1.96, p = .05.

To decompose this interaction, I plotted it (see Figure 6.1) and then performed three simple linear regression analyses after I split the data by each factor. First, I split the data by ideal social competence and tested the simple two-way interaction effects of actual emotion focused coping x ideal emotion focused coping at each level of ideal social competence. Next, I split the data by actual emotion focused coping and tested the simple two-way interaction effects of ideal social competence x ideal emotion focused coping at each level of actual emotion focused coping. Finally, I split the data by ideal emotion focused coping and tested the simple two-way interaction effects of actual emotion focused coping x ideal social competence at each level of ideal emotion focused coping.

The simple effect of ideal social competence and ideal emotion focused coping on number of plans was marginally significant among low emotion-focused coping participants, $\beta = -.34$, t (58) = -1.81, p = .07 but not when actual emotion focused coping was high, $\beta = .01$, t (56) = .08, p = .94. These results indicated that actual emotion focused coping moderated the effects of ideal social competence on number of plans such that the planning of low ideal social competence participants increased the less emotionally focused they were but the more emotionally focused that they wanted to be.

Figure 6.1. Number of Plans as a Function of Ideal Social Competence, Actual Emotion Focused Coping and Ideal Emotion Focused Coping.
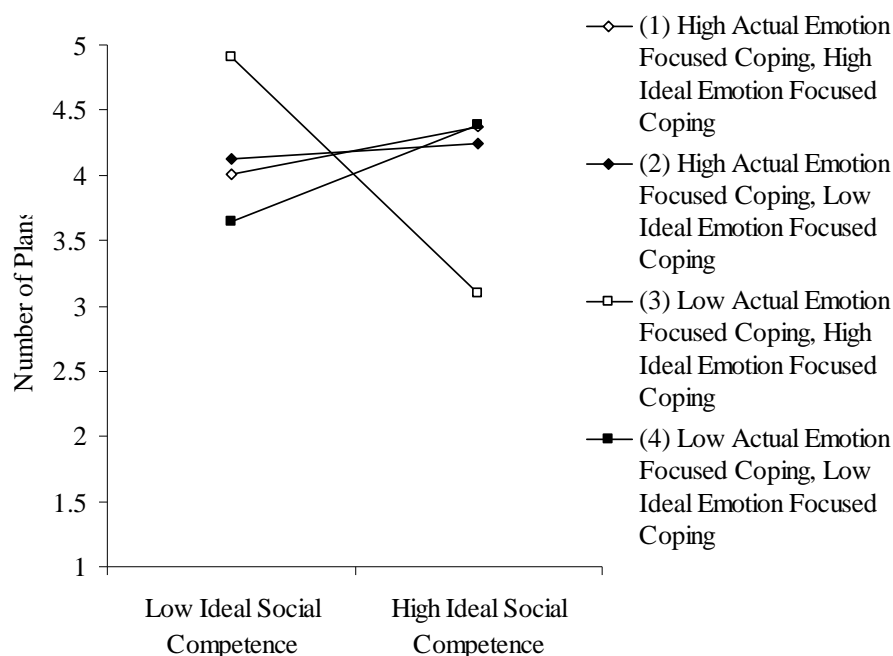
In the second regression analysis, I regressed number of plans onto the actual task competence scales (IV1), ideal task competence scales (IV2), actual self-protection scales (IV3) and ideal self-protection scales (IV4) in Step 1,their two-way interaction terms in Step 2, their three-way interaction terms in Step 3 and their four-way interaction term in Step 4. Next, I substituted task competence with each of its subscales and self-protection with each of its subscales in separate regression analyses. In each analysis, the results failed to produce any theoretically meaningful and statistically significant relationships.

Number of Anagrams

The second hierarchical multiple regression analysis involved the dependent variable: number of anagrams. I regressed number of anagrams onto actual social competence (IV1), ideal social competence (IV2), actual self-protection (IV3) and

ideal self-protection (IV4) in Step 1 and their two-way interaction terms in Step 2, their three-way interaction terms in Step 3 and their four-way interaction term in Step 4. Next, I substituted social competence with each of its subscales and self-protection with each of its subscales in separate regression analyses. In each analysis, the results failed to produce any theoretically meaningful and statistically significant relationships.

A slightly different picture emerged when I regressed number of anagrams onto actual task competence (IV1), ideal task competence (IV2), actual self-protection (IV3) and ideal self-protection (IV4) in Step 1, their two-way interaction terms in Step 2, their three-way interaction terms in Step 3 and their four-way interaction term in Step 4. Next, I substituted task competence with each of its subscales and self-protection with each of its subscales in separate regression analyses.

The results revealed that actual persist, ideal persist and actual self-protection and ideal self-protection did not independently predict problem solving in Step 1, *ps* $\geq$ .14. However, entry of the interaction terms in Step 2 of the analysis significantly improved the prediction of number of anagrams. A disordinal two-way interaction between ideal persist and actual self-protection predicted number of anagrams, $\beta =$ .95, t (119) = 2.54, *p* < .05.

To decompose this interaction, I plotted it (see Figure 6.2) and then performed a simple linear regression analysis after I split the data by each factor. First, I split the data by ideal persist and tested the simple effects of actual self-protection at each level of ideal persist. Next, I split the data by actual self-protection and tested the simple effects of ideal persist at each level of actual self-protection.

Figure 6.2. Number of Anagrams as a Function of Ideal Persist and Actual Self-Protection.
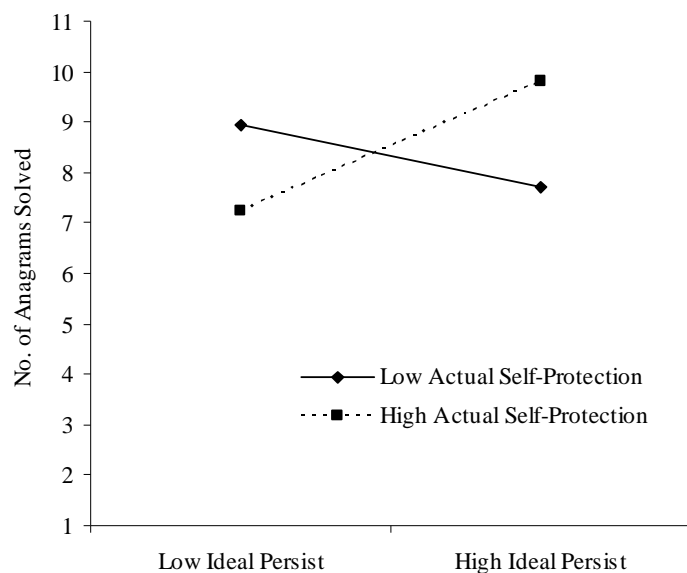
The simple effect of ideal persist and number of anagrams was significant when actual self-protection was high, $\beta = .72$, t (58) = 1.98, $p = .05$ but not when actual self-protection was low, $\beta = -.19$, t (56) = -.64, $p = .52$. Thus, the number of anagrams that high ideal persist, high actual self-protection participants solved increased the more self-protective they were. This result supported Hypothesis 6 that self-protection should moderate the relationship between task competence and problem solving such that the relationship between task competence and performance should be stronger for high self-protection participants and less or non-existent for low self-protection participants.

In other analyses, the results revealed that actual strategise (IV1), ideal strategise (IV2), actual self-protection (IV3) and ideal self-protection (IV4) did not independently predict number of anagrams solved in Step 1, ps ≥ 14. However, entry of their two-way interaction terms in Step 2, their three-way interaction terms in Step 3 and their four-way interaction term in Step 4 of the analysis significantly improved

the prediction of number of anagrams solved. A marginally significant disordinal three-way interaction between actual strategise, actual self-protection and ideal self-protection predicted number of anagrams solved, $\beta = .42$, t (119) = 1.87, p = .06.

To decompose this interaction, I plotted it (see Figure 6.3) and then performed three simple linear regression analyses after I split the data by each factor. First, I split the data by actual strategise and tested the simple two-way interaction effects of actual self-protection x ideal self-protection at each level of actual strategise. Next, I split the data by actual self-protection and tested the simple two-way interaction effects of actual strategise x ideal self-protection at each level of actual self-protection. Finally, I split the data by ideal self-protection and tested the simple two-way interaction effects of actual strategise x actual self-protection at each level of ideal self-protection.

The simple effect of actual strategise and ideal self-protection on number of anagrams solved was significant when actual self-protection was high, $\beta = 1.26$, t (58) = 3.17, p < .01 but not when actual self-protection was low, $\beta = -.09$, t (56) = -.27, p = .79. These results indicated that actual self-protection moderated the effects of actual strategise and ideal self-protection on number of anagrams solved such that the more anagrams that low actual strategise participants solved increased, the less self-protective that they wanted to be but the more self-protective they actually were. This result was inconsistent with Hypothesis 6 that self-protection should moderate the effects of task competence on performance such that high self-protection should be associated with high task competence and more problem solving[21].

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[21] The reader is referred to Appendix 6.7 for more results of the regression analysis involving the dependent variable: number of anagrams.

Figure 6.3. Number of Anagrams Solved as a Function of Actual Strategise, Actual Self-Protection and Ideal Self-Protection.
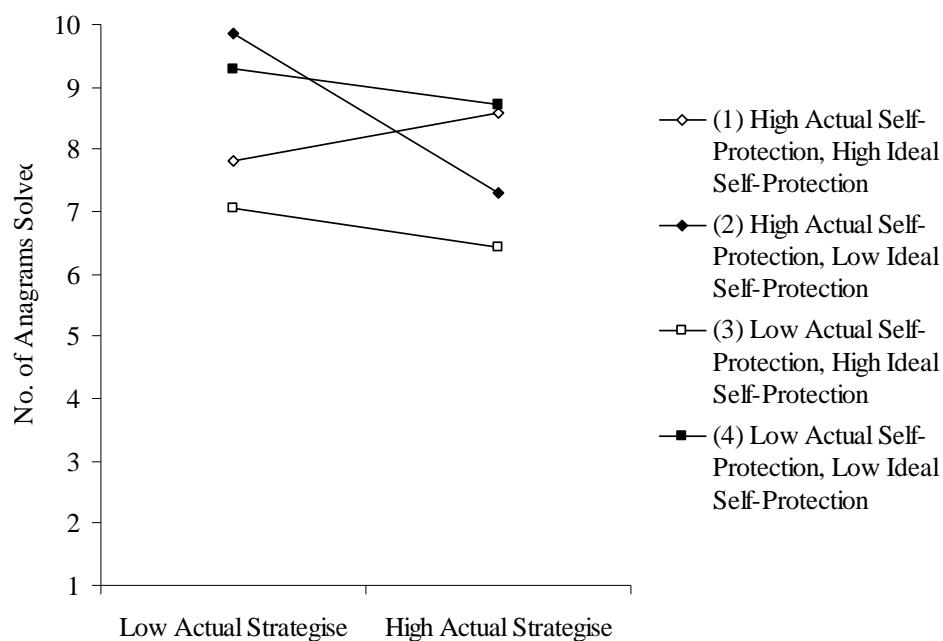
Task Persistence (time)

The third hierarchical multiple regression analysis involved the dependent variable: task persistence (time). I regressed task persistence (time) onto actual social competence (IV1), ideal social competence (IV2), actual self-protection (IV3) and ideal self-protection (IV4) in Step 1,their two-way interaction terms in Step 2, their three-way interaction terms in Step 3 and their four-way interaction term in Step 4. Next, I substituted social competence with each of its subscales and self-protection with each of its subscales in separate regression analyses.

The results revealed that ideal social competence independently predicted task persistence (time) in Step 1, β = -1.75, t (119) = -2.10, $p < .05$[22]. However, entry of the interaction terms in Step 2 of the analysis significantly improved the prediction of task persistence (time). A disordinal two-way interaction between ideal social competence and actual reaction formation predicted task persistence (time), β = -2.36, t (119) = -1.94, $p = .05$. The interaction between ideal social competence and actual self-protection was an unexpected finding. No hypotheses were generated that predicted relationships between actual and ideal beliefs. The results were reported because they are informative about the moderating effects of self-protection on the relationship between social competence and problem-solving.

To decompose this interaction, I plotted it (see Figure 6.4) and then performed a simple linear regression analysis after I split the data by each factor. First, I split the data by ideal social competence and tested the simple effects of actual reaction formation at each level of ideal social competence. Next, I split the data by actual reaction formation and tested the simple effects of ideal social competence at each level of actual reaction formation.

The simple effect of ideal social competence and task persistence (time) was marginally significant when actual reaction formation was high, β = -2.40, t (53) = 1.91, $p = .06$ but not when actual reaction was low, β = -.43, t (54) = -.53, $p = .60$. Thus, the length of time that low ideal social competence, high actual reaction formation participants persisted increased the more they minimised negative feedback from their everyday lives. This result supported Hypothesis 6 that self-protection should moderate the relationship between social competence and problem

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[22] In contrast, actual social competence, actual reaction formation and ideal reaction formation did not independently predict problem solving in Step 1, $ps \geq 12$.

solving such that higher self-protection should be associated with lower social competence and more problem solving.

Figure 6.4. Task Persistence (time) as a Function of Ideal Social Competence and Actual Reaction Formation.
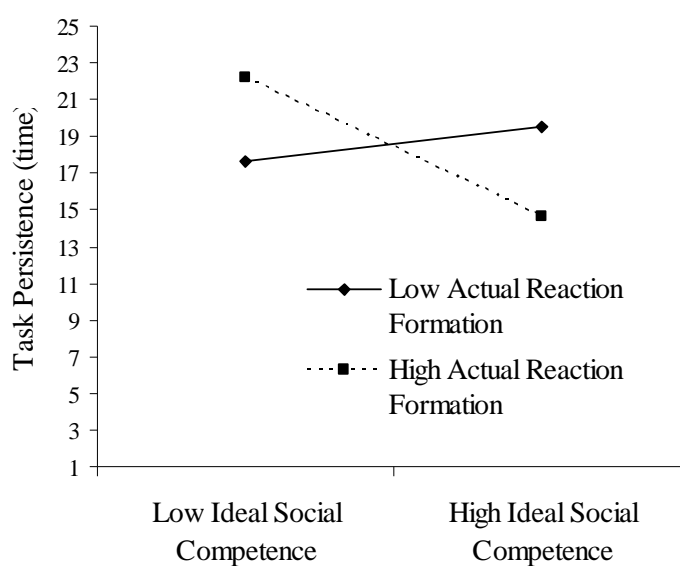
Next I regressed task persistence (time) onto actual task competence (IV1), ideal task competence (IV2), actual self-protection (IV3) and ideal self-protection (IV4) in Step 1, their two-way interaction terms in Step 2, their three-way interaction terms in Step 3 and their four-way interaction term in Step 4. Then, I substituted task competence with each of its subscales and self-protection with each of its subscales in separate regression analyses.

The results revealed that actual persistence, ideal persistence, actual denial and ideal denial did not independently predict problem solving in Step 1, $ps \geq 38$. However, entry of the interaction terms in Step 2 of the analysis significantly improved the prediction of task persistence (time). A disordinal two-way interaction between ideal persist and actual denial predicted number of anagrams, $\beta = 2.70$, t

$(119) = 2.35$, $p = .02$. The interaction between ideal persistence and actual denial was an unexpected finding. No hypotheses were generated that predicted relationships between actual and ideal beliefs. The results were reported because they are informative about the moderating effects of self-protection on the relationship between task competence and problem-solving.

To decompose this interaction, I plotted it (see Figure 6.5) and then performed a simple linear regression analysis after I split the data by each factor. First, I split the data by ideal persist: ideal persist and tested the simple effects of actual denial at each level of ideal persist. Next, I split the data by actual denial and tested the simple effects of ideal persist at each level of actual denial.

Figure 6.5. Task Persistence (time) as a Function of Ideal Persistence and Actual Denial.
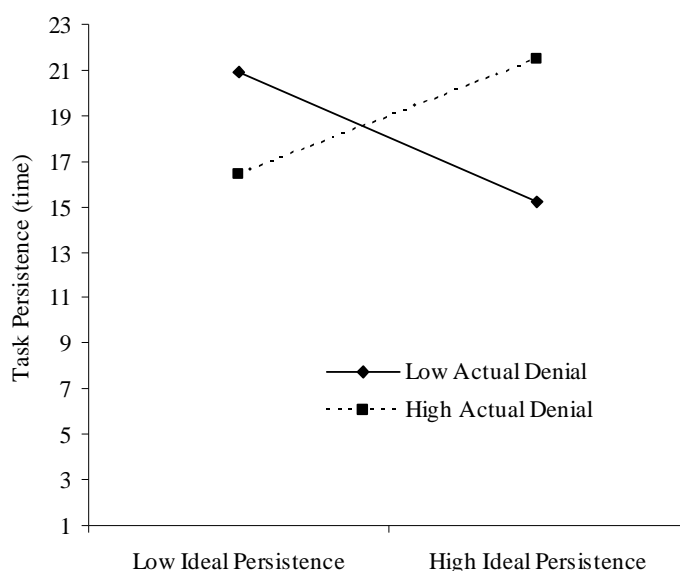
The simple effect of ideal persistence on task persistence (time) was significant when actual denial was high, $\beta = 2.78$, t $(49) = 2.45$, $p = .18$ but not when actual denial was low, $\beta = -1.37$, t $(57) = -1.41$, $p = .17$. Consistent with Hypothesis 6,

actual denial moderated ideal persistence such that the time that high ideal persist, high actual denial participants spent problem solving increased the more that they denied negative feedback[23].

Number of Strategies

The fourth hierarchical multiple regression analysis involved the dependent variable: number of strategies. I regressed number of strategies onto actual social competence (IV1), ideal social competence (IV2), actual self-protection (IV3) and ideal self-protection (IV4) in Step 1 and their two-way interaction terms in Step 2, their three-way interaction terms in Step3 and their four-way interaction term in Step 4. Next, I substituted social competence with each of its subscales and self-protection with each of its subscales in separate regression analyses. In each analysis, the results failed to produce any theoretically meaningful and statistically significant relationships.

A different picture emerged when I regressed number of strategies onto actual task competence (IV1), ideal task competence (IV2), actual self-protection (IV3) and ideal self-protection (IV4) in Step 1 and their two-way interaction terms in Step 2, their three-way interaction terms in Step 3 and their four-way interaction term in Step 4. Next, I substituted task competence with each of its subscales and self-protection with each of its subscales in separate regression analyses.

The results revealed that actual persistence, ideal persistence, actual denial and ideal denial did not independently predict problem solving in Step 1, $ps \geq 09$. However, entry of the interaction terms in Step 2 of the analysis significantly improved the prediction of number of strategies. A disordinal two-way interaction

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[23] The reader is referred to Appendix 6.8 for more results of the regression analysis involving the dependent variable: task persistence (time).

between ideal persist and actual denial predicted number of strategies, $\beta = .16$, t
(119) = 1.95, $p = .05$.

To decompose this interaction, I plotted it (see Figure 6.6) and then performed a
simple linear regression analysis after I split the data by each factor. First, I split the
data by ideal persist: ideal persist and tested the simple effects of actual denial at
each level of ideal persistence. Next, I split the data by actual denial and tested the
simple effects of ideal persist at each level of actual denial.

Figure 6.6. Number of Strategies as a Function of Ideal Persistence and Actual
Denial.
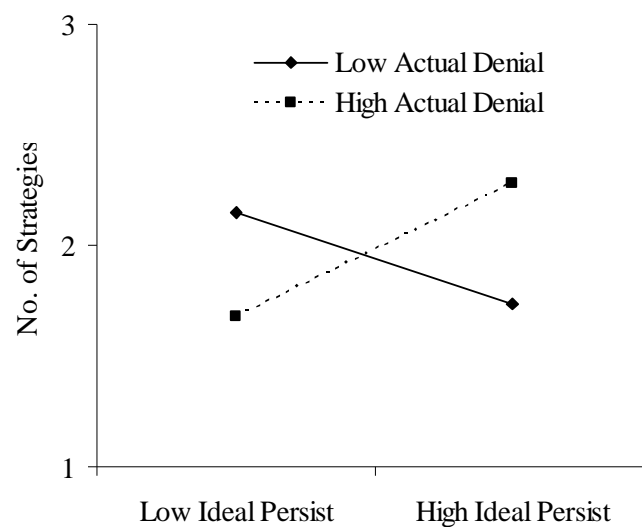
The simple effect of ideal persistence on number of strategies was significant
when actual denial was high, $\beta = .18$, t (49) = 2.00, $p = .05$ but not when actual
denial was low, $\beta = -.08$, t (57) = -1.11, $p = .27$. Consistent with Hypothesis 6, actual
denial moderated ideal persist such that the number of strategies that high ideal
persist, high actual denial participants used during problem solving increased the
more they denied negative feedback from their everyday lives.

Discussion

Analysis of Reliabilities and Factor Structure

The factor analysis revealed that there were three factors underlying the STCS (Version 3). Items from the Task Competence Scale (Version 3) loaded onto Factor 1. The items from the Social Competence Scale (Version 3) loaded onto Factor 2 and Factor 3. It is possible that these items loaded onto separate factors because they were measuring social dimensions of task competence rather than social competence per se. The factor analysis revealed that the items from the SPS (Version 1) loaded onto four factors that were consistent with the four self-protective strategies that the items were constructed to measure. The conceptual parsimony of the items that loaded onto each factor in both factor analyses, and the strength of their factor loadings influenced the decision to retain these items for the STCS (Version 4).

Overall, the reliabilities for the STCS (Version 3) were appreciably higher than for Study 1; although, the reliability of some of the subscales was less than the value of .60 that is recommended for scientific research (Clark & Watson, 1995). There are several possible explanations for the lower reliabilities of some of the subscales in this study. First, the items that were reconstructed for the STCS (Version 3) may have increased the measurement error because they had less face and content validity than the original items. It is possible that the items in the STCS (Version 3) had less face and content validity than the original items because they were shorter versions of the more detailed vignettes used in Study 1. The shorter items used in this study contained less detail about the situation in which the behaviour was enacted and were open to wider interpretation. This would have increased the variability in participants' responses.

Second, the STCS was administered under different conditions in each study. In Study 1, participants completed the questionnaire at their own leisure and in an environment of their choice, whereas in this study participants completed the questionnaire at pre-arranged times and under experimental conditions. This could have introduced fluctuations in participants' mood or motivation due to extraneous factors such as time constraints, fatigue and/or illness.

The reliabilities of the actual scales were lower than the ideal scales, as was the case in Study 1. Recall that in Chapter 5 I suggested that the actual scales may have had lower reliabilities than the ideal scales in Study 1 because there was more variability in participants' actual behaviour than in their standards of performance. That is, the standards of performance that participants valued may have generalised across different situations more than their actual behaviour did. The idea that cross-situational variability in performance affects the consistency of performance ratings has been used before in order to justify the low reliabilities of personality scales (Epstein, 1979; Mischel, 1968). A reliability of .30 has often been found for measures of personality traits (Epstein, 1979). A similar case could be made for actual social and task competence beliefs. That is, as different people may have been consistent along different dimensions, the variation in behaviour across situations could have lowered the actual scale reliabilities. The variability in behaviour would not have affected the ratings for the ideal scales because goals and standards tend to be more generalised, rather than situation-specific.

Third, the reliabilities of the subscales that were less than the value of .60 that is recommended for scientific research (Clark & Watson, 1995), could partly be attributed to the low number of items in these subscales. Several of the reliabilities that were less than .60 contained two or three items.

Fourth, the reliability of the Social Competence Scale (Version 3) may have been low because the cooperation items were not included. The cooperation items failed to load in the factor analysis of the social and task competence items. One possible explanation of this finding is that the wording of the cooperation items was unclear.

The reliabilities that were produced in this study indicated that further scale revisions would be necessary in order to improve the reliabilities of the STCS (Version 4). There are several changes that could be made in order to improve the reliabilities of the STCS (Version 4). First, the direction of the scale anchors could be changed so that they are in the same direction. In Study 1 and Study 2 the first point on the actual scale equalled "very similarly" and the first point on the ideal scale equalled "not ideal at all". Second, an equal number of positively and negatively worded items could be constructed. In this study, all of the items were positively worded and the points of the actual and ideal scales were reversed. Third, the wording of some of the items could be changed in order to improve their meaning.

Convergent and Discriminant Validity of the STCS Scales and Subscales

Hypothesis 1 that there should be significant positive correlations between the social and task competence scales and self-protection scales, was supported. Most correlations between the scales and subscales fell between .18 and 49 and indicated that they were sufficiently correlated to be considered part of the more general construct of self-competence. The size of the correlations also provided some evidence of divergent validity between the subscales.

Predictive Validity of the STCS

Hypothesis 2 that task setting should affect the performance of high and low social competence participants such that high social competence participants should perform better in the group condition and low social competence participants should perform better in the alone condition was partially supported. The results showed that the less that participants in the alone condition wanted to identify, the more anagrams they solved. The performance of high social competence participants was not significantly different in the alone or group condition. Nevertheless, the performance of high identification participants was in the predicted direction, with high identification participants in the group condition solving more anagrams than low identification participants.

Hypothesis 3 that task setting should affect the problem solving of high and low task competence participants such that they should perform better in the group condition was partially supported. The results showed that the presence of other participants affected the performance of low task competence participants but not high task competence participants. These findings are consistent with research on social facilitation effects that showed the mere presence of an audience increased motivation to perform and actual performance outcomes (e.g., Cottrell, Wack, Sekerak, & Rittle, 1968; Guerin, 1993; Zajonc, 1965; Zajonc & Sales, 1966).

The performance of high task competence participants in the group condition was not significantly different from high task competence in the alone condition. They did not perform as well as the low task competence participants in the group condition either. One possible explanation is that the high task competence participants were threatened by the other participants. Research has shown that some people are threatened when they receive feedback that their performance is

substandard compared to their peers (e.g., Bandura & Jourden, 1989; Wood & Bandura, 1989a). Therefore, the presence of other participants could have led high task competence participants in the group condition to become concerned about how their performance would fare compared to the other participants. This could have caused them to become internally focused and make more social comparisons. In turn, this could have had a deleterious effect on their subsequent performances. An examination of the data provided support for this idea because high task competence participants tended to perform better in the alone condition than they did in the group condition. Therefore, it was tentatively concluded that the presence of other people during task performance may affect people with high and low task competence differently.

Hypothesis 4 that task setting should affect the performance of high self-protection participants such that they should perform better in the alone condition, was partially supported. As predicted, high self-protection participants had more protection in the alone condition than low self-protection participants did. High self-protection participants were expected to be more sensitive to negative feedback from the task than low self-protection participants. Additionally, the alone condition should have provided fewer external threats than the group condition. The difficulty that participants should have experienced trying to solve the three insoluble anagrams would have constituted negative feedback about their task abilities. Thus, the alone condition and task difficulty should have triggered more self-protective processes in high self-protection participants. The group condition added external threats from social sources. Therefore, high self-protection participants were expected to utilise more self-protection processes than low self-protection participants in this condition also. Therefore, the finding that low self-protection

participants in the group condition had high protection was unexpected. This result suggests that low self-protection participants were more threatened by feedback from social sources and/or made more social comparisons than high self-protection participants.

One explanation of this finding is that low self-protection participants could have been participants with low social competence but high task competence, who were more sensitive to social feedback. Recall from Chapter 2, that Tafarodi (1998) found that people who were low in self-liking but high in self-competence were more negatively biased in their memory for personality feedback when compared to people low in both self-liking and self-competence. The memory biases observed in people with paradoxically low or high self-competence and self-liking were attributed to their heightened selectivity processes (Tafarodi, 1998). These heightened selectivity processes were thought to enable people to filter out negative information in a defensive effort to sustain socially unsupported levels of self-liking. Tafarodi (1998) concluded that the self-liking component of people with paradoxical self-competence/self-liking is challenged by their constant awareness of how they are esteemed by others, rather than their sense of competence per se (Tafarodi, 1998). The presence of other people in the group condition could have been more threatening to participants with low social competence but high task competence because they had low confidence in their social abilities and so, they should have been more concerned about how the other participants would have perceived them. Therefore, low self-protection participants in the group condition could have utilised more self-protection processes than high self-protection participants in order to protect their self-esteem.

Self-Protection as a Moderator

The results supported Hypothesis 5 that self-protection would moderate the effect of social competence on performance such that the relationship between social competence and performance would be stronger for high self-protection participants and less or non-existent for low self-protection participants. Participants who did not want to be socially competent, but who thought that it was important to be vigilant, made more plans. Furthermore, participants who did not want to be socially competent, but perceived they had some unacceptable traits, responded to this perception by behaving in a way that showed them to have the opposite trait. Hence, they persisted for longer on the anagram task.

Finally, Hypothesis 6 that self-protection would moderate the effects of task competence on performance was supported. As predicted, the relationship between task competence and performance was stronger for high self-protection participants and less or non-existent for low self-protection participants. The results revealed that participants who wanted to persist and high self-protection (denial)_solved more anagrams and used more strategies. One implication of this finding is that denial increased the motivation of participants who valued trying hard on the experimental task. Similar performance enhancing effects of self-protection processes were observed in participants who doubted their ability to strategise. The results suggest that as low actual strategise participants were more self-protective, they managed to solve more anagrams despite thinking that self-protection processes were not important for improving their performance.

Overall, the support for the predictions of this study led to the conclusion that the STCS has predictive validity. However, this conclusion should be viewed with caution because the regression analyses produced several non-significant results

when the ANOVAs showed significant interactions between social competence and performance, task competence and performance and self-protection and performance. Therefore, there is a discrepancy between the two approaches. The ANOVAS were performed in order to increase the clarity of the interpretation of the results. It is acknowledged that ANOVAs are not as statistically robust as multiple regression analyses. Furthermore, the ANOVAs relied on dichotomous (high/low) scores of the subscales of the STCS (Version 3) and SPS (Version 1). Research has shown that, under some conditions, the pattern of correlations among independent and dependent variables can yield a spurious main effect when dichotomous measures are used (e.g., Maxwell & Delaney, 1993). These types of spurious main effects have been shown to occur when the partial correlation of one independent variable with the dependent variable is near zero, and the independent variables are correlated with each other (Maxwell & Delaney, 1993). Spurious interactions are also known to occur when two independent variables are dichotomised because there are direct nonlinear effects of one or both independent variables on the dependent variable. Thus, ANOVA using median splits can yield a significant interaction simply as a misrepresentation of the nonlinearity in the effect of the independent variable/s on the dependent variable (MacCallum et al., 2002). Alternatively, a non-significant ANOVA finding and a significant multiple regression finding can be attributed to the loss of statistical power that occurs when variables are dichotomised (MacCallum et al., 2002). One impact of dichotomization is that it overlooks the differences that existed between participants prior to dichotomization by altering the original distribution of scores. Therefore, dichotomization changes the nature of individual differences by defining participants within a subgroup as equal when in actuality they are not equal at all (MacCallum et al., 2002).

One limitation of the present study was that the anagram task was not representative of the task-related skills necessary for successful performance in real work situations. Therefore, the results of this study are related to a narrow contextual application of the STCS (Version 3) and do not necessarily reflect the true potential of the measure to predict task performances in real work settings.

A second limitation of the present study was that the experimental design did not permit the potential relationship between social competence and social performance to be tested. The ability of social competence to predict social performance is a direction for future research. Nevertheless, the results of this study are encouraging because they suggest that the STCS (Version 3) has the potential to predict task performance in real work settings with further refinement of items and format and broader contextual application.

Summary

This study provided further evidence for the factor structure and reliability of the STCS even though the results are not as desirable as possible. The data analysis produced three interpretable factors measuring task and social (task competence, identification and communication and four interpretable factors measuring self-protection (emotion focused coping, denial, reaction formation and isolation). The reliabilities of the subscales were, with a few exceptions, generally acceptable. The results also led to the tentative conclusion that the STCS has predictive validity. First, the results showed that task setting interacted with low social competence, low task competence and high self-protection to influence problem solving. Second, the results showed that high self-protection moderated the relationship between low social competence and problem solving and high task competence and problem solving.

CHAPTER 7: AN INVESTIGATION OF THE CONVERGENT AND

DISCRIMINANT VALIDITY OF THE SOCIAL AND COMPETENCE SCALE

AND SELF-PROTECTION SCALE

Summary

Chapter 7 describes Study 3, which had two aims. The first aim was to examine the factor structure and reliability of the STCS (Version 4). The second aim was to investigate the convergent and discriminant validity of the STCS (Version 4) with measures of self-competence, self-esteem, personality, and self-monitoring and social desirability. The results indicated that the reliability of the STCS (Version 4) was better than the earlier versions of the measure, and that the instrument had convergent and discriminant validity with several other conceptually related but theoretically distinct measures.

Introduction

It is important for psychological theory and practice to establish the construct validity of a psychological test (Cohen & Swerdlik, 1999). Construct validity refers to "a set of procedures for evaluating the validity of a testing instrument based on the determination of the degree to which the test items capture the hypothetical quality or trait" (Reber, 1995, p. 832). Construct validity is important for psychological theory for two reasons. First, it shows how efficiently a new scale is measuring its underlying construct. Second, it shows one or more facets of its underlying construct. The construct validity of a test is also practically important for two reasons. First, it assists researchers to operationalise the constructs that they want to measure more clearly. Second, psychological tests will never predict performance with total accuracy, as they can never be administered under ideal conditions.

Therefore, establishing whether or not the STCS (Version 4) has construct validity will provide some assurance to researchers and test users that it is measuring the psychological traits that it is supposed to measure.

One of the most common methods for establishing whether a measure has construct validity is to ascertain its convergent validity (Cohen & Swerdlik, 1999). Convergent validity is concerned with comparing how well a measure is correlated to established conceptually related measures (Cohen & Swerdlik, 1999). In addition to determining whether or not a measure has convergent validity, it is equally important to show that a measure has discriminant validity when it is being construct-validated. Discriminant validity refers to the statistically nonsignificant relationship of a test score with other tests that are not theoretically related (Cohen & Swerdlik, 1999). The aim of Study 3 was to explore the construct validity of the STCS (Version 4) through an examination of its convergent and discriminant validity. The convergent and discriminant validity of the STCS (Version 4) was established by comparing it to two measures of self-competence (Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, and Roger, 1982; Wagner & Morse, 1975), two measures of self-esteem (Rosenberg, 1965; Tafarodi & Swann, 1995), the big five personality traits (Costa & McCrae, 1992), self-monitoring (1974) and two measures of social desirability (Marlowe-Crowne, 1960; Paulhus (1984, 1991). In the next section, I describe the measures that I used in Study 3 to establish the convergent and discriminant validity of the STCS (Version 4).

Selecting Measures to Validate the STCS

Wagner and Morse's (1975) Sense of Competence Questionnaire

Wagner and Morse's Sense of Competence Questionnaire (1975) aims to measure generalised self-competence beliefs about work abilities. The purpose of including the measure in this study was to examine its convergent validity with the Task Competence Scale of the STCS (Version 4). The advantage of the Sense of Competence Questionnaire over other generalised measures of self-competence is that it is the only measure of work-related self-competence that has been tested for its ability to predict work performance (Morse, 1976; Steel, Mento, Davis & Wilson, 1989; Tharenous & Harker, 1984).

The measure consists of 23 brief statements. There are four subscales measuring global self-competence, problem-solving ability, locus of control and self-confidence as dimensions of self-competence. An example of an item measuring global self-competence is "Doing this job well is a reward in itself". An example of an item measuring problem-solving ability is "Considering the time spent on the job, I feel thoroughly familiar with my tasks". An example of an item measuring locus of control is "I do not know why it is, but sometimes when I'm supposed to be in control I feel more like the one being manipulated". An example of an item measuring self-confidence is "No one knows this job better than I do". Items are scored on a 9-point Likert-type scale ranging from -4 (*strongly disagree*) to $+4$ (*strongly agree*).

Kuder-Richardson reliability for the measure was .96 with a test-retest coefficient of .84 after two months (Wagner & Morse, 1975).Cronbach's (1951) alpha reliabilities for the measure were .78 and .79, with a test-retest coefficient of .58 after 14 months (e.g., Steele, Mento, Davis & Wilson, 1989). The measure has

predictive validity with actual task performance (Morse, 1976; Wagner & Morse) and convergent validity with supervisor ratings (Steele et al., 1989). A weakness of the Sense of Competence Questionnaire is that it does not tap the social dimensions of self-competence.

Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, and Roger's (1982) Self-Efficacy Scale

The Self-Efficacy Scale (Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs & Rogers, 1982) was originally intended to measure generalized self-efficacy, which Sherer et al. conceptualized as the degree to which a person feels a sense of overall confidence that is not tied to a specific situation or behaviour. The advantages of the Self-Efficacy Scale over other generalized self-efficacy scales are that it contains a social self-efficacy subscale.

The Self-Efficacy Scale consists of 23 brief statements, of which six statements constitute the social self-efficacy subscale. The remaining 17 statements measure generalized self-efficacy. Three of the six social self-efficacy statements are reverse-scored and all of the statements are scored on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). An example of a social self-efficacy statement is: "I have acquired my friends through my ability to make friends." An example of a general self-efficacy statement is "When I have something unpleasant to do, I stick to it until I finish it".

The measure has good reliability with Cronbach's (1951) alphas of .86 for the general self-efficacy subscale and .71 for the social self-efficacy subscale reported (Sherer et al., 1982). The measure has convergent validity with several personality measures, including the Internal-External Control Scale (Rotter, 1966), Ego-Strength Scale (Barron, 1953), Self-Esteem Scale (Rosenberg, 1965), and Bem Sex-Role

Inventory (Bem, 1974) and the constructs of masculinity and assertiveness (Sherer & Adams, 1983). Finally, the Self-Efficacy Scale has criterion validity with past success (Sherer et al.). A weakness of the Self-Efficacy Scale is that it does not measure the variations that occur in self-efficacy as a result of different situations.

Rosenberg's (1965) Self-Esteem Scale

Rosenberg's (1965) Self-Esteem Scale is one of the most widely used and researched measures of global self-esteem (Blascovich & Tomaka, 1991). The purpose of including this measure in Study 3 was to establish the convergent validity of the STCS (Version 4). The advantage of the Self-Esteem Scale over other self-esteem scales (e.g., Tafarodi & Swann, 1995) is that it measures self-esteem as a global personal trait rather than as a specific personal trait such as self-liking or self-competence.

The Self-Esteem Scale (Rosenberg, 1965) contains 10 short self-descriptive statements that describe global self-esteem. An example of an item is "I take a positive attitude about myself". Respondents indicate their agreement/disagreement on a 4-point Likert-type scale ranging from 1 (*disagree*) to 4 (*agree*).

The Self-Esteem Scale has good convergent and discriminant validity and good reliability, with Cronbach's (1961) alphas of .77 to .88 (Blascovich & Tomaka, 1991; Rosenberg, 1986). In addition, the scale has good test-retest reliability with *rs* of .82 to .85 over one and two weeks respectively (Blascovich & Tomaka; Rosenberg, 1986). A weakness of the Self-Esteem Scale is that exploratory and confirmatory factor analyses have shown that both a unidimensional and two-factor structure can be identified (Barber, 1990; Goldsmith, 1986; Kaplan & Pokorny, 1969; Kohn & Schooler, 1969; Marsh, 1996; Openshaw, Thomas, & Rollins, 1981; Owens, 1993; Shahani, Dipboye, & Phillips, 1990; Shelving, Bunting & Lewis,

1995; Tafarodi & Milne, 2002). According to Rosenberg (1965) self-esteem consisted of the single unitary construct of self-liking, also known as global self-esteem. Rosenberg (1979) argued that self-competence contributed to self-liking, which was the higher-order construct. However, the 2-factor solution structure that has been found in some studies (e.g., Barber, 1990; Kaplan & Pokorny, 1969; Kohn & Schooler, 1969; Openshaw, Thomas & Rollins, 1981; Shahani, Dipboye & Phillips, 1990; Owens, 1993) suggested that self-competence may not be subordinate to self-liking, but rather an equal component of self-esteem. Therefore, there is confusion about the facets of global self-esteem (De Young, Higgins & Peterson, 2006; Tafarodi & Swann, 1995).

Tafarodi and Swann's (1995) Self-Liking/Self-Competence Scale

The Self-Liking/Self-Competence Scale (Tafarodi & Swann, 1995) measures two-component self-esteem: self-liking and self-competence. The advantage of the Self-Liking/Self-Competence Scale over other self-esteem measures is that it measures self-competence and self-liking as two facets of self-esteem.

The Self-Liking/Self-Competence Scale contains two 10 item subscales measuring self-liking and self-competence. Items are assertions in the form of first person statements that reflect low or high self-liking and low or high self-competence. An example of a low self-liking item is "I do not have enough respect for myself, and an example of a high self-liking item is "I like myself". An example of a low self-competence item is "I am not very competent", and an example of a high self-competence item is "I am a capable person". There are an equal number of positively and negatively worded items. Respondents indicate their disagreement or agreement to each item on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

The Self-Liking/Self-Competence Scale has good reliability with Cronbach's (1951) alphas of .90 to .95 for self-liking and .89 to .95 for self-competence (Bosson & Tafarodi, 1999; Tafarodi & Swann, 1995). In addition, the measure has good test-retest reliabilities with Cronbach's alphas of .80 for self-liking and .78 for self-competence after three weeks (Tafarodi & Swann, 1995). A weakness of the Self-Liking/Self-Competence Scale is that self-liking and self-competence are highly correlated. For example, correlations between self-liking and self-competence ranged from .69 to .75 (Bosson & Tafarodi, 1999; Tafarodi & Swann, 1995), which suggests that the scales may be measuring the same underlying traits.

Costa and McCrae's (1992) NEO-FFI

The NEO-FFI (Costa & McCrae, 1992) is a 60-item short version of Costa and McCrae's (1992) NEO-PI. The instrument is one of the most widely used and researched measures of the Big Five personality dimensions (Hurtz & Donovan, 2000). I chose to use the NEO-FFI in this study in order to establish both the convergent and discriminant validity of the STCS (Version 4). The advantages of the NEO-FFI are its psychometric strengths, ease of administration and the fact that it is widely used by organizational and social psychologists.

The five personality dimensions of the NEO-FFI are conscientiousness, agreeableness, neuroticism, openness to experience and extraversion. Conscientiousness is linked to traits such as achievement orientation, dependability and persistence, whereas agreeableness is linked to traits such as friendliness, flexibility and tolerance. The facets of emotional instability, anxiety, pessimism and self-consciousness are associated with neuroticism. Openness to experience includes traits such as ability to deal with ambiguity, openness to new experiences and artistic creativity, whereas extraversion includes facets such as assertiveness, energy and

sociability (McCrae & Costa, 1992; Saucier, 1998). Each personality dimension is assessed by 12 simple statements. Responses are coded on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

The NEO-FFI has good reliability with Cronbach alphas ranging from .85 to .89 for neuroticism, .79 to .80 for extraversion, .68 to .76 for openness, .74 to .75 for agreeableness and .83 to .84 for conscientiousness (Sherry, Hewitt, Flett, Lee-Baggley & Hall, 2007). The measure has convergent and discriminant validity with several other theoretically related and distinct measures (McCrae & Costa, 1992) and criterion validity for predicting academic achievement (Conrad, 2005), career decision making self-efficacy (Wang, Jome, Haase & Bruche, 2006) and computer anxiety (Korukonda, 2007). Weaknesses of the NEO-FFI are that it is subject to social desirability and does not allow for facet analysis within the five personality dimensions. Hence, the NEO-FFI yields only a general assessment of personality traits.

Snyder's (1974) Self-Monitoring Scale

The Self-Monitoring Scale (Snyder, 1974) was selected because it measures self-presentation strategies. The purpose of including the measure in Study 3 was to establish the convergent validity of the Social Competence Scale of the STCS (Version 4). An advantage of the Self-Monitoring Scale is it is the only self-report measure that measures social skills as self-presentational strategies. Measures of social anxiety and social difficulty provide indices of social skills. However, these measures have limited adequate psychometric evaluation (Furnham & Capon, 1983).

The Self-Monitoring Scale consists of 25 true – false self-descriptive statements measuring two dimensions of self-presentation: low and high self-monitoring. Twelve items measure low self-monitoring and 13 items measure high self-

monitoring. The items measure five content domains: concern with situational appropriateness, attention to social cues with situational appropriateness, ability to control expressive behaviour, ability to control expressive behaviour in specific situations, situation to situation shifts in self-presentation. An example of an item measuring concern with situational appropriateness of self-presentation is "I laugh more when I watch a comedy with others than when alone". An example of an item measuring attention to social cues for situational appropriateness of self presentation is "In order to get along and be liked, I tend to be what people expect me to be rather than anything else". An example of an item measuring ability to control expressive behavior is "I can look anyone in the eye and tell a lie with a straight face (if for a right end)". An example of an item measuring ability to control expressive behaviour in particular situations is "I may deceive people by being friendly when I really dislike them". Finally, an example of an item measuring situation to situation shifts in self-presentation "I have trouble changing my behaviour to suit different people and different situations".

The Self-Monitoring Scale has acceptable reliability of .66 (Gangstead & Snyder, 1985) and temporal stability with test-retest reliability of .83 for one month (Snyder, 1974), .76 for two months and .77 for a 3.5 month interval (Snyder, 1987). Scores on the scale are independent of social desirability response sets (Snyder, 1987). The Self-Monitoring Scale has good construct validity (for a review, see Gangestad & Snyder, 2000) and predictive validity of social skills in normal and psychiatric populations (Furnham & Capon, 1983).

A weakness of the Self-Monitoring Scale is that the scale may be multidimensional, consisting of two or possibly three factors, resembling personality traits that are linked to extraversion, other-directedness and acting (Briggs & Cheek,

1988; Briggs, Cheek & Buss, 1980; Gangestad & Snyder, 1986, 2000). The two-factor structure of the Self-Monitoring Scale is also thought to resemble the affective and motivational styles of acquisitive and defensive self-monitoring (Avia, Sanchez-Bernados, Sanz, Carrillo & Rojo, 1998; Briggs & Cheek; Lennox & Wolfe, 1984). Acquisitive self-monitoring refers to the active pursuit of power and social standing in interpersonal relationships (Briggs & Cheek; Lennox & Wolfe, 1984). Defensive self-monitoring is defined as seeking social approval and avoiding social rejection (Briggs & Cheek; Lennox & Wolfe, 1984). The acquisitive self-monitoring subscale was positively correlated with the sociability and acting subscales on the NEO-PI, $r = .62$, $p < .05$ for both, while defensive self-monitoring correlated significantly with other-directedness, $r = .33$, $p < .05$ (Avia et al.). The interitem correlations between acquisitive and defensive self-monitoring suggest that these scales are low to moderately correlated, .33 and .28 (Gangestad & Snyder, 2000).

A weakness of the acquisitive self-monitoring subscale and the defensiveness self-monitoring subscale is that they are based on personality factors which assess stable dispositions, rather than the motivational aspects of self-presentation (Costa & McCrae, 1992). For example, Avia et al. (1998) found individuals with an acquisitive orientation did not tend to experience social anxiety and were not self-conscious, but rather, were characterised by their extraversion and openness traits: assertiveness, warmth, openness to fantasy, and desire for excitement. Conversely, the defensive orientation was associated with emotional instability, depression, social anxiety and vulnerability. In light of these findings, the authors concurred with Briggs and Cheek (1988) that a total score on the Self-Monitoring Scale could obscure significant relationships between the interpersonal orientations of self-monitoring and personality variables. Therefore, the acquisitive self-monitoring

subscale and the defensive self-monitoring subscale were also used in Study 3 to establish the convergent validity of the STCS.

Crowne and Marlowe's (1960) Marlowe-Crowne Scale

The Marlowe-Crowne Scale (Crowne & Marlowe, 1960) is designed to measure socially desirable responding in normal populations (Paulhus, 1984). I chose the measure for this study in order to establish the convergent validity of the STCS (Version 4). The advantages of this scale are its psychometric strengths, short time taken to complete and the fact that it is the most widely used measure of social desirability in psychometric research (Leite & Beretvas, 2005).

The Marlowe-Crowne Scale consists of 33 simple statements that describe either desirable but uncommon behaviours (e.g., admitting mistakes) or undesirable but common behaviours (e.g., gossiping). An example of an item measuring a desirable but uncommon behaviour is "No matter who I am talking to, I am always a good listener". An example of an item measuring an undesirable but common behaviour is "I can remember 'playing sick' to get out of something". Items are responded to as "true" or "false". Eighteen items are keyed in the direction of "true" and 15 items are keyed in the direction of "false". A perfect score of 33 indicates that a person is denying all undesirable behaviours and endorsing all desirable behaviours. Therefore, a person with a perfect score would be seen as engaging in socially desirable responding.

The scale has good reliability with Cronbach (1951) alphas of .73 to .88 (Marlowe & Crowne, 1964) and .88 at a 1-month test-retest (Paulhus, 1991). In addition, the scale has good convergent and discriminant validity (Crowne & Marlowe, 1960, 1964; Paulhus, 1991).

Paulhus' (1984, 1988) Balanced Inventory of Desirable Responding

The Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1984, 1988) measures the tendency to give honest but positively biased self-reports and deliberate self-presentation to others. The purpose of using the scale in this study was to establish the convergent validity of the STCS (Version 4). The advantage of using this scale is that it takes a short time to complete and is widely used in psychometric research (Li & Bagger, 2007).

The measure consists of 40 propositions. Respondents rate their agreement/ disagreement on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The scoring key is balanced with an equal number of positively and negatively scored items. There are two subscales: the Self-Deceptive Enhancement Subscale and the Impression management subscale. The Self-Deceptive Enhancement Subscale taps overconfidence and egoistic self-deception, whereas the Impression management subscale taps deliberate attempts to create a favourable impression. An example of an item from the Self-Deceptive Enhancement Subscale is "I am a completely rational person". An example of an item from the Impression management subscale is "I don't gossip about other people's business". In his review of studies examining the BIDR, Paulhus (1991) reported Cronbach (1951) alphas of .83 for the total scale, .68 to .80 for the Self-Deceptive Enhancement Subscale and .75 to .86 for the Impression management subscale. The BIDR has good convergent validity with the Marlowe-Crowne Scale (Crowne & Marlowe, 1964).

Rationale for Changes to the STCS (Version 3)

The results from Study 2 indicated that scale revisions were warranted to the STCS (Version 3) in order to improve its reliability. First, I changed the direction of the scale anchors for the ideal scale so that they matched the direction of the anchors

for the actual scale. In Study 1 and Study 2, the actual and ideal scales were reversed in order to control for response bias. That is, in Study 1 and Study 2 the first point on the actual scale equaled "very similarly" and the first point on the ideal scale equaled "not ideal at all". For Study 3, I changed the direction of the scale anchors on the ideal scale so that they matched the direction of the scale anchors on the actual scale. That is, the ideal scale was reversed in the same direction as the actual scale. Therefore, in this study, the 7-point Likert-type scale ranged from 1 (*very differently*) to 7 (*very similarly*) for both the actual and ideal scales.

Second, I created an equal number of positively and negatively worded items in order to control for response bias. Third, I reworded the two scale questions in order to clarify their meaning. I changed the actual scale question from "How would you have behaved in this situation?" to "How would you actually have behaved in this situation?" I changed the ideal scale question from "In your opinion, how ideal is the behaviour described in the scenario?" to "How would you ideally behave in this situation?"

Fourth, I changed the wording of some of the items and constructed several new items. I retained three planning items, two persistence items and three strategizing items from the Task Competence Scale and four identification and four communication items from the Social Competence Scale from Study 2. However, I changed the wording of some of these items in order to improve their meaning. The results from Study 1 and Study 2 also indicated that the items from the cooperation subscale had very low reliability. Therefore, I created new items for the cooperation subscale for Study 3. The STCS (Version 4) contained 10 positively worded and 10 negatively worded items that measured social and task competence. The STCS (Version 4) is shown in Appendix J

Fifth, I reworded some of items from the Self-Protection Scale (Version 1) in order to improve their meaning. In keeping with the format changes to the STCS (Version 3), I reworded some items so that there were an equal number of positively worded and negatively worded items for each of the four self-protection mechanisms: emotion focused coping, denial, isolation and reaction formation. The equal number of positively and negatively worded items minimised the possible influence of response sets on self-protection scores. The revised Self-Protection Scale (Version 1) is shown in Appendix K.

Overview of the Study and Predictions

The first aim of Study 3 was to investigate the reliability and factor structure of the STCS (Version 4). The second aim of Study 3 was to establish the construct validity of the STCS (Version 4) through its convergent and discriminant validity with several other measures containing conceptually related but distinct characteristics.

To summarise the main predictions of Study 3, I predicted that if the STCS (Version 4) has convergent and discriminant validity:

1. There should be a significant positive correlation between the STCS and Sense of Competence Questionnaire because they both measure beliefs about work-related abilities.

2. There should be a significant positive correlation between the STCS and the Self-Efficacy Scale because they both measure self-competence along its task and social dimensions.

3. There should be a significant positive correlation between the STCS and the Self-Esteem Scale because the STCS measures positive traits that contribute

to generalised self-esteem and the Self-Esteem Scale measures generalised self-esteem.

4. There should be a significant positive correlation between the STCS and the Self-Competence/Self-Liking Scale because the STCS measures positive traits that contribute to task-specific self-competence and the Self-Competence/Self-Liking Scale measures positive traits of generalised self-competence as positive traits of self-esteem.

5. There should be a significant negative correlation between the STCS and the neuroticism subscale because the STCS measures positive traits of social and task competence and self-protection and the neuroticism subscale measures negative personality traits.

6. There should be a significant medium-sized positive correlation between the STCS and the extraversion, openness to experience, agreeableness and conscientiousness subscales from the NEO-FFI (Costa & McCrae, 1992) because the STCS measures positive traits of social and task competence and the extraversion, openness to experience, agreeableness and conscientious subscales measure positive personality traits.

7. There should be a significant positive correlation between the STCS and the Self-Monitoring Scale because the STCS measures social competence and the Self-Monitoring Scale measures self-presentation in social situations.

8. There should be low and nonsignificant correlations between the STCS and the Marlowe-Crowne Scale because the STCS measures positive social and task traits that people regard as socially desirable and the Marlowe-Crowne Scale measures socially desirable behaviours.

9. There should be a low and nonsignificant correlation between the STCS and the BIDR because the STCS measures positive social and task traits that people regard as socially desirable and the BIDR measures socially desirable behaviours.

Method

Participants

One hundred and sixty participants (121 females, 34 males) were recruited from the First Year Psychology Research Pool of the University of Newcastle, NSW, Australia and over the World Wide Web. Participants needed to be 18 years of age and over to participate. First year psychology students received course credit in return for their participation. The mean age of all participants was 33.33 years ($SD =$ 12.58 years). The mean age of participants who were first year university students was 22.11 years ($SD = 6.04$). The mean age of participants who were recruited over the World Wide Web was 31.36 years ($SD = 13.86$).

Procedure

The study was advertised by placing posters on the University of Newcastle's School of Psychology first year participant pool electronic and hardcopy notice boards. The posters invited first year psychology students to contact the researcher by email in order to obtain an information statement. The information statement contained information about the study and a link to my research website. Participants were required to complete nine questionnaires about their thoughts and beliefs in different work situations and answer demographic questions about their age, gender, country of birth, number of years of work experience and whether they had participated in Study 3 before. I planned to exclude data from participants who

participated more than once in Study 3 in order to control for response sets. To access the questionnaires, participants copied the web address to their web browser. The online instructions indicated that it should take approximately 30-40 minutes to complete the questionnaires and that participation was voluntary and they could withdraw at any stage without penalty. The instructions confirmed that participants' responses would be anonymous because my webpage did not use cookies and I was not recording IP addresses.

The recruitment rate was slower than expected. Therefore, the study was opened up to any participant over the age of 18 who had access to the internet. I linked the survey to websites that listed online psychology studies and psychology interest groups and newsgroups that had websites, and I posted messages on electronic bulletin boards. Members of the internet community were able to view the link that I had posted to my online questionnaire when they visited these locations.

As an incentive, participants were invited to submit their email address if they wished to enter into a prize draw. Participants who elected not to enter the prize draw were not required to submit their email address. One draw for every 50 participants who entered the draw was conducted. This ensured that each entrant in the draw had the same probability of winning. The prize was an electronic gift certificate to the value of AU$50.00 redeemable from www.amazon.com. Three prizes were awarded.

Materials

The questionnaires consisted of the STCS, the Sense of Competence Questionnaire (Wagner & Morse, 1975), the Self-Efficacy Scale (Sherer et al., 1982), the Self-Esteem Scale (Rosenberg, 1965), the Self-Liking/Self-Competence Scale (Tafarodi & Swann,1995), the NEO-FFI (McCrae & Costa, 1992), the Self-Monitoring Scale (Snyder, 1974), the Marlowe-Crowne Scale (Crowne & Marlowe,

1960), the Balanced Inventory of Desirable Responding (Paulhus, 1984; 1988) and demographic questions. The order of the questionnaires was counterbalanced. Fifty per cent of participants completed the STCS (Version 4) first, followed by Self-Competence Scale, the Self-Efficacy Scale, Self-Esteem Scale, Self-Competence/Self-Liking Scale, Self-Monitoring Scale, Marlowe-Crowne Scale, the Balanced Inventory of Desirable Responding and demographic questions. The order of questionnaires was reversed for the remaining 50% of participants who completed the demographic questions, the Balanced Inventory of Desirable Responding, Marlowe-Crowne Scale, Self-Monitoring Scale, Self-Competence/Self-Liking Scale, Self-Esteem Scale, Self-Efficacy Scale, Self-Competence Scale and the STCS (Version 4).

The final page of the questionnaire packages contained demographic items that related to participants' age, gender, years of work and the question "Have you already completed this questionnaire?"

Results

Participants

Four participants were excluded from the statistical analyses. One participant was excluded because that participant's responses duplicated the responses from another participant. The fact that the responses for these two participants were delivered to the data collection mailbox directly after one another and within three hours of each other on the same day suggested that the data had come from the same respondent. The responses from three other participants were also excluded from the analyses because each of these participants had responded to most of the items using the same rating point.

Fifty-one participants answered 'yes' to the item "Have you already answered this survey?" This percentage of participants seemed to be very high. However, I concluded that the item wording was possibly ambiguous and could have been interpreted as meaning "Have you completed this survey before answering this item?" I also considered that this number of participants would have been unlikely to spend approximately 30 minutes on two occasions participating in my study. Therefore, these participants' responses were retained in the analyses. This decision meant that participants who may have genuinely completed the questionnaires previously were not excluded.

Reliability of the Social and Task Competence Scale and Self-Protection Scale

The Spearman-Brown prediction formula was again used to assess the reliability of the STCS (Version 4). The preliminary reliabilities for the STCS (Version 4) and its subscales and the SPS (Version 2) and its subscales is shown in Appendix L. The preliminary reliabilites of the STCS (Version 4) were .69 for the actual scale and .83 for the ideal scale. The preliminary reliabilities of the SPS (Version 1) were .51 for the actual scale and .64 for the ideal scale. The reliabilities of the subscales were generally higher than in Study 2, although the communication and identification subscales were still problematic and showed alphas of -.02 and .18 for the actual and ideal scales respectively. In addition, alphas for the denial subscale were also low, α = .11 for the actual scale and α = .08 for the ideal scale.

The negative loading of items from the cooperation subscale indicated that the assumptions of the reliability model were violated. Therefore, it was necessary to drop these items from the subsequent statistical analyses.

Examination of the interitem correlations between the social and task competence items and the self-protections items revealed that they were mostly low

and/or negative. This indicated that the social and task competence and self-protection items were not measuring the same construct. Following Clark and Watson (1995), the social and task competence items and the self-protection items were not combined into a single scale in order to generate a total score. Therefore, the STCS (Version 4) and the SPS (Version 1) items were analysed in separate factor analyses.

Factor Structure of the Social and Task Competence Scale

I performed a principal axis factor analysis with promax rotation on the actual and ideal social and task competence items. When the 20 actual and 20 ideal social and task competence items were entered into the same factor analysis the rotation failed to converge in 25 iterations. Furthermore, when I raised the number of iterations to 100 the solution that was produced was too difficult to interpret.

Next, I entered the actual and ideal items in separate factor analyses. However, the factor analysis of the actual scale produced two factors that I deemed to be method factors because the items that loaded onto the first factor were positively words items and the items that loaded onto the second factor were negatively scored items. The loading of positive and negative items onto separate factors has been reported elsewhere in the research literature (e.g., Austin, 1983; Knight, Chisholm, Marsh & Godfrey, 1988; McWhirter, 1990; Miller & Cleary, 1993; Russell, 1996) and is thought to indicate systematic biases in responding such as acquiescent response styles (Russell, 2000).

I analysed the positive actual and ideal social and task competence items and negative actual and ideal social and task competence items separately in order to circumvent this problem. However, the results showed that the positive actual items and positive ideal items loaded onto a single factor and the negative actual items and

negative ideal items loaded onto a single factor. These results suggested that pariticpants may not have discriminated between the actual and ideal questions for these items. Thus, it was necessary to perform four separate factor analyses on the positive actual, positive ideal, negative actual and negative ideal social and task competence items.

The factor analyses of the positive and positive ideal items produced two interpretable factors that I deemed to measure the strategising and persistence dimensions of task competence. Common items in both analyses were retained and items that did not load in common in both factor analyses were dropped. The interitem correlations of the items that loaded onto factors in each factor analyses are shown in Appendix L.

The average interitem correlation was .20 for the items that loaded onto the positive actual scale and 66.76% of items fell within the range of .15 to 50 recommended by Clark and Watson (1995). The average interitem correlation was .20 for the items that loaded onto the positive ideal scale. The average interitem correlation was .32 for the items that loaded onto the positive ideal scale and 94.4% of items fell within the recommended range.

The factor analysis of the negative actual and negative ideal items produced two interpretable factors that contained items that I deemed to measure the persistence and strategising dimensions of task competence. Common items in both analyses were retained and items that did not load in common in both factor analyses were dropped. The interitem correlations of the items that loaded onto factors in each factor analyses are shown in Appendix L.

The average interitem correlation was .26 for the items that loaded onto the negative actual scale and 95.2% of these items fell within the range of .15 to 50

recommended by Clark and Watson (1995). The average interitem correlation was .35 for the items that loaded onto the negative ideal scale and again, 95.2% of items fell within the recommended range.

Factor Analysis of the Self-Protection Items

I performed the same promax procedure as the social and task competence items in order to analyse the factor structure of the SPS (Version 2; see Appendix L). On this occasion the rotation converged in 25 iterations when the 80 items were entered in the same factor analysis. However, the factors were difficult to interpret and so I analysed the positive and negative actual self-protection items and positive and negative ideal self-protection items in separate factor analyses.

The factor analysis of the actual self-protection items produced two interpretable factors that I deemed to measure the reaction formation and denial dimensions of self-protection. Examination of the interitem correlations for the actual items that loaded onto Factor 1: Reaction Formation revealed that 69.4% of interitem correlations fell within the recommended range of .15 to .50 (Clark & Watson, 1995). The average interitem correlation was .24. Examination of the interitem correlations of the actual items that loaded onto Factor 2: Denial revealed that the average interitem correlation was .21 and 64.4% of interitem correlations fell within the desired range.

The factor analysis of the ideal self-protection items produced two interpretable factors that I deemed measured the reaction formation and denial dimensions of self-protection. The items that loaded onto these two factors mirrored the actual self-protection items with the exception of only one item. The average interitem correlation was .47 for the ideal items that loaded onto Factor 1: Reaction Formation and 77.8% of these items fell within the range of .15 to 50 recommended by Clark

and Watson (1995). The average interitem correlation was .28 for the ideal items that loaded onto Factor 2: Denial and 86.4% of items fell within the recommended range.

Reliability of the Newly Formed Scales

Next, I examined the reliability of the scales that I formed from the factor analysis (see Table 7.1). Overall, the reliability of the revised actual and ideal STCS (Version 4) was an acceptable .79 and .83 respectively. For the revised actual and ideal SPS (Version 2), the reliability was .77 and .80 respectively. The reliability of the revised STCS (Version 4) subscales was .70 for actual strategizing and .86 for ideal strategizing, .64 for actual persistence and .79 for ideal persistence. The reliability of the revised SPS (Version 2) subscales was also acceptable. The reliability of the Denial and Reaction Formation Subscales was .69 and .66 respectively for the actual scales and .83 and .80 for the ideal scales.

Table 7.1

Alpha Coefficients for the Revised Scales and Subscales

Scale	Items	Actual	Ideal
STCS	3, 4, 5, 7, 8, 9, 10, 15, 16, 17, 19, 22, 26, 28, 32, 33, 34, 36, 40, 41, 44, 45, 46, 48, 49, 51, 52, 59	.79	.83
Strategising	3, 4, 5, 15	.70	.86
Persistence	7, 8, 9, 10, 16, 17, 19	.64	.79
Self-protection	22, 26, 28, 32, 33, 34, 36, 40, 41, 44, 45, 46, 48, 49, 51, 52, 59	.77	.80
Denial	33, 34, 40, 41, 45, 49, 51, 59	.69	.66
Reaction Formation	22, 26, 28, 32, 36, 44, 46, 48, 52	.83	.80

Convergent and Discriminant Validity

In order to assess the convergent and discriminant validity of the Revised STCS (Version 4), I computed correlations between the actual and ideal Revised STCS

(Version 4) scales and subscales and the Sense of Competence Questionnaire (Wagner & Morse, 1975), Self-Efficacy Scale (Sherer et al., 1982), Self-Liking/Self-Competence Scale (Tafarodi & Swann, 1995), Self-Esteem Scale (Rosenberg, 1965) and the Extraversion, Agreeableness, Openness and Conscientiousness Subscales from the NEO FFI (McCrae & Costa, 1992; see Appendix M).

The STCS and the Self-Competence Measures. Hypothesis 1 and Hypothesis 2 were concerned with establishing the convergent validity of the Revised STCS (Version 4) and two self-competence measures: the Sense of Competence Questionnaire (Wagner & Morse, 1975) and the Self-Efficacy Scale (Sherer et al., 1982). In Hypothesis 1, I predicted that there should be a significant positive correlation between the Revised STCS (Version 4) and the Sense of Competence Questionnaire because they both measure beliefs about work-related abilities. In Hypothesis 2, I predicted that there should be a positive correlation between the Revised STCS (Version 4) and the Self-Efficacy Scale because they both measure self-competence along its social and task dimensions[24]. By referring to Table 7.2. it is evident that for the self-competence measures, the actual STCS showed significant medium-sized positive correlations with the Sense of Competence Questionnaire ($r = .55, p < .01, N = 157$), the Self-Efficacy Scale ($r = .55, p < .01, N = 157$), the General Self-Efficacy Subscale ($r = .56, p < .01, N = 157$) and the Social Self-Efficacy Subscale ($r = .30, p < .01, N = 157$). Therefore, the actual STCS had convergent validity with the two self-competence measures as I predicted in Hypothesis 1 and Hypothesis 2.

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[24] The correlations between the ideal STCS and self-competence measures are shown in Appendix 7.5.

In further support of Hypothesis 1 and Hypothesis 2, there were also significant medium-sized positive correlations between the actual persistence subscale and the Sense of Competence Questionnaire ($r = .33$, $p < .01$, $N = 157$), Self-Efficacy Scale ($r = .46$, $p < .01$, $N = 157$), general self-efficacy subscale ($r = .47$ $p < .01$, $N = 157$) and the social self-efficacy subscale ($r = .25$, $p < .01$, $N = 157$). Consistent with these findings, the actual strategise subscale showed significant medium-sized positive correlations with the Sense of Competence Questionnaire ($r = .38$, $p < .01$, $N = 157$), Self-Efficacy Scale ($r = .27$, $p < .01$, $N = 157$) and general self-efficacy subscale ($r = .28$, $p < .01$, $N = 157$). However, contrary to Hypothesis 2, the correlation between actual strategise and the social self-efficacy subscale was not significant ($r = .13$, $p = .12$, $N = 157$).

I found significant medium-sized positive correlations for the actual SPS and Sense of Competence Questionnaire ($r = .55$, $p < .01$, $N = 157$), Self-Efficacy Scale ($r = .51$, $p < .01$, $N = 157$), general self-efficacy subscale ($r = .52$, $p < .01$, $N = 157$) and social self-efficacy subscale ($r = .28$, $p < .01$, $N = 157$). Similarly, there were significant medium-sized positive correlations between the actual reaction formation subscale and the Sense of Competence Questionnaire ($r = .49$, $p < .01$, $N = 157$), Self-Efficacy Scale ($r = .57$, $p < .01$, $N = 157$), general self-efficacy subscale ($r = .58$, $p < .01$, $N = 157$) and social self-efficacy subscale ($r = .33$, $p < .01$, $N = 157$). There was a significant small positive correlation between the actual denial subscale and the Sense of Competence Questionnaire ($r = .21$, $p < .01$, $N = 157$). However, there were no significant correlations between the actual denial subscale and the Self-Efficacy Scale ($r = -.00$, $p = .97$, $N = 157$), general self-efficacy subscale ($r = .00$, $p = .96$, $N = 157$) and social self-efficacy subscale ($r = .02$, $p = .81$, $N = 157$). Therefore, the actual SPS and reaction formation subscale had convergent validity

with the two self-competence measures but the actual denial subscale only had

convergent validity with the Sense of Competence Questionnaire.

Table 7.2

Correlation Matrix for the Actual STCS and Self-Competence Measures

	1	2	3	4	5	6	7	8	9	10
1. STCS	-	.62**	.76**	.93**	.81**	.39**	.56**	.55**	.30**	.55**
2. Strategising		-	.29**	.50**	.25**	.50**	.28**	.27**	.13	.38**
3. Persistence			-	.53**	.61**	-.03	.47**	.46**	.25**	.33**
4. Self-Protection				-	.83**	.47***	.52**	.51**	.29***	.55**
5. Reaction Formation					-	-.10	.58**	.57**	.33**	.49**
6. Denial						-	.00	-.00	-.02	.21*
7. Self-Efficacy Scale							-	.96**	.71**	.61**
8. General Self-Efficacy Subscale								-	.49**	.61**
9. Social Self-Efficacy Scale									-	.39**
10. Self-Competence Scale										-
Mean	5.14	5.91	4.90	5.07	4.81	5.36	4.68	4.88	4.11	5.08
SD	.74	.99	1.08	.78	1.31	.92	1.03	1.12	1.25	1.00

Note: * $p < .05$; ** $p < .01$; $N = 157$

The STCS and the Self-Esteem Measures. Hypothesis 3 and Hypothesis 4 were concerned with establishing the convergent validity of the Revised STCS (Version 4) with the two self-esteem measures: the Self-Esteem Scale (Rosenberg, 1965) and the Self-Competence/Self-Liking Scale (Tafarodi & Swann, 1995). In Hypothesis 3, I predicted that there should be a significant medium-sized positive correlation between the Revised STCS (Version 4) and the Self-Esteem Scale because the Revised STCS (Version 4) measures positive traits that contribute to generalised self-esteem and the Self-Esteem Scale measures generalised self-esteem. In Hypothesis 4, I predicted that there should be a significant medium-sized positive correlation between the Revised STCS (Version 4) and the Self-Competence/Self-Liking Scale because the Revised STCS (Version 4) measures positive traits that contribute to task specific self-competence and the Self-Competence/Self-Liking Scale measures positive traits of generalised self-competence and self-liking as components of self-esteem. The correlations between the actual STCS and these criterion measures are shown in Table 7.3[25].Consistent with these predictions, the actual Revised STCS (Version 4) showed significant medium positive correlations with the Self-Esteem Scale ($r = .48$, $p < .01$, $N = 157$), the Self-Competence/Self-Liking Scale ($r = .45$, $p < .01$, $N = 157$), self-liking subscale ($r = .36$, $p < .01$, $N = 157$), and the self-competence subscale ($r = .50$, $p < .01$, $N = 157$). Similarly, the actual persistence subscale showed significant positive correlations with the Self-Esteem Scale ($r = .31$, $p < .01$, $N = 157$), the Self-Competence/Self-Liking Scale ($r = .37$, $p < .01$, $N = 157$), self-liking subscale ($r = .26$, $p < .01$, $N = 157$) and the self-competence subscale ($r = .46$, $p < .01$, $N = 157$). The actual strategise subscale also

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[25] The correlations between the ideal STCS and self-esteem measures are shown in Appendix 7.5.

showed significant positive correlations with the Self-Esteem Scale ($r = .26$, $p < .01$, $N = 157$), the Self-Competence/Self-Liking Scale ($r = .19$, $p < .05$, $N = 157$), self-liking subscale ($r = .18$, $p < .05$, $N = 157$) and self-competence subscale ($r = .16$, $p < .05$, $N = 157$). Thus, as predicted, the Revised STCS (Version 4) had convergent validity with the two self-esteem measures.

I observed similar results when I examined the correlational relationships between the actual Revised SPS (Version 2) and self-esteem measures. There were significant positive correlations between the actual Revised SPS (Version 2) and the Self-Esteem Scale ($r = .49$, $p < .01$, $N = 157$), Self-Liking/Self-Competence Scale ($r = .43$, $p < .01$, $N = 157$), self-liking subscale ($r = .35$, $p < .01$, $N = 157$) and self-competence subscale ($r = .46$, $p < .01$, $N = 157$). The actual reaction formation subscale also had convergent validity with the Self-Esteem Scale ($r = .54$, $p < .01$, $N = 157$), Self-Liking/Self-Competence Scale ($r = .55$, $p < .01$, $N = 157$), self-liking subscale ($r = .48$, $p < .01$, $N = 157$) and self-competence subscale ($r = .55$, $p < .01$, $N = 157$). However, there were no significant correlations found for the actual denial subscale and any of the self-esteem scales, $ps > .11$.

Table 7.3

Correlation Matrix for the Actual STCS (Version 4) and Self-Esteem Measures

Scale	1	2	3	4	5	6	7	8	9	10
1. STCS	-	.62**	.76**	.93**	.81**	.39**	.48**	.45**	.36**	.50**
21. Strategising		-	.29**	.50**	.25**	.50**	.27**	.19*	.18*	.16*
3. Persistence			-	.53**	.62**	-.03	.32**	.37**	.26**	.46**
4. Self-Protection				-	.83**	.47**	.49**	.43**	.35**	.46**
5. Reaction Formation					-	-.10	.55**	.55**	.48**	.55**
6. Denial						-	.01	-.10	-.13	-.05
7. Self-Esteem Scale							-	.80**	.81**	.66**
8. Self-Competence/Self-Liking Scale								-	.95**	.90**
9. Self-Liking Subscale									-	.73**
10. Self-Comeptence Subscale										-
Mean	4.81	5.91	4.90	5.07	4.81	5.36	3.08	3.32	3.33	3.31
SD	1.31	.99	1.08	.78	1.31	.92	.63	.79	.99	.71

*Note: * p < .05; ** p < .01; N = 157*

The STCS and the NEO-FFI. I predicted in Hypothesis 5 that there would be a
significant medium-sized negative correlation between the Revised STCS (Version
4) and Neuroticism Subscale of the NEO-FFI (Costa & McCrae, 1992) because the
Revised STCS (Version 4) measures positive traits of social and task competence
and the Neuroticism Subscale measures negative personality traits. The results of the
correlational analysis supported Hypothesis 5 (see Table 7.4[26]). There were medium-
sized negative correlations between the neuroticism subscale and the actual Revised
STCS (Version 4) (r = -.40, p < .01, N = 157), ideal Revised STCS (Version 4), (r =
-.17, p < .05, N = 157), the actual persistence subscale, (r = -.35, p < .01, N = 157),
and the actual strategizing subscale (r = -.16, p < .05, N = 157). The actual Revised
SPS (Version 2) was also moderately negatively correlated with the neuroticism
subscale (r = -.38, p < .01, N = 157) and the actual reaction formation subscale was
moderately negatively correlated with the neuroticism subscale (r = -.57, p < .01, N
= 157). However, contrary to expectations, the actual denial subscale and the ideal
denial subscale were both positively correlated with the neuroticism subscale, (r =
.23, p < .01, N = 157) and (r = .16, p < .05, N = 157) respectively.

In Hypothesis 6, I predicted that there should be a significant medium-sized
positive correlation between the Revised STCS (Version 4) and the extraversion,
openness to experience, agreeableness and conscientiousness subscales from the
NEO-FFI (Costa & McCrae, 1992) because the Revised STCS (Version 4) measures
positive traits of social and task competence and the extraversion, openness to
experience, agreeableness and conscientious subscales measure positive personality
traits. I found medium-sized positive correlations between the actual Revised STCS

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[26] The correlations between the ideal STCS and the NEO-FFI are shown in Appendix
7.5.

(Version 4) and extraversion ($r = .18$, $p < .05$, $N = 157$), openness ($r = .30$, $p < .01$, $N = 157$), agreeableness ($r = .32$, $p < .01$, $N = 157$) and conscientiousness ($r = .49$, $p < .01$, $N = 157$). The actual persistence subscale was significantly positively correlated with the agreeableness subscale ($r = .30$, $p < .01$, $N = 157$) and the conscientiousness subscale ($r = .39$, $p < .01$, $N = 157$) but not the extraversion subscale ($r = .09$, $p =.27$, $N = 157$) or the openness to experience subscale ($r = .09$, $p =.24$, $N = 157$). Similarly, the actual strategise subscale was significantly positively correlated with the openness to experience subscale ($r = .30$, $p < .01$, $N = 157$), the agreeableness subscale ($r = .29$, $p < .01$, $N = 157$) and the conscientiousness subscale ($r = .35$, $p < .01$, $N = 157$) but not the extraversion subscale ($r = .11$, $p =.16$, $N = 157$). Overall these results supported Hypothesis 6.

Adding support to these findings, the actual Revised SPS (Version 2) had convergent validity with the extraversion subscale ($r = .19$, $p < .05$, $N = 157$), openness to experience subscale ($r = .33$, $p < .01$, $N = 157$), agreeableness subscale ($r = .24$, $p < .01$, $N = 157$) and the conscientiousness subscale ($r = .43$, $p < .01$, $N = 157$). I observed similar results for the actual reaction formation subscale and the extraversion subscale ($r = .18$, $p < .05$, $N = 157$), openness to experience subscale ($r = .17$, $p < .05$, $N = 157$), agreeableness subscale ($r = .23$, $p < .01$, $N = 157$) and the conscientiousness subscale ($r = .40$, $p < .01$, $N = 157$).

Table 7.4

Correlation Matrix for the Actual STCS and NEO-FFI

	1	2	3	4	5	6	7	8	9	10	11
1.STCS	-	.62**	.76**	.93**	.81**	.39**	.18*	.30**	.32**	.49**	-.41**
2. Strategising		-	.29**	.50**	.25**	.50**	.11	.30**	.30**	.35**	-.16*
3. Persistence			-	.53**	.61**	-.03	.09	.09	.30**	.39**	-.35**
4. Self-Protection				-	.83**	.47**	.19*	.33**	.24**	.43**	-.38**
5. Reaction Formation					-	-.10	.18*	.17*	.23**	.40**	-.58**
6. Denial						-	.05	.32**	.06	.14	.23**
7. Extraversion							-	.07	.29**	.26**	-.44**
8. Openness								-	.22**	.18*	.06
9. Agreeableness									-	.45**	-.35**
10. Conscientiousness										-	-.55**
11. Neuroticism											-
M	5.14	5.91	4.90	5.07	4.81	5.36	3.18	3.42	3.52	3.65	2.89
SD	.74	.99	1.08	.78	1.31	.92	.66	.64	.63	.67	.82

*Note: * $p < .05$; ** $p < .01$; N = 157*

The STCS and the Self-Monitoring Scale. In Hypothesis 7, I predicted that there should be a medium-sized positive correlation between the Revised STCS (Version 4) and the Self-Monitoring Scale (Snyder, 1974) because the Revised STCS (Version 4) measures the social dimensions of self-competence and the Self-Monitoring Scale measures self-presentation in social situations. Overall, the results did not provide support for Hypothesis 7 (see. Table 7.5[27]). Contrary to expectations, I found mostly nonsignificant correlational relationships between the Revised STCS (Version 4) and the Self-Monitoring Scale and the acquisitive self-monitoring subscale and defensive self-monitoring subscale, *ps* > .14. I found only one significant correlation between the actual persistence subscale and the acquisitive self-monitoring subscale ($r = -.16$, $p < .05$, $N = 157$) indicating the more that persistence increased, the less actively that people pursued social standing. The correlation between the actual denial subscale and the defensive self-monitoring subscale was marginally significant ($r = .15$, $p =.06$, $N = 157$) indicating the more that people denied the implications of negative feedback, the more that they actively sought social approval and avoided social rejection. However, overall, Hypothesis 7 that there would be a positive medium-sized correlation between the STCS and the Self-Monitoring Scale was largely unsupported.

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[27] The correlations between the ideal STCS and the Self-Monitoring Scale are shown in Appendix 7.5.

Table 7.5

Correlation Matrix for the Actual STCS and Self-Monitoring Scale

	1	2	3	4	5	6	7	8	9
1.STCS	-	.62**	.76**	.93**-	.81**	.39**	.03	-.02	-.09
2. Strategising		-	.29**	.50**-	.25***	.50**	-.02	-.12	-.08
3. Persistence			-	.53**-	.61**	-.03	-.08	-.11	-.16*
4. Self-Protection				-	.83**	.47**	.09	.07	-.03
5. Reaction Formation					-	-.10	-.00	-.00	-.13
6. Denial						-	.17*	.12	.15
7. Self-Monitoring							-	.82**	.81**
8. Aquisitive Self-Monitoring								-	.71**
9. Defensive Self-Monitoring									-
M	5.14	5.91	4.90	5.07	4.81	5.36	3.18	3.42	3.52
SD	.74	.99	1.08	.78	1.31	.92	.66	.64	.63

Note: $* p < .05; ** p < .01; N = 157$

The STCS and the Marlowe-Crowne Scale. In Hypothesis 8, I predicted that there should be a nonsignificant correlation between the Revised STCS (Version 4) and the Marlowe-Crowne Scale (Crowne & Marlowe, 1960) because the Revised STCS (Version 4) measures social and task competence and people regard these traits as socially desirable and the Marlowe-Crowne Scale measures socially desirable traits. As predicted (see Table 7.6)[28], the correlational relationships between the Revised STCS (Version 4) and its subscales and the Marlowe-Crowne Scale were nonsignificant ($ps > .08$). Thus, consistent with Hypothesis 8, the STCS had discriminant validity with the Marlowe-Crowne Scale.

Table 7.6

Correlation Matrix for the Actual STCS and Marlowe Crowne Scale

	1	2	3	4	5	6	7
1.STCS	-	.62**	.76**	.93**-	.81**	.39**	.07
2. Strategising		-	.29**	.50**-	.25**	.50**	.03
3. Persistence			-	.53**-	.61**	-.03	.08
4. Self-Protection				-	.83**	.47**	.06
5. Reaction Formation					-	-.10	.14
6. Denial						-	-.12
7. Marlowe-Crowne Scale							-
M	5.14	5.91	4.90	5.07	4.81	5.36	.44
SD	.74	.99	1.08	.78	1.31	.92	.16

*Note: * p < .05; ** p < .01; N = 157*

The STCS and the BIDR. I predicted in Hypothesis 9 that there would be a nonsignificant correlation between the Revised STCS (Version 4) and the BIDR (Paulhus, 1984, 1988) because the Revised STCS (Version 4) measures social and task competence and people regard these traits as socially desirable and the BIDR

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[28] The correlations between the ideal STCS and Marlowe-Crowne Scale are shown in Appendix 7.5.

measures socially desirable traits. The correlations between the actual STCS and BIDR is shown in Table 7.6[29]. Contrary to expectations, the actual Revised STCS (Version 4) and the BIDR ($r = .32, p < .01$) and the ideal Revised STCS (Version 4) and the BIDR were both positively correlated with the BIDR ($r = .20, p < .05$). There was a small positive correlation between the actual persistence subscale and the BIDR ($r = .17, p < .05$). In addition, there were positive correlations for both the actual strategise subscale and the BIDR (($r = .25, p < .01$) and the ideal strategise subscale and the BIDR ($r = .22, p < .01$). Similarly, there was a medium-sized positive correlation between the actual Revised SPS (Version 2) and BIDR ($r = .33, p < .01$) and a small correlation between the ideal Revised SPS (Version 2) and the BIDR ($r = .22, p < .01$). There was a small positive correlation between the actual reaction formation subscale and the BIDR ($r = .28, p < .01$) and the ideal reaction formation subscale and the BIDR ($r = .18, p < .05$). Finally, there was a marginally significant small positive correlation between the ideal denial subscale and the BIDR ($r = .15, p = .06, N = 157$). Only two of the STCS subscales had discriminant validity with the BIDR. First, there was a nonsignificant small positive correlation between the ideal persistence subscale and the BIDR ($r = .06, p = .49, N = 157$). Second, there was a nonsignificant small positive correlation between the ideal denial subscale and the BIDR ($r = .11, p = .17, N = 157$). Therefore, Hypothesis 9 was only partially supported.

Next, I examined the correlational relationships between the Revised STCS (Version 4) and the self-deceptive enhancement subscale and the impression management subscale in order to clarify the unexpected correlations between the

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[29] The correlations between the ideal STCS and the BIDR are shown in Appendix 7.4.

Revised STCS (Version 4) and the BIDR. I transformed participants' BIDR scores
into self-deceptive enhancement scores and impression management scores. Recall
that the self-deceptive enhancement subscale measures whether participants'
responses reflect a positive self-bias (Paulhus, 1984; 1988). In contrast, the
impression management subscale measures whether participants are deliberately
trying to create a favourable impression (Paulhus). The results revealed that the
Revised STCS (Version 4) and its subscales were nearly all significantly correlated
with the self-deceptive enhancement subscale, indicating that participants' responses
were honestly but positively biased. There was a medium-sized positive correlation
between the actual Revised STCS (Version 4) and the self-deceptive enhancement
subscale ($r = .41$, $p < .01$) and a small positive correlation between the ideal STCS
(Version 4) and the self-deceptive enhancement subscale ($r = .15$, $p < .05$). The
actual persistence subscale was also positively correlated with the self-deceptive
enhancement subscale ($r = .23$, $p < .01$). However, there was a nonsignificant small
correlation between the ideal persistence subscale and the self-deceptive
enhancement subscale ($r = .10$, $p = .21$) and the ideal denial subscale and the self-
deceptive enhancement subscale ($r = .13$, $p = .11$, $N = 157$). Therefore, consistent
with Hypothesis 9, the ideal persistence subscale and the ideal denial subscale had
discriminant validity with the BIDR.

I found further support for Hypothesis 9 when I examined the correlational
relationships between the Revised STCS (Version 4) and the impression
management subscale. There were nonsignificant small to medium-sized positive
correlations between almost all of the STCS subscales ($ps > .08$), indicating that, for
the most part, participants had not deliberately tried to create a positive impression.
There were three exceptions to this finding. First, there was a significant small

positive correlation between the actual Revised STCS (Version 4) and the

impression management subscale ($r = .15$, $p < .05$, $N = 157$). Second, there was a

significant small positive correlation between the actual strategise subscale and the

impression management subscale ($r = .21$, $p < .01$, $N = 157$). Finally, there was a

significant small positive correlation between the ideal strategise subscale and the

impression management subscales ($r = .19$, $p < .05$, $N = 157$). Therefore, participants

had deliberately tried to create a positive impression with respect to how much they

valued persisting on a task and strategising, and how often they actually strategised.

Table 7.7

Correlation Matrix for the Actual STCS and Balanced Inventory of Desirable Responding

	1	2	3	4	5	6	7	8	9
1.STCS	-	.62**	.76**	.93**	.81**	.39**	.32**	.41**	.15
2. Strategising		-	.29**	.50**	.25***	.50**	.23***	.22**	.22**)
3. Persistence			-	.53**	.61**	-.03	.17*	.23**	.07
4. Self-Protection				-	.83**	.47**	.33***	.44**	.14
5. Reaction Formation					-	-.10	.28**	.39**	.10
6. Denial						-	.15	.17*	.10
7. BIDR							-	.88***	.87**
8. Self-Deceptive Rating								-	.52**
9. Impression Management									-
M	5.14	5.91	4.90	5.07	4.81	5.36	.29	.29	.29
SD	.74	.99	1.08	.78	1.31	.92	.15	.17	.18

Note: * $p < .05$; ** $p < .01$; N = 157

Discussion

The first aim of Study 3 was to further examine the factor structure and reliability of the STCS (Version 4). I observed method factors when I entered the positive and negative social and task competence items into the same factor analysis simultaneously. Therefore, I conducted separate factor analyses of the actual positive, ideal positive, actual negative and ideal negative items.

There are two possible explanations for the method factors that I observed in this study. First, the method factors possibly reflected a systematic response bias such as an acquiescent response style (Russell, 2000). Second, the factor analysis may have been unreliable because only 157 cases were included in the analysis of items when factor analysis requires 200 – 300 cases (Clark & Watson, 1995).

A surprising result of the factor analysis was that the social competence items did not load onto a separate factor in the factor analysis. Rather, the communicate and Cooperation items loaded onto the same factor as the persistence items[30]. I concluded that persistence may be a multidimensional construct and consists of both social and task dimensions. The social competence items that loaded onto the persistence factor in the factor analysis described behaviours concerned with not explaining oneself when one could have explained oneself, not asking for clarification when one could have asked for clarification, and not offering to help a colleague when one could have offered to help. Notably, these items all reflect failure to persist, but in a social situation.

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[30] The identification items did not load +/- .20, hence, they were excluded from the subsequent analysis.

Therefore, the items that loaded onto the persistence factor could be tapping the positive and negative aspects of persistence as it relates to both task and social situations at work. The social competence items may have been tapping social competence as a function of overall work performance (task and contextual performance) rather than contextual performance alone. Borman and Motowildo (1997) argued that contextual performances generalise across situations. There may be a need to further revise the social competence items so that it is clearer that they are measuring contextual performance only.

The factor analysis also produced interpretable factors for the denial and reaction formation dimensions of self-protection. However, I constructed many of the items that loaded onto these factors to measure the emotion focused coping and isolation dimensions of self-protection. In addition, several of these items loaded onto emotion focused coping and isolation factors in Study 2. Therefore, the conclusions drawn from this study about the factors should be viewed with caution.

The results of the reliability analysis compared favourably with the alpha value of .60 recommended by Nunnally (1978) for scales to be used in basic research. All of the revised scales had alphas greater than .70. However, the reliabilities of the actual scales were lower than the reliabilities of the ideal scales. The lower reliabilities of the actual scales replicated the results from Study 1 and Study 2. One explanation of this finding is that there is more variability in participants' actual behaviour than in their standards of performance.

The second aim of Study 3 was to investigate the construct validity of the STCS through its convergent and discriminant validity with several conceptually related and

theoretically distinct measures. Given the exploratory nature of the research, it was tentatively concluded that the results from this study revealed that the STCS (Version 4) had satisfactory convergent validity. The hypotheses that there would be significant positive correlations between the STCS (Version 4) and the Sense of Competence Questionnaire and Self-Efficacy Scale were supported. Similarly, the hypotheses that there would be medium-sized positive correlations between the STCS and Self-Esteem Scale and Self-Liking/Self-Competence Scale were supported.

The hypothesis that there should be a negative correlation between the STCS and the Neuroticism Subscale was supported. However, the positive correlation between the denial subscale and the neuroticism subscale raises issues about the nature of the relationship between denial and neuroticism. In my model, I conceptualise denial as an adaptive self-protective strategy. In contrast, neuroticism is associated with maladaptive personality traits (McCrae & Costa, 1992). There are three possible explanations for the positive correlation between the denial subscale and the neuroticism subscale. First, several items that I constructed as emotion focused coping items loaded onto the factor that I named denial in the factor analysis. These items involve feeling anxious in work situations, hence they could be positively related to the anxiety dimension that the neuroticism subscale taps. Second, rather than denial being an adaptive self-protection strategy only, denial could also be maladaptive because the more that participants denied negative feedback from their everyday lives, the more anxious they became. Third, the items that loaded onto the factor that I named denial are not really measuring denial, but rather the emotion focused coping dimension of self-protection. Therefore, further research was necessary in order to clarify this finding.

The hypothesis that there should be medium-sized positive correlations between the STCS (Version 4) and the extraversion, openness to experience, agreeableness and conscientiousness subscales from the NEO-FFI was also supported. Therefore, as predicted in Hypothesis 7, the STCS (Version 4) had convergent validity with these four subscales. In contrast, the hypothesized relationship between the STCS and the Self-Monitoring Scale (Snyder, 1974) was unsupported. No significant correlations were revealed for the relationship between the STCS (Version 4) and self-monitoring. One implication of this finding is that social and task competence and self-monitoring are unrelated constructs. Alternatively, it is possible that the multidimensionality of the self-monitoring scale (e.g., Furnham & Capon, 1983) contaminated the results of this study.

The hypothesis that there should be nonsignificant correlations between the STCS (Version 4) and the Marlowe-Crowne Scale was supported. The STCS (Version 4) measures positive social and task competence traits that people regard as socially desirable and the Marlow-Crowne Scale measures socially desirable behaviours. Therefore, the STCS (Version 4) should have discriminant validity with the Marlowe-Crowne Scale. In contrast to these findings, many of the correlational relationships between the STCS (Version 4) and the BIDR were significant. However, when participants' scores on the self-deceptive enhancement Subscale and the impression management subscale were examined, a slightly different picture emerged. The results suggested that while participants had not deliberately tried to create a favourable impression and had answered honestly, their responses were, nevertheless, positively biased. In other words, they perceived that they were more competent than they may

have actually been. Therefore, Hypothesis 9 that the STCS (Version 4) should have discriminant validity with the BIDR was partially supported.

A limitation of this study is that the data was collected over the internet. Web participants are free of any social pressures or embarrassment. Therefore, they could have paid less attention to their responses than laboratory-based participants. A laboratory provides a research context for participation in experimental research that could motivate participants to pay more attention to how they respond (Birnbaum, 2004).

In conclusion, the results from this study revealed that the STCS (Version 4) had good reliability and convergent and discriminant validity with several conceptually related but theoretically distinct measures. It is important that to establish that the STCS (Version 4) has convergent and discriminant validity because psychological tests should not measure the same underlying characteristics. None of the correlations between the STCS and other measures were of a sufficient magnitude to suggest that any of these scales are measuring precisely the same underlying characteristics as the STCS. Therefore, the STCS (Version 4) has the potential to be a useful tool for both researchers and organizational psychologists interested in predicting work performance from perspective of social and task competence beliefs and self-protection processes.

CHAPTER 8: AN INVESTIGATION OF THE CONVERGENT VALIDITY OF THE
SOCIAL AND TASK COMPETENCE SCALE AND SELF-PROTECTION SCALE

Summary

In Chapter 8, I describe Study 4, which had two aims. The first aim was to investigate the reliability and factor structure of the Social and Task Competence Scale (STCS, Version 5) and Self-Protection Scale (SPS, Version 2) in an experiment that examined the effects of perceived task difficulty on self-competence, self-protection and performance. The second aim of Study 4 was to investigate the convergent validity of these measures with the Emotional Intelligence Scale (Schutte, Malouf, Hall, Haggerty, Cooper, Golden & Dornheim, 1998). The results indicated that the reliabilities of the STCS (Version 5) were acceptable for use in scientific research and that the STCS (Version 5) and SPS (Version 2) had convergent validity with the Emotional Intelligence Scale. Finally, the results provided support for the hypothesized relationships between perceptions of task difficulty, social and task competence, self-protection and task performance, and led to the conclusion that both measures had predictive validity.

Introduction

People are required to perform both simple and complex tasks when they work. Research has shown that people vary greatly in their ability to perform simple and complex tasks (for a review, see Stajkovic & Luthans, 1998). One reason for these differences may be attributed to differences in how people think about a task. For

example, Wood and Bandura (1989a) found that when their participants *thought* that the experimental task was difficult, regardless of whether or not it really was, they did not perform as well as when they believed that the task was simple.

There are no studies that have examined this idea from the perspective of self-competence and self-protection. In Study 4, I take a closer look at what happens to task performance when participants *believe* that the same task is easy or difficult to complete, from the perspective of social and task competence beliefs and self-protection processes.

The Effects of Task Complexity on Self-Competence

How difficult people *think* that a task is to complete should be distinguished from actual task difficulty. Actual task difficulty refers to the task itself and is a determination that is made based on task knowledge and task skills. Recall from Chapter 4 that task knowledge refers to the information that a person has about a task, and task skills are the actual task-related abilities that a person possesses (Bandura 1990; Sternberg & Kolligan, 1990). Perceived task difficulty concerns cognitive processes involving self-evaluations and other people's evaluations about a task's actual difficulty. Thus, perceived task difficulty is the psychological component of actual task difficulty.

Stajkovic and Luthans (1998) meta-analysed 114 empirical studies conducted over the past 20 years in order to investigate whether task difficulty and type of setting moderated the relationship between self-efficacy and task performance. To obtain pairwise average correlations between self-efficacy and task performance, they partitioned each group of studies according to whether or not they were simulated or actual, and whether they were low, medium or high task difficulty. They found that the

relationship between self-efficacy and performance was significant for each level of task difficulty (simple and complex), but the magnitude of this relationship decreased significantly between simple and complex tasks. That is, self-efficacy had a greater effect on the performance of complex tasks.

Stajkovic and Luthans (1998) argued that the lagged effects between self-efficacy and performance occurred because participants with high self-efficacy developed more effective strategies for completing complex tasks over time. That is, as participants developed strategies and became more confident using them, their performance on complex tasks increased. In contrast, participants with low self-efficacy became more self-focused as task complexity increased which interfered with their ability to cognitively process information to develop task strategies, and negatively impacted on their performance.

The results of Stajkovic and Luthans' (1998) meta-analysis suggest that how people *think* about complex tasks affects their subsequent task performance. As people gain confidence in their abilities, their perceptions about a task change and they think that the task is easier to complete successfully. These confident thoughts, in turn, improve their performance. On the other hand, the thoughts of people who lack confidence are concerned with the possibility of failure, and this has a detrimental effect on their performance. Therefore, perceptions of task difficulty may be an important variable that affects the relationship between social and task competence, self-protection and task performance. That is, perceiving that a task is difficult could activate self-protection processes. Self-protection should then interact with social and task competence and in turn, influence subsequent task performance.

The Influence of Self-Protection on Self-Competence

Research has shown that people with low self efficacy are prone to more anxiety before and during stressful performance than people with high self-efficacy, whereas people with high self-efficacy had adaptive coping responses when they perceived threat (e.g., Averill, 1973; Bandura, Cioffi, Taylor, & Brouillard, 1988; Bhagat & Allie, 1989; Kahn & Long, 1988; Karasek & Theorell, 1990; Levine & Ursin, 1980; Jex, Bliese, Buzzell & Primeau, 2001; Miller, 1980; Terry & Jimmieson, 2003; Terry, Tonge & Callan, 1995). One conclusion from this line of research is that people with low self-efficacy experience different emotions to people with high self-efficacy when they perceive threat.

It has become clear over the past 20 years or so, that emotions make an important contribution to task performance (e.g., Cervone, Jiwani & Wood, 1991; Kavanagh, 1987; Kavanagh & Bower, 1985; Matthews, Campbell, Falconer, Joyner, Huggins, Gilliland, Grier & Warm, 2002; Matthews, Davies, Westerman & Stammers, 2000; Palfai & Salovey, 1993; Tsai, Chen & Lui, 2007; Wright & Mischel, 1982). For example, people find it easier to recall past successful performances when they experience positive emotions (Bower, 1981) and use positive emotions to inform them about how they feel about their task performances (Schwarz & Clore, 1988). Positive emotions also increase confidence in abilities to perform a task successfully (Cervone, Jiwani & Wood, 1991; Gist & Mitchell, 1992; Kavanagh, 1987).

Kavanagh (1987) studied the effects of positive and negative emotions on performance standards and persistence. In this study, participants were randomly assigned to either a happy experience condition, sad experience condition or neutral

situation condition. In the happy experience condition, participants were instructed to recall vividly happy experiences while they completed an anagram task. In the sad experience condition, participants were asked to recall sad experiences while they completed an anagram task. In the neutral situation condition, participants were given a neutral scenario to imagine. The results showed that participants who recalled happy experiences persisted for longer and solved more anagrams than participants who recalled sad experiences. However, there was no evidence that positive and negative emotions moderated self-efficacy's effects on task performance.

In contrast to Kavanagh's (1987) findings, Cervone et al. (1991) found evidence of a relationship between negative emotions, self-efficacy and task performance. This study tested the hypothesis that assigned goals moderate the relationship between self-efficacy and performance and investigated whether the impact of self-efficacy evaluations generalized from simple to difficult tasks. The experimental task was a computer simulation that involved matching eight employees to job requirements and arranging their rosters so that production orders were maximised. Participants were randomly assigned to one of three goal-setting conditions: difficult goal, moderate goal and no specific goal. In the difficult goal condition, participants were told to complete the production orders within the standard time. In reality, this goal was almost impossible to achieve consistently. Hence, participants should have felt threatened by the potential for task failure. In the moderate goal condition, participants were given 25% leeway to complete the production orders, which was achievable. Hence, participants should have felt less threatened by the potential for task failure. In the no specific goal condition,

participants were told to do their best to fill the production orders expediently. Hence, participants should not have felt threatened by the potential for task failure.

The results showed that self-evaluations and emotional reactions to performance impacted on subsequent performance after the effects of past performance were controlled. Specifically, positive self-evaluations and high self-efficacy predicted higher levels of performance in the difficult and moderate goal conditions, but not the no specific goal condition. Conversely, low self-efficacy and negative self-evaluations led to inferior performance.

In summary, when people doubt their abilities, they are sensitive to perceiving task failure for difficult tasks. In contrast, people who are confident in their abilities seem to be able to tap memories of past positive experiences that assist them to evaluate the attributes of difficult tasks more favorably. The positive appraisals of task difficulty lead to better task performances. However, how emotional reactions elicited by positive and negative appraisals of task difficulty may interact with self-competence beliefs, self-protection processes and task performance is unclear. More research is needed in order to clarify the effects of emotional reactions on self-competence and self-protection processes in perceptions of task difficulty. The methodology that I used in Study 4 aimed to induce positive and negative emotional reactions by manipulating perceptions of task difficulty. Participants who perceived that the experimental task was difficult should have had a negative emotional reaction if they made negative appraisals of task difficulty (e.g., this task is very hard and I won't be able to complete it easily). In contrast, participants who perceived that the experimental task was easy should have had a positive emotional reaction as a result of positive appraisals of task difficulty (e.g.,

this task is easy and I will be able to complete it easily). The effects of emotional reactions and positive and negative appraisals on perceptions of task difficulty and performance have been investigated from a self-efficacy perspective (e.g., Cervone et al., 1991). However, there is no work that has examined the effects of positive and negative appraisals of task difficulty on self-competence, self-protection and task performance.

The Relationship between Emotional Intelligence and Task Performance

Schutte, Schuettpelz and Malouff (2001) examined the impact of emotional intelligence on performance of an anagram task. Participants completed the Emotional Intelligence Scale (Schutte, Malouf, Hall, Haggerty, Cooper, Golden & Dornheim, 1998) prior to performing a three-phase experimental task. In the first phase, participants were given five minutes to unscramble a set of moderately difficult anagrams. In the second phase, participants were given five minutes to unscramble a set of very difficult anagrams. In the third phase, participants were given five minutes to unscramble a set of moderately difficult anagrams. The second phase was intended to induce feelings of frustration and hopelessness. The third phase was intended to give participants a chance to solve anagrams after they had felt frustrated and/or hopeless. The researchers predicted that people with higher emotional intelligence should be able to control their negative emotions so that they could perform better on the anagram task, particularly in the third phase.

The results revealed that in the first and third phases, higher emotional intelligence was associated with solving more anagrams. Furthermore, when performance in the first

phase was held constant and a partial correlation between emotional intelligence and number of anagrams solved in the third phase was completed, the results showed that persistence after feeling frustrated made an independent contribution to task performance. Therefore, the researchers concluded that there was a positive relationship between higher emotional intelligence and persistence on a cognitive task. These results link emotional intelligence to the persistence dimension of task competence.

The study of the relationship between emotional intelligence and self-competence is still in its early stages. There has been some support for Goleman's (1995) hypothesis that there is a positive correlation between emotional intelligence and self-competence (e.g., Barchard, 2003; Daus & Ashkanasy, 2005; Davies, Stankov & Roberts, 1998; Sosik & Megerian, 1999). However, to date, there has been no research that has examined the relationship between emotional intelligence and social and task competence.

A major problem with the research on emotional intelligence is that there is a high degree of overlap between emotional intelligence and other constructs (Zeidner et al., 2008). For example, Bar-On's (2004) Emotional Quotient Inventory correlated at -.70 with Neuroticism and .68 with Extraversion (Petrides & Furnham, 2003). The overlap between emotional intelligence and other constructs means that it is unclear whether emotional intelligence is an underlying construct in its own right or subsumed by other constructs (Zeidner et al, 2008). Therefore, the second aim of Study 4 was to examine the convergent validity of the STCS (Version 5) and the SPS (Version 2) with a reliable measure of emotional intelligence.

Selecting a Measure of Emotional Intelligence

The Emotional Intelligence Scale aims to measure the extent that people perceive, understand and control their emotions. The purpose of including the Emotional Intelligence Scale in this study was to examine its convergent validity with the STCS (Version 5) and SPS (Version 2). The advantage of the Emotional Intelligence Scale over other measures of emotional intelligence (e.g., Bar-On, 2006; Goleman, 1998) is that it is a brief measure that has been validated against performance of a cognitive task (Schutte et al., 2001) and is based on a cohesive theoretical model (Salovey & Mayer, 1990). The measure consists of 33 single statement items that measure appraisal and expression of emotion, regulation of emotion and utilization of emotion in solving problems. An example of an item measuring appraisal and expression of emotion is "I present myself in a way that makes a good impression on others". An example of an item measuring regulation of emotion is "I have control over my emotions". An example of an item measuring utilization of emotion is "I motivate myself by imagining a good outcome to the tasks that I take on". Items are scored on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Two studies that investigated the psychometric properties of the Emotional Intelligence Scale produced Cronbach's (1951) alphas of .90 and .87 (Schutte et al., 1998). The Emotional Intelligence Scale had a test-retest coefficient of .78 after two weeks and predictive validity with academic performance and discriminant validity with mathematical and verbal abilities and the Big Five personality factors (Schutte et al., 1998). The Emotional Intelligence Scale has convergent validity with self-esteem and positive mood (Schutte, Malouff, Simunek, McKenley & Hollander, 2002) and self-

monitoring in social situations (Schutte, Mallouf, Bobik, Coston, Greeson, Jedlicka, Rhodes & Wendorf, 2001).

A weakness of the Emotional Intelligence Scale is that problems have emerged concerning the factor structure of the scale. Schutte et al. (1998) recommended using the total scores on their 33-item scale because their factor analysis supported a one factor solution. Several other studies that focused on the factor structure of the measure also found a one factor solution (e.g., Brackett & Mayer, 2003; Ciarrochi, Chan & Bajgar, 2001; Gignac, Palmer, Manocha & Stough, 2005), along with a fit for subfactors (Ciarrochi et al. 2001), or a higher order factor associated with subfactors (Gignac et al., 2005). However, several researchers (e.g., Ciarrochi et al., 2001; Petrides & Furnham, 2000; Saklofske, Austin & Minski, 2003) have cautioned about the instability of the factor structure of the Emotional Intelligence Scale. These researchers favored a four factor solution measuring perception of emotions, managing emotions in the self, managing other's emotions and utilizing emotions. To resolve the uncertainty surrounding the factor structure of the Emotional Intelligence Scale, Petrides and Furnham (2000) urged researchers to conduct their own factor analysis of the Emotional Intelligence Scale before using the measure in their own research.

Rational for Changes to the STCS (Version 4) and SPS (Version 1)

The results from Study 3 indicated that further scale revisions to the STCS (Version 4) and SPS (Version 1) were needed in order to improve the ecological validity of both measures. First, I deleted the ideal scale and its anchors from both measures. There were several reasons for this decision. First, the reliability of the ideal scales was

higher than the reliability of the actual scales in Studies 1 – 3. I suggested in my discussion of the results from Study 1 that this could mean that there is less variability in performance standards than actual performance. The replication of the higher reliability of the ideal scales compared to the actual scales in Studies 2 and 3 cast more doubt over the usefulness of the ideal scales for predicting task performance.

Second, the ideal scales were useful for the generation of difference scores. However, the difference score scales were not reliable. Difference scores have often been used in psychological research (Carusso, 2004). However, the use of difference scores has been criticized because their statistical and psychometric properties are problematic (e.g., Cattell, 1982; Cronbach & Furby, 1970; Lord & Novick, 1968). A major problem with difference scores is that the reliability of a difference score is less than the average reliability of its component parts (Cronbach & Furby, 1970).

Third, the ideal scales doubled the length of the questionnaire. The format of the STCS (Version 4) was such that participants read each item and responded according to the actual scale question. Next, they read the same item again and responded according to the ideal scale question. Therefore, deleting the ideal scale effectively halved the administration time of the STCS (Version 5).

Next, I evaluated each item for its fidelity to the social and task competence and self-protection constructs. Recall from Study 3 that the social competence items did not load onto a separate factor in the factor analysis. Instead, the items that I constructed to measure the communication and cooperation dimensions of social competence loaded onto the same factor as the persistence items from the task competence subscale. Hence, I concluded that either the social competence items lacked ecological validity or the

factor that they loaded onto in the factor analysis was multidimensional and consisted of both social and task dimensions. I examined the items for their readability and clarity. Then, I deleted some items, added some items, and revised a number of items to construct the STCS (Version 5; see Appendix N).

The results of the factor analysis of the SPS (Version 1) items from Study 3 followed a similar path to the SPS (Version 4) in that the items that I constructed to measure emotion focused coping and isolation loaded onto two factors that I considered better represented denial and reaction formation. Hence, the fidelity of the SPS items to the underlying constructs that they were supposed to measure needed to be reconsidered for the SPS (Version 2). I examined the self-protection items for their readability and clarity. Then, I deleted some items, added some items, and revised a number of items to construct the SPS (Version 2; see Appendix O).

Overview of Study 4 and Predictions

Study 4 had two aims. The first aim was to investigate the reliability and factor structure of the STCS (Version 5) and SPS (Version 2). The second aim was to examine the construct validity of the STCS (Version 5) and SPS (Version 2). First, the convergent validity of the STCS (Version 5) and SPS (Version 2) was examined in relation to emotional intelligence. Second, the predictive validity of these measures was explored by examining how perceived task difficulty and self-protection may affect the relationship between social and task competence and task performance.

The procedure contained three parts. Part 1 consisted of the STCS (Version 5) and SPS (Version 2). Part 2 consisted of a word search task, and Part 3 consisted of two post-task questionnaires that measured task strategies and emotional intelligence.

The study had a 2 (task difficulty: simple/complex) x 2 (task competence: high/low) x 2 (social competence: high/low) x 2 (self-protection: high/low) between-participants factorial design. Participants in the *simple* condition were informed that the word search task was easy to complete. Participants in the *complex* condition were informed that the word search task was hard to complete. All participants completed the STCS (Version 5), SPS (Version 2), the word search task, a strategies questionnaire and the EIS (Schutte et al., 1998). Task difficulty was the manipulated independent variable. That is, participants' perceptions of task difficulty were manipulated and they completed the same word search task in both conditions. There were seven performance measures (dependent variables): the number of words that participants believed were contained in the puzzle, the number of words participants believed most people would identify (part of a manipulation check), number of strategies used, task persistence (time on task), task performance (number of words found) and prior experience with word search puzzles.

Following my social and task competence model, I predicted that:

1. There should be significant positive correlations between self-competence competence and self-protection.

2. The STCS (Version 5) and SPS (Version 2) should have convergent validity with the Emotional Intelligence Scale such that there should be significant positive correlations between the STCS (Version 5) and SPS (Version 2) and the Emotional Intelligence Scale. Higher self-competence should be associated with higher emotional intelligence and increased task performance because the STCS (Version 5) measures positive traits of self-competence and the Emotional

Intelligence Scale measure ability to evaluate and express feelings about competence.

Hypotheses 3 was a manipulation check.

3. Participants in the difficult task condition should perceive that the word search puzzle is more difficult than participants in the easy task condition.

4. Participants with high self-competence and low self-protection should perceive that the word search puzzle was more difficult than participants with low self-competence and low self-protection. I made this prediction because high self-competence participants possess higher standards of performance than low self-competence participants. It follows that high self-competence and low self-protection participants should more sensitive to perceiving task difficulty than low task competence and low self-protection participants because it is important to them that they produce successful performances. Therefore, they are likely to carefully evaluate how difficult a task is so that they can prepare themselves for the task.

5. The number of words that participants believed that most people would find during the task should be greater for people in the easy task condition than for people in the difficult task condition. I made this prediction because participants should have inferred from the task instructions that the word search puzzle had more words in the easy task condition than the difficult task condition based on the instructions that were given.

6. The number of words that participants believed that the words search puzzle contained should be greater for the easy task condition than the difficult task

condition. I made this prediction because participants should have expected that more words would have made the word search puzzle easier to complete.

Hypothesis 5 and 6 examined the predictive validity of the STCS (Version 5) and SPS (Version 2):

7. Task difficulty should moderate the effects of self-competence on task performance such that high self-competence participants should find more words, spend more time finding words and use more strategies than low self-competence participants. This effect should be stronger for the difficult task than the easy task. I made this prediction because research has shown that how difficult people think that a task is affects their performance (e.g., Stajkovic & Luthans, 1998).

8. High self-protection participants should find more words, spend more time finding words and use more strategies than low self-protection participants. I made this prediction because high self-protection participants should be less likely to feel threatened than low self-protection tasks, and so, they should produce better performances.

9. High social competence participants should find more words, spend more time finding words and use more strategies than low social competence participants. I made this prediction because high social competence participant should be more motivated to perform well in order to create a positive impression.

Method

Participants

One hundred and fifty-five participants (75 females, 58 males[31]) were recruited from PsychData.com. PsychData.com is an online data collection service that specializes in collecting data for the social sciences community. As an incentive, participants were automatically entered into a prize draw. The prize was an electronic gift certificate to the value of AU\$135.00. Participants needed to be 18 years of age or older to participate and they needed to have access to the internet. The mean age of all participants was 42.56 years ($SD = 13.84$ years).

Procedure

Participants were permitted to proceed at their own pace through the three parts of the study. To obtain an accurate measure of persistence, participants were timed on the task. Time was measured in minutes from the time that participants began the study to the time that they started to complete the post-task questionnaires. Participants were unaware that they were being timed. This slight deception enabled a measure of persistence to be obtained independent of the effects of perceived time pressure.

Experimental Materials

Materials for Part 1. In Part 1 of the experiment, participants completed the STCS (Version 5; see Appendix N) and SPS (Version 2; see Appendix O).

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[31] Twenty-two participants did not respond to the item asking them to indicate their gender.

Materials for Part 2. Part 2 consisted of a word search task (see Appendix P). Participants were not given any guidance in relation to the number of words contained in the word search task or a word list to help them find words. There were two sets of instructions. In the first set of instructions (simple condition), participants read: "The following word search task has been generated by a computer program. It is designed to be a relatively easy task, and you should find it easy to complete. You should look for food-related words". In the second set of instructions (complex condition), participants read: "The following word search task has been generated by a computer program. It is designed to be a relatively difficult task, and you should find it hard to complete. You should look for food-related words".

The perception of the difficulty of the word search task (simple or complex) represented the experimental manipulation in this study. In reality, the same word search puzzle was used in both conditions. This slight deception enabled a measure of how participants' perceptions of task difficulty, as opposed to the task's actual difficulty, affected their performance along the cognitive dimensions that I was interested in.

All participants were asked to type all of the food-related words that they could find in the space allocated. In addition, all participants were asked to indicate how many food-related words they believed the word search puzzle contained, how many food-related words that they believed most people would find and how difficult the word search puzzle was for them to complete. Finally, participants were asked to indicate whether or not they had completed word search puzzles before.

Materials for Part 3. Part 3 consisted of two post-task questionnaires that measured task strategies and emotional intelligence (see Appendix Q and Appendix R). The task

strategies questionnaire asked participants to indicate the extent to which they used a series of strategies during the word search task. Ideas for the strategies were obtained from an online word search website (http://www.word-buff.com/word-search-puzzles.html). An example of a strategy is "I read all of the horizontal rows, backwards and forwards". A five-point Likert-type scale ranging from *never* to *always*, was used to record how often respondents used each strategy during the word search task. Emotional intelligence was measured using the Emotional Intelligence Questionnaire. Lastly, there were demographic items that related to participants' age, gender, country of residence, number of years worked, whether English was their first language and prior participation in the study.

Results

Participants

Twenty-five participants were excluded from the statistical analyses because they withdrew from the study before they had completed all three parts of the study. Twenty participants answered "yes" to the item "Have you previously participated in this research?". There were two possible explanations for this finding. First, these participants could have participated in Study 2. Recall that Study 2 was an online study and participants were recruited from websites that advertised psychological research. Second, these participants may have misinterpreted the question. In light of this second possibility, the data from these participants was included in the statistical analyses. Therefore, a total of 132 participants participated in this study.

Factor Structure of the Social and Task Competence Scale

The same promax procedure that I used in the earlier studies was followed in Study 4 (see Appendix S). The factor analysis produced two interpretable factors. Factor 1 contained six items (Items 1, 4, 6, 7, 9, 10 and 13) that measured the social and task dimensions of self-competence. Therefore, Factor 1 was named: Self-Competence. Three items (Items 1, 9 and 10) were constructed as task competence (strategizing) items and four items (Items 4, 6, 7 and 13) were constructed as social competence (communication, cooperation and identification) items. The items (Items 2, 5, 8 and 14) that loaded onto Factor 2 were constructed as negative items that measured task competence along its persistence dimension. Therefore, Factor 2 was named Persistence. The interitem correlations (see Appendix S) indicated that the items that loaded onto these factors had good internal consistency and unidimensionality.

Factor Structure of the Self-Protection Scale

The factor analysis of the SPS (Version 2) produced a single interpretable factor that measured the four dimensions of self-protection (see Appendix S). Three items (Item 15, 26 and 27) measured denial, four items (Items 16, 17, 20 and 21) measured reaction formation, three items (Items 28, 29 and 30) measured isolation and six items (Items 18, 22, 23, 24, 25 and 31) measured emotion-focused coping. The interitem correlations (see Appendix S) indicated that the items that loaded onto this factor had good internal consistency and unidimensionality.

Reliability of the Newly Formed Scales

Next, I formed several new scales from the items that loaded positively onto Factor 1 and negatively onto Factor 2, based on a priori theoretical considerations. According to my social and task competence model, task competence has three dimensions: plan,

persistence and strategizing and social competence has three dimensions: communication, cooperation and identification. Therefore, three items (Items 1, 9 and 10) from Factor 1 formed the Strategizing Subscale and four items (Items 2, 5, 8 and 14) from Factor 2 formed the Persistence Subscale. Together, these seven items (1, 2, 5, 8, 9, 10 and 14) formed the Task Competence Scale for the STCS (Version 5). Four items (Items 4, 6, 7 and 13) from Factor 1 measured the communication, cooperation and identification dimensions of social competence. As these four items loaded onto the same factor, these four items formed the Social Competence Scale. I formed one scale from the items that loaded positively and negatively onto Factor 1 in the factor analysis of the self-protection items.

The Spearman-Brown prediction formula was used to obtain the reliability of these scales (see Table 8.1). The reliability of the STCS (Version 5) was an acceptable .67. The reliability of the SPS (Version 2) was also acceptable ($\alpha = .73$). The reliabilities of the Strategizing Subscale and Persistence Subscale were .74 and .51 respectively. The reliability of the Social Competence Scale was .44. Overall, the reliabilities of the subscales from both measures were acceptable because they were above the .60 that is recommended for psychological research (Clarke & Watson, 1995).

Examination of the interitem correlations in Table 8.2 revealed that 86% of the items that loaded onto Factor 1 in the factor analysis of the STCS (Version 5) were significantly correlated and fell within the recommended range of .15 to .50 (Clark & Watson, 1995). However, the average interitem correlation was .12, which was just outside of the recommended range of .15 to .50 (Clarke & Watson, 1995).

Table 8.1

Alpha Coefficients for the Revised Scales and Subscales

Scale	Items	Alpha
STCS	1, 2, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	.67
Task Competence	1, 2, 5, 8, 9, 10, 14	.55
Strategizing	1, 9, 10	.74
Persistence	2, 5, 8, 14	.51
Social Competence	4, 6, 7, 13	.44
Self-Protection	15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	.73

Examination of the interitem correlations in Table 8.3 revealed that 67% of the items that loaded onto Factor 2 in the factor analysis of the STCS (Version 5) were significantly correlated and fell within the range of .15 to .50 that Clark and Watson (1995) recommended. The average interitem correlation was .16, which fell just within the recommended range. The correlation between Factor 1 and Factor 2 was .18.

Examination of the interitem correlations in Table 8.4 revealed that 81% of the SPS (Version 2) items fell within the recommended range of .15 to .50 (Clarke & Watson, 1995). The average interitem correlation of these items was .47, which was consistent with the desirable range of .40 to .50 that Clark and Watson recommended for the mean interitem correlation of narrower constructs.

Table 8.2

Correlation Matrix of Items that Loaded onto Factor 1 in the Factor Analysis of the

Social and Task Competence Items

Item	1	4	6	7	9	10	13
1	-	.21*	.33**	.13	.42**	.30**	.18*
4		-	.24*	.19*	.34**	.39**	.23**
6			-	.18*	.36**	.29**	.10
7				-	.28**	.35**	.23**
9					-	.71**	.34**
10						-	.40**
13							-
M	5.67	5.73	5.14	4.98	6.14	6.21	5.58
SD	1.56	1.59	1.50	1.56	1.23	1.27	1.48

*Note: * $p < .05$; ** $p < .01$; N = 132*

Table 8.3

Correlation Matrix of Items that Loaded onto Factor 2 in the Factor Analysis of the

Social and Task Competence Items

Item	2	5	8	14
2	-	.16	.23*	.16
5		-	.25**	.18*
8			-	.31**
14				-
M		5.21	4.54	4.86
SD		1.73	1.83	1.65

*Note: * $p < .05$; ** $p < .01$; N = 112*

Table 8.4

Correlation Matrix of Items Loading onto Factor 1: Self-Protection

Item	15	16	17	18	20	21	22	23	24	25	26	27	28	29	30	31
15	-															
16	.50**	-														
17	.47**	.51**	-													
18	.34**	.44**	.44**	-												
20	.23**	.32**	.32**	.43**	-											
21	.42**	.60**	.52**	.44**	.60**	-										
22	-.34**	-.46**	-.41**	-.64**	-.43**	-.59**	-									
23	-.08	-.18*	-.24*	-.18*	-.33**	-.32**	.14	-								
24	.29**	-.50**	.38**	-.19*	.24*	.45**	-.29**	-.41**	-							
25	.26**	.47**	.37**	.44**	.38**	53**	-.52**	.07	.37**	-						
26	.33**	.39**	.39**	.44**	.43**	.56**	-.41**	-.17*	.36**	.58**	-					
27	.38**	.38**	.42**	.38**	.35**	.53**	-.30**	-.09	.24**	.48**	.65**	-				
28	.41**	.58**	.51**	.45**	.42**	.54**	-.47**	-.22**	.35**	.45**	.48**	.45**	-			
29	.50**	.64**	.54**	.45**	.47**	.65**	-.48**	-.27**	.41**	.41**	.48**	.50**	.83**	-		
30	.31**	.38**	.45**	.35**	.39**	.48**	-.37**	-.28**	.35**	.37**	.34**	.45**	.60**	.62**	-	
31	-.16	-.11	-.15	-.44**	-.20**	-.25**	.41**	-.09**	.01	-.31**	-.29**	-.28**	-.25**	-.27**	-.26**	-
M	4.82	5.30	5.34	4.89	4.52	5.07	3.44	2.92	5.47	5.37	4.83	4.88	4.77	4.98	5.11	4.32
SD	1.88	1.54	1.71	1.88	1.78	1.81	1.85	1.42	1.48	1.80	1.82	1.81	1.76	1.74	1.78	1.91

Note: $* p < .05$; $** p < .01$; $N = 132$

Correlational Relationships between the STCS Scales and Subscales

In Hypothesis 1, I predicted that there should be significant positive correlations between social and task competence and self-protection. I computed correlations between the STCS (Version 5), Task Competence Scale, strategizing subscale, persistence subscale and Social Competence Scale and the SPS (Version 2) in order to examine this hypothesis (see Table 8.5).

Table 8.5

Correlations between the STCS (Version 5) and SPS (Version 2)

	1	2	3	4	5	6
1. STCS (Version 5)	-	.91**	.70**	.65**	.78**	.25**
2. Task Competence		-	.61**	.83**	.45**	.25**
3. Strategizing			-	.05	.58**	.31**
4. Persistence				-	.16*	.09
5. Social Competence					-	.17*
6. SPS (Version 2)						-
M	5.38		6.00	4.95	5.36	4.75
SD	.75		1.09	1.14	1.00	.86

*Note: * $p < .05$; ** $p < .01$; $N = 132$

For the STCS (Version 5), the results showed that there was a significant positive correlation between the STCS (Version 5) and the SPS (Version 2), ($r = .25$, $p < .01$, $N = 132$). Therefore, as self-competence increased, self-protection also increased. In addition, task competence and social competence were also both significant and positively correlated with self-protection, ($r = .25$, $p < .01$, $N = 132$; $r = .17$, $p < .05$, $N = 132$). In contrast to these findings, the correlation between the strategizing subscale and the persistence subscale was nonsignificant, ($r = .05$, $p = .54$, $N = 132$)

but the strategizing subscale was significantly and positively correlated with social competence, ($r = .58$, $p < .01$, $N = 132$). There was also a moderate, positive correlation between the strategizing subscale and the SPS (Version 2), ($r = .24$, $p < .01$, $N = 132$). Moreover, the correlations between the persistence subscale and the Social Competence Scale was significant, ($r = .16$, $p < .05$, $N = 132$) but the correlation between persistence and self-protection was nonsignificant, ($r = .09$, $p = .32$. $N = 132$). Overall, the results of the correlational analysis supported Hypothesis 1.

Convergent Validity with Emotional Intelligence

The convergent validity of the STCS (Version 5) and SPS (Version 2) was examined through a comparison with the Emotional Intelligence Scale. The data from Study 4 revealed that Cronbach's (1951) alpha for the Emotional Intelligence Scale was high ($\alpha = .91$). Examination of the interitem correlations of the Emotional Intelligence Scale revealed that 89.66% of the items were significantly correlated and fell within the recommended range of .15 to .50 (Clark & Watson, 1995). The average interitem correlation was .30 and fell within the recommended range of .15 to .50 (Clarke & Watson, 1995).

Following Petrides and Furnham's (2000) recommendations, the factor structure of the Emotional Intelligence Scale was examined (see Appendix T). Consistent with other studies (Brackett & Mayer, 2003; Ciarrochi et al., 2001; Gignac et al., 2005; Schutte et al., 1998, 2001), the factor analysis supported a one factor solution. Therefore, the total score for the 33-item scale was used in Study 4.

To examine Hypothesis 2, I computed correlations between the STCS (Version 5) and the SPS (Version 2) and the Emotional Intelligence Scale (see Table 8.6). In Hypothesis 2, I predicted that there should be significant positive correlations

between the STCS (Version 5) and SPS (Version 2) and the Emotional Intelligence Scale. As predicted, the STCS (Version 5) showed a significant positive correlation with the Emotional Intelligence Scale, ($r = .18$, $p < .05$, $N = 132$). Moreover, there were significant positive correlations between the strategizing subscale and the Emotional Intelligence Scale, ($r = .20$, $p < .01$, $N = 132$) and Social Competence Scale and the Emotional Intelligence Scale, ($r = .19$, $p < .01$, $N = 132$). However, contrary to expectations, the relationship between persistence and emotional intelligence was nonsignificant, ($r = .01$, $p < .91$, $N = 132$). Overall, the STCS (Version 5) had convergent validity with the Emotional Intelligence Scale as predicted in Hypothesis 2.

The results of the correlation analysis between the SPS (Version 2) and the Emotional Intelligence Scale added further support to Hypothesis 2 (see Table 8.10). There was a significant medium-sized positive correlation between the SPS (Version 2) and the Emotional Intelligence Scale, ($r = .24$ $p < .01$, $N = 132$). These findings confirmed that the STCS (Version 5), the SPS (Version 2) and the Emotional Intelligence Scale were distinct but theoretically related measures. Hence, the STCS (Version 5) and the SPS (Version 2) had convergent validity with the Emotional Intelligence Scale.

Table 8.6

Correlations between the STCS (Version 5), SPS (Version 2) and the Emotional Intelligence Scale

	1	2	3	4	5	6	7
1. Emotional Intelligence	-	.18*	.12	.20*	.01	.19*	.24**
2. STCS (Version 5)		-	.91*	.70**	.65**	.78**	.13
3. Task Competence			-	.61*	.83**	.45**	.17*
4. Strategizing				-	.05	.58**	.14

5. Persistence					-	.16	.12
6. Social Competence						-	.02
7. SPS (Version 2)							-
M	4.96	5.38	5.40	6.00	4.95	5.36	4.45
SD	.83	.75	.82	1.09	1.14	1.00	.78

*Note: * p < .05; ** p < .01; N = 132.*

Manipulation Checks

The experimental manipulation involved telling half of the participants that the experimental task was easy to complete and half of the participants that the task was difficult to complete. In reality, all participants completed the same task. This manipulation enabled an examination of whether or not perceptions of task difficulty affected the relationship between social and task competence and task performance. In order to check if this manipulation was successful, I performed a series of hierarchical regression analyses to examine participants' perceptions of task difficulty and the number of words that they thought most people would find. As predicted in Hypothesis 3, participants in the difficult condition should have perceived that the word search puzzle was more difficult than participants in the simple condition if the experimental manipulation was successful.

Following Cohen's and Cohen's (1983) recommendations, I entered the main effect terms in Step 1 and interaction terms in Step 2. For example, the main effect terms: word search task (easy, difficult) and self-competence were entered simultaneously in Step 1 and the interaction term (e.g., word search task x self-competence) was entered in Step 2. I coded word search task as +1 for easy and +2 for difficult. I coded perceptions of task difficulty on a 7-point Likert scale where 1 = very difficult and 7 = very easy. I substituted self-competence with task competence, strategizing, persistence, social competence and self-protection in separate hierarchical regression analyses. Then, I used combinations of these

variables in separate hierarchical regression analyses. For example, I entered word search task, persistence, strategizing and self-protection in Step 1, their two-way interaction terms (e.g., word search task x persistence, word search task x strategizing, word search task x self-protection, self-protection x persistence, self-protection x strategising, persistence x strategizing) in Step 2, their three-way interaction terms (e.g., word search task x persistence x strategizing, word search task x persistence x self-protection, word search task x strategising x self-protection) in Step 3 and their four-way interaction (word search task x persistence x strategising x self-protection) in Step 4.

One proposition of the social and task competence model is that high task competence participants will strategise more and persist for longer than low task competence participants. Therefore, it made sense to combine strategizing and persistence in the same regression analysis in order to examine whether there were any main effects of task competence on perceptions of task difficulty. I did not include social competence in the same analysis with strategising and persistence because social competence was not predicted to interact with task competence to affect performance of the word search task.

These analyses were followed by simple linear regression analyses to investigate the interaction of the continuous variables. To ensure that multicollinearity did not affect the results, each variable was centered and interaction terms were based on the centered product scores (Aiken & West, 1991). As the predictor variables that I included in each analysis were related to each other, I computed the variance inflation factors (VIFs) to detect the severity of multicollinearity. Multicollinearity is present when VIFs have a value more than 10 (Neter, Kutner, Nachtsheim, &

Wasserman, 1996). In all cases, the VIFs that I obtained were ≤ 7.80 indicating that

multicollinearity did not have a substantial effect on the results.

In the first series of regression analyses, I regressed perceptions of task difficulty

onto word search task (IV1) and the STCS (IV2) in Step 1 and their two-way

interaction term in Step 2. Contrary to Hypothesis 3, the results did not reveal any

significant main effects when I regressed perceptions of task difficulty onto word

search task (easy, difficult) and the STCS ($ps \geq .31$). Then, I substituted the STCS

for task competence, strategizing, persistence and social competence in Step 1, the

two-way interaction terms in Step 2, the three-way interaction term/s in Step 3, and

where appropriate, and the four-way interaction term in Step 4, in separate regression

analyses.

I regressed perceived task difficulty onto word search task (IV1), strategising

(IV2), persistence (IV3) in Step 1, their two-way interaction terms in Step 2 and their

three-way interaction term in Step 3. The regression analysis yielded two predicted

main effects in Step 1: a main effect of word search task on perceived task difficulty,

$\beta = -.27$, $t(131) = -1.20$, $p < .05$ and a main effect of strategizing on perceived task

difficulty, $\beta = .26$, $t(131) = 1.96$, $p = .05$. Furthermore, entry of the interaction terms

in Step 2 of the analysis yielded a disordinal two-way interaction between

strategizing and persistence on perceptions of difficulty, $\beta = -.40$, t (131) = -2.36, $p <$

.05. To examine this interaction, I plotted it (see Figure 8.1) and then performed

simple linear regressions at each level of persistence. To ascertain whether

participants were high or low on a particular self-competence dimension, I

transformed the initial continuous scale scores into high and low scores using the

mean such that participants who had the lowest scores through to the mean score -

.02 were categorized as having low self-competence and participants who had the

mean + .02 through to the highest score were categorized as having low self-

competence. The deviation of .02, as opposed to ± 1.0 standard deviations (Aiken &

West, 1991) increased the likelihood that an equal number of participants would be

assigned to each cell. I excluded participants who had the mean scores from the

analysis ($N = 16$). The deviation of .02 took into account rounding of scores.

Figure 8.1. Perceptions of Task Difficulty as a Function of Strategizing and
Persistence
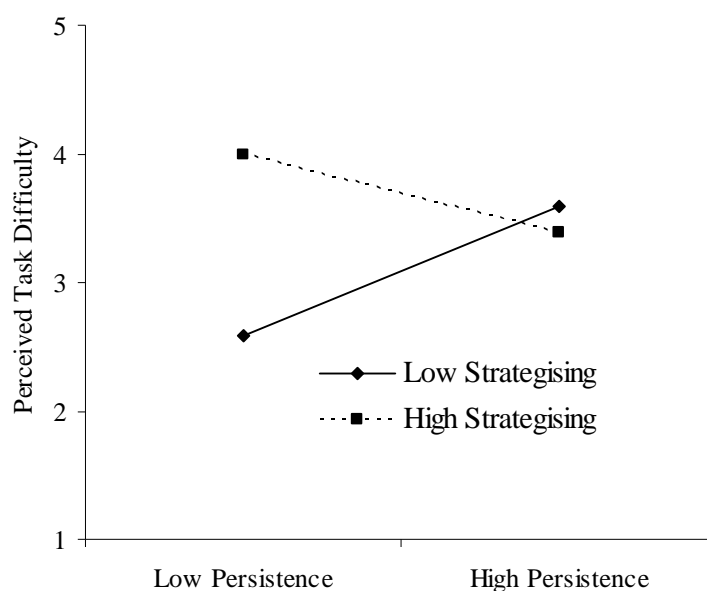
The test of simple effects examining the relationship between strategizing and

perceived task difficulty was significant among participants with low persistence, β

$= .44$, $t(54) = 2.15$, $p <.05$, but not among participants with high persistence, $\beta = .15$,

$t(78) = .84$, $p = .41$. Thus, among participants with low persistence, high strategizers

found the task more difficult than low strategizers. Participants with high strategizing

may have perceived that the task was more difficult because they were not confident

that they could spend more time on the task. It is possible that they realized that they had a long hard task ahead of them in which they needed to strategise for a long time. Therefore, this finding provided some support for Hypothesis 3. More results for Hypothesis 3 are shown in Appendix U.

In Hypothesis 4, I predicted that participants with high self-competence and low self-protection should perceive that the word search puzzle was more difficult than participants with low self-competence and low self-protection. To examine this hypothesis, I regressed perceptions of task difficulty onto the word search task (easy, difficult; IV1), STCS (IV2) and SPS (IV3) in Step 1 and their two-way interaction terms in Step 2 and their three-way interaction term in Step 3. The results supported Hypothesis 4. Self-protection independently predicted perceptions of task difficulty in Step 1, $\beta = .26$, $t(132) = 2.63$, $p < .05$. This main effect was qualified by a marginally significant disordinal two-way interaction between self-protection and STCS in Step 2, $\beta = -.25$, $t(132) = -1.82$, $p = .07$. To examine this interaction, I plotted it (see Figure 8.2) and then performed simple linear regressions at each level of self-competence.

Figure 8.2. Perceptions of Task Difficulty as a Function of STCS and Self-Protection
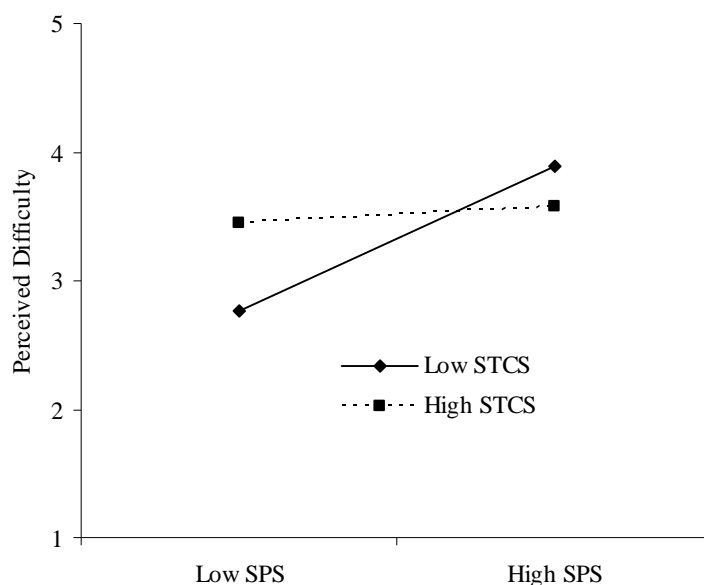
The test of simple effects examining the relationship between self-competence and perceived task difficulty was significant among low self-protection participants, $\beta = .50$, $t(62) = 2.62$, $p < .01$, but not among high self-protection participants, $\beta = .14$, $t(70) = .77$, $p = .44$. This result provided more evidence that the experimental manipulation was successful. Consistent with Hypothesis 4, participants who did not protect themselves, but who were confident in their task abilities, perceived that the word search task was more difficult than participants who did not protect themselves and had low confidence in their ability to complete the word search puzzle correctly.

Next, I examined Hypothesis 5 that the number of words that participants believed most people would find should be greater for people in the easy task condition than for people in the difficult task condition To test this hypothesis, I regressed number of words that participants believed most people would find onto

word search task (IV1), strategizing (STCS) (IV2) and persistence (IV3) in Step 1

and the two-way interaction terms in Step 2 and their three-way interaction term in

Step 3. Word search task did not independently predict the number of words that

participants believed most people would find in Step 1, $p = .59$. However, entry of

the interaction terms in Step 2 and 3 showed a significant disordinal two-way

interaction between strategizing and word search task for number of words that

participants believed most people would find, $\beta = -3.51$, $t(131) = -2.29$, $p < .05$. To

examine this interaction, I plotted it (see Figure 8.3) and then performed simple

linear regressions at each level of word search task.

Figure 8.3. Number of Words That Participants Thought People Would Find as a

Function of Word Search Task and Strategizing
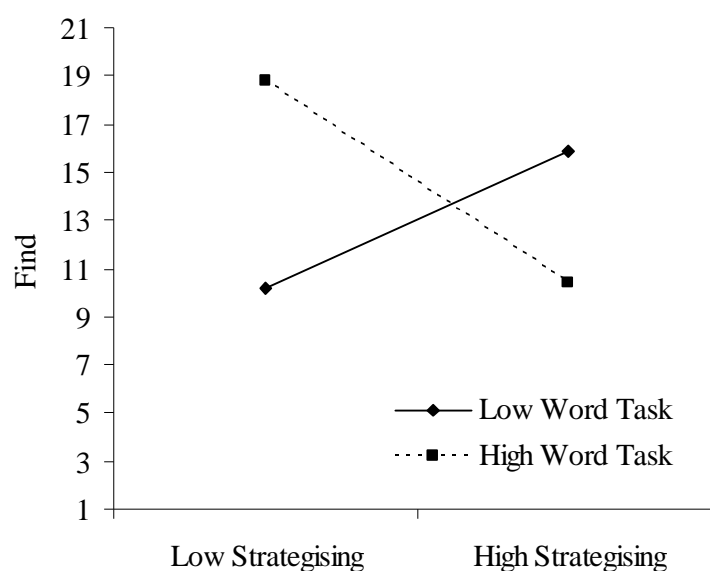
The test of simple effects examining the relationship between strategizing and

the number of words that participants believed most people would find was

significant in the difficult condition, $\beta = -4.41$, $t(57) = -2.04$, $p < .05$, but not the easy

condition, $\beta = 2.41$, $t(75) = 1.23$, $p = .22$. Thus, for low strategising participants in the difficult condition, the less confidence they had in their strategizing abilities, the more words they thought people would find. That is, low strategising participants in the difficult condition did not seem to appreciate the value of strategising. This result did not support Hypothesis 5.

Hypothesis 6 that participants should have believed that the word search task contained more words in the easy condition, was the final part of the manipulation check. To test this hypothesis, I regressed number of words participants believed the word search puzzle contained onto word search task (IV1), strategizing (IV2), persistence (IV3), self-protection (IV4) in Step 1 and the two-way interaction terms in Step 2, the three-way interaction terms in Step 3 and the four-way interaction term in Step 4. The results produced a significant main effect of word search task on number of words that participants believed the task contained in Step 1, $\beta = 3.05$, $t(131) = 1.99$, $p = .05$. Furthermore, entry of the interaction terms in Step 2 yielded a significant disordinal two-way interaction between word search task and strategising for number of words that participants believed the word search puzzle contained, $\beta = -3.52$, $t(131) = -2.18$, $p < .05$.

To decompose this interaction, I plotted it (see Figure 8.4) and then performed a simple linear regression analysis after I split the data by strategising and tested the simple effects of word search task at each level of strategising.

Figure 8.4. Number of Words That Participants Thought the Word Search Puzzle
Contained as a Function of Word Search Task and Strategising.
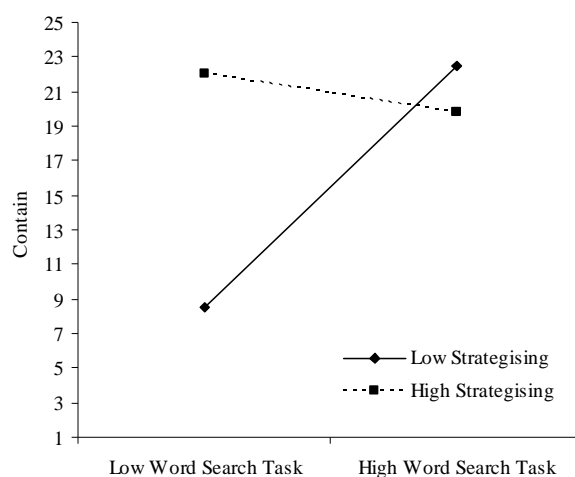
The test of simple effects examining the relationship between strategising and
word search task was marginally significant among participants with low
strategising, $\beta = 4.07$, $t(57) = 1.77$, $p = .08$, but not among participants with high
strategising, $\beta = 2.22$, $t(73) = 1.14$, $p = .26$. Thus, low strategising participants
thought that the word search task contained more words in the easy condition. This
result provided qualified support for Hypothesis 6, with the qualification being that it
was true only for low strategizing participants.

In summary, the manipulation of participants' perceptions of task difficulty was
partially successful. The results revealed that participants with high self-competence
may have underestimated the difficulty of the task when they were led to believe that
it was easy. Furthermore, high strategizers seem to have believed that the task was
more difficult because they realized that they did not have enough time to strategise.
The same was true for high self-competence, low self-protection participants. That
is, the less that high self-competence participants protected themselves, the more

difficult that they perceived the word search task in the difficult condition was. Finally, low strategisers did not seem to appreciate the value of strategizing, and so they believed that the difficult task condition contained more words.

Predictive Validity of Social and Task Competence and Self-Protection

Number of Words Found

In Hypothesis 7, I predicted that high self-competence participants should find more words, spend more time finding words and use more strategies than low self-competence competence participants. To test this hypothesis, I regressed number of words found onto word search task (IV1), task competence (IV2) and self-protection (IV3) in Step 1 and their two-way interactions terms in Step 2 and their three-way interaction term in Step 3. The results revealed two main effects in Step 1: a main effect of task competence on number of words found, $\beta = 1.76$, $t(131) = 2.35$, $p < .05$ and a main effect of self-protection on number of words found, $\beta = 1.55$, $t(131) = 2.08$, $p < .05$. These results suggested that both task competence and self-protection influenced the number of words that participants found. These two main effects yielded a significant two-way interaction between task competence and self-protection, $\beta = -2.28$, $t(131) = -3.15$, $p < .01$, in Step 2.

To decompose the former interaction, I plotted it (see Figure 8.5) and then performed linear regressions at the level of self-protection. The simple effects of task competence on number of words found was significant among participants with low self-protection, $\beta = 3.55$, $t(62) = 3.27$, $p < .01$, but not among participants with high self-protection, $\beta = -.36$, $t(68) = -.36$, $p = .72$. Thus, high task competence participants who did not feel threatened by the task found more words. High task competence participants would have been confident in their abilities to find words.

Therefore, they would not have perceived that the word search task was threatening. This result supported Hypothesis 7.

Figure 8.5. Number of Words Found as a Function of Task Competence and Self-Protection.
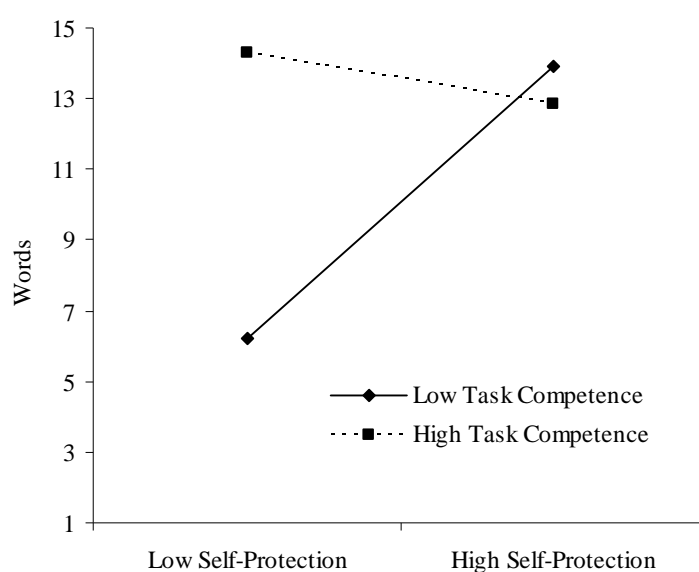
This two-way interaction was qualified by a three-way interaction between word search task, task competence and self-protection for number of words found, $\beta =$ 1.69, $t(131) = 2.39$, $p < .05$, in Step 3. To decompose this interaction, I plotted it (see Figure 8.6) and then performed regression analyses at each level of word search task.

The two-way interaction between self-protection and task competence was significant among participants in the easy condition, $\beta = 3.85$, $t(74) = -4.33$, $p < .01$, but not among participants in the difficult condition, $\beta = -.46$, $t(56) = -.40$, $p = .69$.

Figure 8.6. Number of Words Found as a Function of Word Search Task, Task

Competence and Self-Protection.
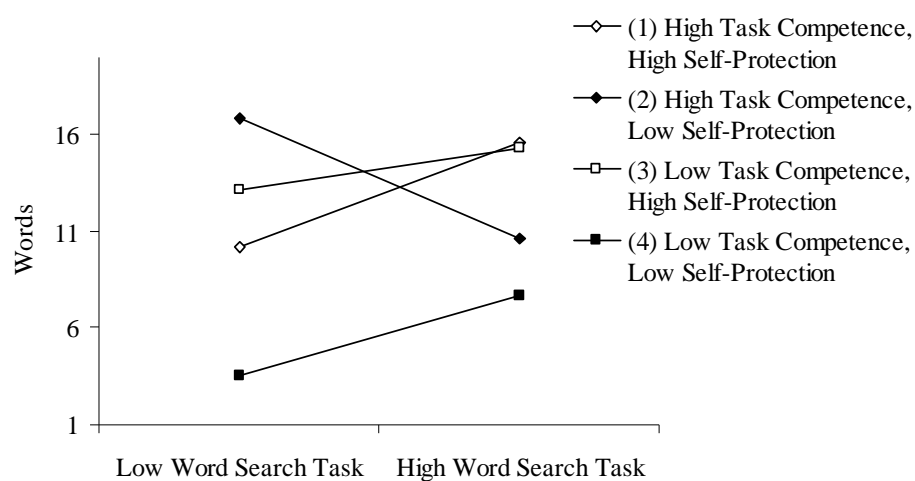
To decompose this interaction, I plotted it (see figure 8.7) and then performed a

linear regression at the level of easy condition.

Figure 8.7. Number of Words Found as a Function of Task Competence and Self-

Protection at the Level of Easy Condition.
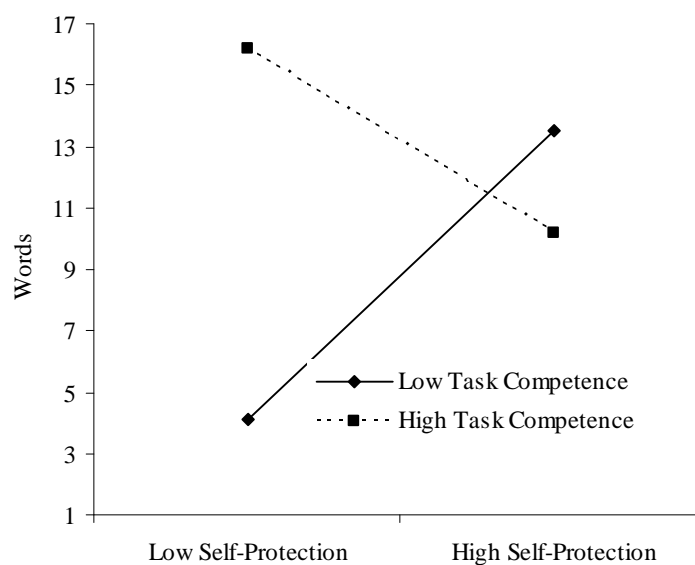
The test of simple effects examining the relationship between task competence for words found was significant among participants with high self-protection, $\beta =$ 3.76, $t(68) = 2.26$, $p < .05$, but not among participants with low self-protection, $\beta =$ 2.57, $t(62) = 1.44$, $p = .16$. Thus, high self-protection, low task competence participants in the easy condition found more words than high self-protection, high task competence participants did. It is possible that for high self-protectors with low confidence in their task abilities being told that the task was easy was more meaningful and so, they may have tried harder to find words.

Adding to these findings, when I split the data by task competence, the two-way interaction between self-protection and word search task was significant among participants in the difficult condition, $\beta = 2.15$, $t(70) = 2.24$, $p < .05$, but not among participants in the easy condition, $\beta = -.11$, $t(60) = -.10$, $p = .93$.

To decompose this interaction, I plotted it (see 8.8) and then performed a linear regression at the level of self-protection. The test of simple effects examining the relationship between word search task for words found was significant among participants with high self-protection, $\beta = 1.84$, $t(68) = 1.96$, $p < .05$, but not among participants with low self-protection, $\beta = -.00$, $t(62) = -.00$, $p = 1.00$. Thus, high self-protection, high task competence participants in the difficult task condition found more words than high self-protection, high task competence participants in the easy task condition did. This result supported Hypothesis 8 that high self-protection participants would find more words, spend more time finding words and use more strategies than low self-protection participants (see also, Appendix V).

Figure 8.8. Number of Words Found as a Function of Self-Protection and Word Search Task at the Level of High Task Competence.
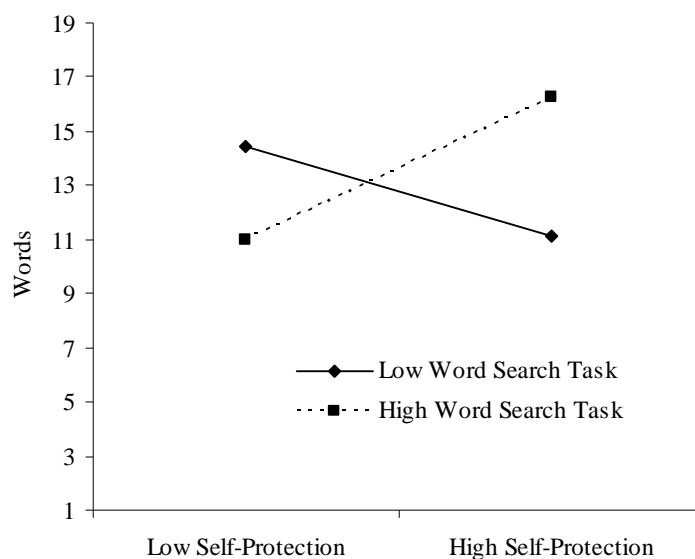
Time

Next, I regressed time onto word search task (IV1), strategising (IV2) persistence (IV3) and self-protection (IV4) in Step 1, their two-way interaction terms in Step 2, their three-way interaction terms in Step 3 and their four-way interaction term in Step 4. The results produced a significant main effect of strategising on time in Step 1, $\beta = 2.40$, $t(131) = 2.17$, $p < .05$, which indicated that strategising made them spend longer on the word search task. Furthermore, entry of the interaction terms in Step 4 yielded a significant disordinal two-way interaction between self-protection and persistence on time, $\beta = -2.89$, $t(131) = -2.18$, $p < .05$.

To decompose this interaction, I plotted it (see Figure 8.9) and then performed linear regressions at the level of persistence.

Figure 8.9. Time as a Function of Self-Protection and Persistence.
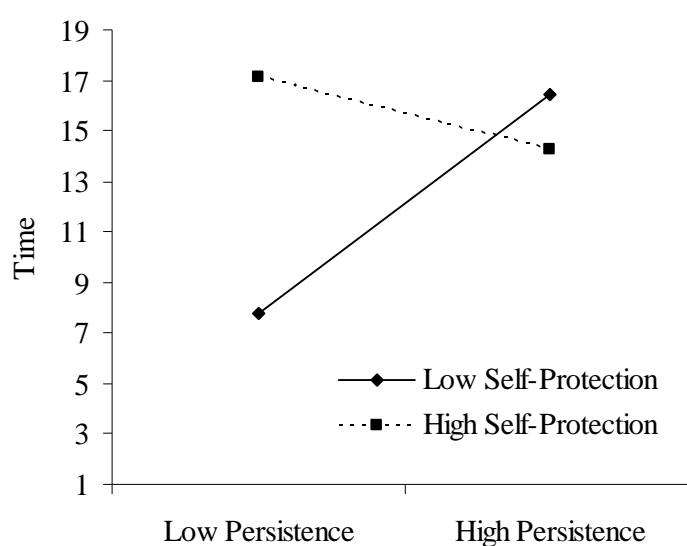
The test of simple effects examining the relationship between self-protection and time was significant among participants with high persistence, $\beta = 4.65$, $t(68) = 2.16$, $p < .05$ and among participants with low persistence, $\beta = 5.76$, $t(62) = 2.12$, $p < .05$. Thus, high persistence participants with low self-protection spent more time than high persistence participants with high self-protection. This effect suggests that high persistence participants with high self-protection were less motivated to spend time searching for words than high persistence participants with low self-protection. High persistence participants may have believed that they would succeed on the task because they knew that they could spend time searching for words. Therefore, they did not feel worried and so self-protection processes were not activated. The results for low persistence participants support this interpretation. Low persistence participants with high self-protection spent more time searching for words than low persistence participants with low self-protection. Low persistence participants may

not have believed that they could succeed at the task because they did not have the staying power, and so high self-protection may have motivated them to search for words. These results supported Hypothesis 8 (see also Appendix W8).

Strategies

To investigate whether high self-competence predicted the number of strategies that participants used, I regressed word search task (IV1), strategizing (IV2), persistence (IV3) and self-protection (IV4) in Step 1, their two-way interaction terms in Step 2, their three-way interaction terms in Step 3 and their four-way interaction term in Step 4.

The results revealed a main effect of strategizing on strategies in Step 1, $\beta = .30$, $t(131) = 3.35$, $p < .01$. Participants who believed that they could strategize, strategized more. Furthermore, entry of the interaction terms in Step 4 yielded a significant disordinal three-way interaction between word strategizing, persistence and self-protection for number of strategies used, $\beta = -.34$, $t(131) = -2.54$, $p < .05$.

To decompose this interaction, I plotted it (see Figure 8.10) and then performed linear regressions at the level self-protection, strategizing and persistence. When I split the data by self-protection, the ordinal two-way interaction between persistence and strategizing was significant among low self-protection participants, $\beta = .31$, $t(62) = 2.45$, $p < .05$, and among high self-protection participants, $\beta = .42$, $t(68) = -2.18$, $p < .05$.

I decomposed and plotted the former interaction first (see figure 8.11) and then performed simple linear regressions at the level of both strategizing and persistence.

Figure 8.10. Number of Strategies Used as a Function of Self-Protection, Strategizing and Persistence.
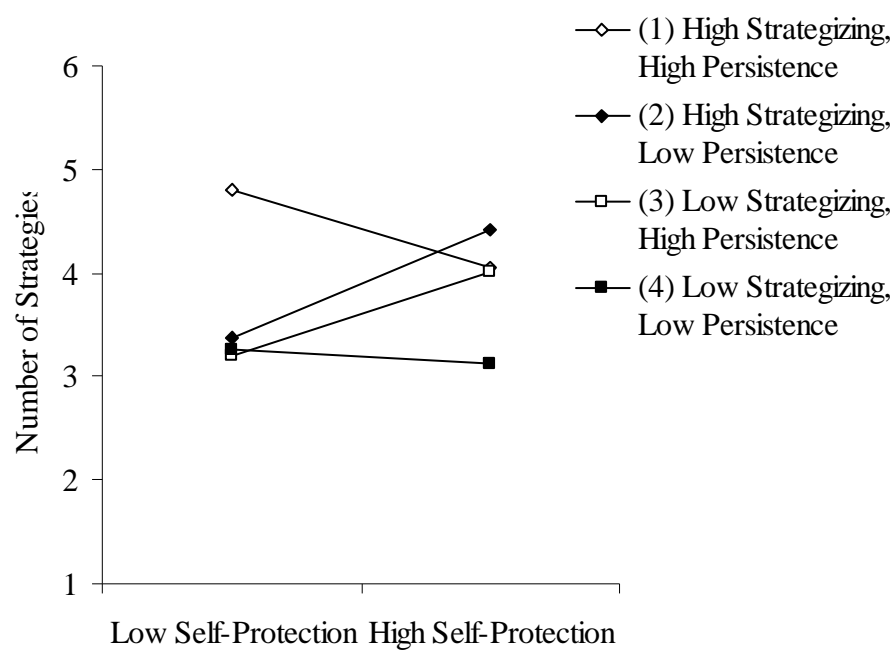
Figure 8.11. Number of Strategies Used as a Function of Strategizing and Persistence at the level of Low Self-Protection.
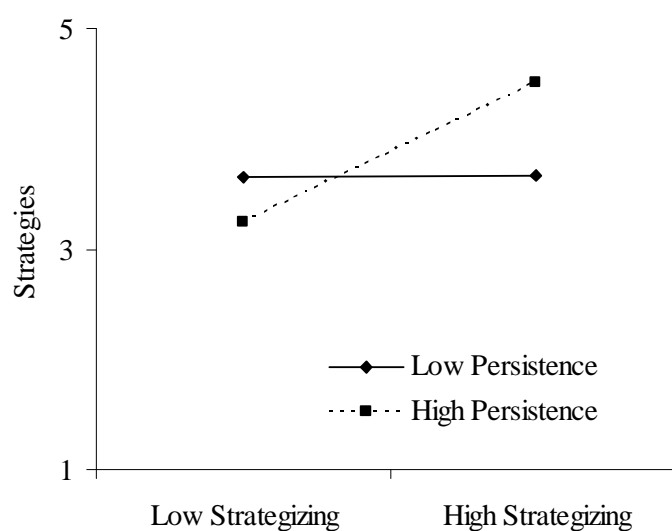
The test of simple effects examining the relationship between strategizing and strategies was significant among participants with high persistence, $\beta = .45$, $t(77) = 4.52$, $p < .01$, but not among participants with low persistence, $\beta = .18$, $t(53) = 1.20$, $p = .24$. Thus, for low self-protection participants, participants with high persistence and high strategising used more strategies than participants with high persistence and low strategizing. These results provided partial support for Hypothesis 7.

Next, I plotted (see Figure 8.12) the ordinal two-way interaction between persistence and strategizing that was significant among high self-protection participants, $\beta = .42$, $t(68) = -2.18$, $p < .05$.

Figure 8.12. Number of Strategies Used as a Function of Strategizing and Persistence at the level of High Self-Protection.
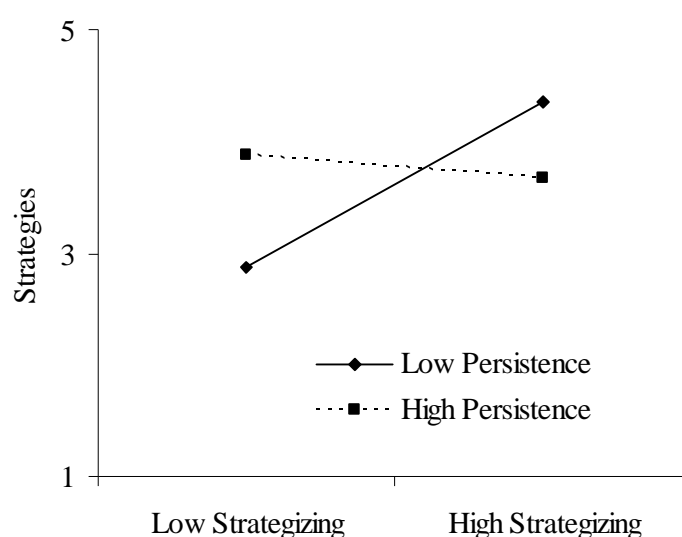
The results indicate that at the level of high self-protection, low strategising and high persistence participants used more strategies than high strategising and high persistence participants. These results suggest that the effects of high self-protection

were greater when strategising was low. Low strategizers would have had low confidence that they could use strategies, but with the performance enhancing benefits of self-protection, their confidence in strategizing seems to have increased. This result provided support for Hypothesis 8.

When I split the data by persistence, the ordinal two-way interaction between strategizing and self-protection was significant among high persistence participants, $\beta = -.34$, $t(77) = -2.94$, $p < .01$, but not among low persistence participants, $\beta = .17$, $t(53) = .86$, $p = .39$.

I decomposed and plotted this interaction (see figure 8.13) at the level of self-protection.

Figure 8.13. Number of Strategies Used as a Function of Persistence and Self-Protection at the level of High Persistence.
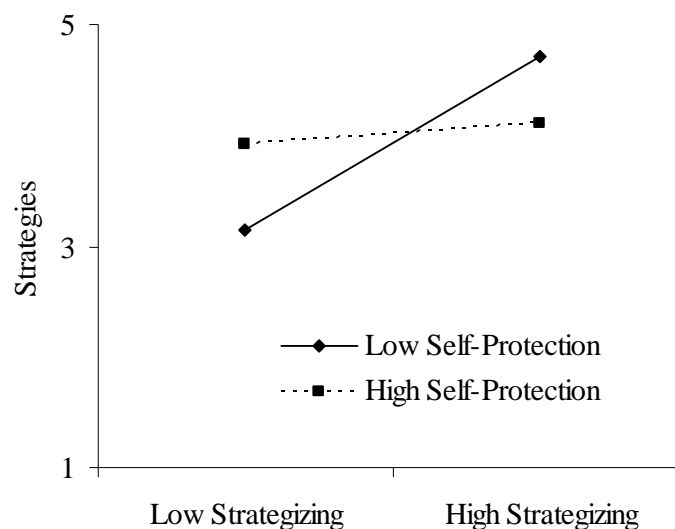
The test of simple effects examining the relationship between strategizing and strategies was significant among participants with high self-protection, $\beta = .31$, $t(68)$

= 2.18, $p < .05$, and among participants with low self-protection, $\beta = .34$, $t(62) =$ 2.97, $p < .01$. Thus, for high persistence participants, those participants with high self-protection and high strategizing used more strategies than those participants with high self-protection and low strategizing. This result provided partial support for Hypothesis 7 that high self-competence participants would use more strategies than low self-competence participants. This result also provided support for Hypothesis 8 that high self-protection participants would use more strategies than low self-protection participants. Notably, the effect of strategizing on strategies was the greatest for high persistence, high strategizing and low self-protection participants who used the most strategies. This result supported Hypothesis 7. These participants would have been very confident and so, they would not threatened by the word search task.

To investigate Hypothesis 9 that high social competence participants would use more strategies than low social competence participants, I regressed word search task (IV1), social competence (IV2) and self-protection (IV3) in Step 1, their two-way interaction terms in Step 2, their three-way interaction terms in Step 3.

The results revealed a main effect of social competence on strategies in Step 1, $\beta = .23$, $t(131) = 2.58$, $p < .01$. Furthermore, entry of the interaction terms in Step 3 yielded a significant disordinal two-way interaction between social competence and word search task for number of strategies used, $\beta = -.21$, $t(131) = -2.14$, $p < .05$.

To decompose this interaction, I plotted it (see Figure 8.14) and then performed linear regressions at the level self-protection, strategizing and persistence.

Figure 8.14. Number of Strategies Used as a Function of Social Competence and Strategizing.
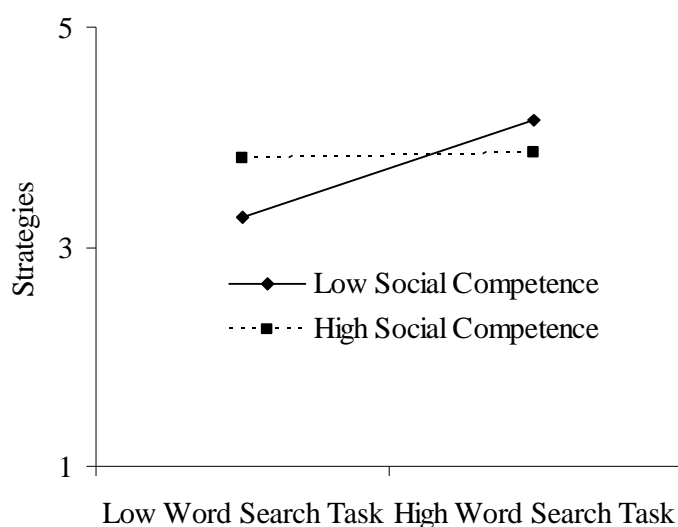
The two-way interaction between social competence and word search task for strategies used was significant in the easy task condition, $\beta = .40$ $t(74) = 3.45$, $p < .01$, and not the difficult task condition, $\beta = .09$, $t(56) = .63$, $p = .53$. Thus, in the easy condition, high social competence participants used more strategies than low social competence participants. These results supported Hypothesis 9. High social competence participants in the easy condition could have thought that most people would do well at the task because it was easy. Therefore, they could have perceived that they needed to try even harder at the task in order to create a favourable impression.

Discussion

Reliability and Factor Structure of the STCS and SPS

The factor analysis of the self-competence items produced two interpretable factors that measured the same underlying construct. Factor 1 was named Self-Competence and Factor 2 was named Persistence. Factor 1 was named self-competence because both social and task competence items loaded onto this factor. These results replicated findings from Study 2 (see Chapter 6). There are several possible explanations for this finding. First, it is possible that the social competence and strategizing items that loaded onto Factor 1 were not really measuring social competence as it is defined in my self-competence model. Second, it is possible that social competence is conceptually distinct but not empirically distinct from strategizing. Thus, social competence may be a dimension of strategizing. That is, strategizing has social and task dimensions to it. The different results that these two variables produced are evidence for treating them separately. However, it is also possible that task competence affects overall work performance (task and contextual performance; Borman & Motowildo, 1997) rather than task performance only. Future research will need to determine whether this is actually the case. Future research will resolve whether the STCS relates to the specific theory, and in turn, whether the specified thory needs revision.

The loading of the persistence items onto Factor 2 was an unexpected finding. It is possible that these items may have loaded onto Factor 2 because of the promax procedure (Russell, 2002). The positive loadings of the items loading onto Factor 1 would have meant that the residual matrix would have consisted of positive and negative values, and as a consequence the items that loaded onto Factor 2 were likely

to be negative or bipolar (Russell, 2002). That is, Factor 2 could have been a method factor.

There are two possible explanations for method factors. First, method factors may reflect a systematic response bias such as an acquiescent response style (Russell, 2002). Second, the factor analysis may have been unreliable because only 132 cases were included in the analysis of items when factor analysis requires 200 to 300 cases (Clark & Watson, 1995). Therefore, future research will need to examine the stability of the factor structure of the STCS (Version 5) further.

The second reason that persistence may have loaded onto a separate factor is that there are problems in the definition of persistence. Persistence was defined as persisting for longer on a task and operationalised as the amount of time that people spend. However, persistence can vary according to whether it is defined as persisting without interruption (e.g., running from Sydney to Melbourne without stopping), or stopping and then starting again (e.g., running to Sydney, stopping in Albury for a break, and then continuing on to Melbourne). Both can be said to be persistence. Therefore, the loading of persistence items onto Factor 2 may have reflected this variability in persistence, whereas the definition of strategizing and social competence is not as variable.

The factor analysis of the SPS (Version 2) was easier to interpret. The principal axis procedure yielded a single interpretable factor, which I named self-protection. Ten items loaded onto this factor and represented the four dimensions of self-protection (reaction formation, isolation, denial and emotion focused coping) approximately equally. The factor loadings of these items were approximately the same.

The one factor solution for the SPS (Version 2) suggests that the items that loaded onto this factor were parsimonious and represented the same underlying construct. This argument is supported by the interitem correlations. The correlation matrix of the items that loaded onto Factor 1 showed that many of the interitem correlations were moderate to large-sized correlations. This could indicate that these items represent the same dimensions of the same construct rather than four different dimensions from the same construct. Again, however, future research will be necessary in order to clarify this issue.

The item-total correlations of the three subscales (strategizing, persistence and social competence) formed from the factor analysis of the STCS (Version 5) items, indicated that the subscales were internally consistent and homogenous. Moreover, the reliability of both of these scales was acceptable. It was a similar story with the item-total correlations of the SPS (Version 2). The item-total correlations of the SPS (Version 2) hovered closely around each other, which indicated that the scale was both internally consistent and homogenous.

Hypothesis 1 that there would be significant positive correlations between the scales and subscales of the STCS (Version 5) and SPS (Version 2) was largely supported. For the STCS (Version 5), the nonsignificant correlation between strategizing and persistence ($r = .05$) suggested that these subscales lacked convergent validity. However, this conclusion should be regarded with caution because the persistence items were negatively worded items and the strategizing items were positively worded items. Therefore, method factors may have prevented these items from loading onto the same factor.

Convergent Validity with the Emotional Intelligence Scale

Following Petrides and Furnham's (2000) recommendations, the factor structure of the Emotional Intelligence Scale was examined first in order to determine whether total scores or scale scores should be used to establish the convergent validity of the STCS (Version 5) and the SPS (Version 2) with this measure. The results of a principal axis factor analysis revealed that that the 33 items of the Emotional Intelligence Scale (Schutte et al., 1998) loaded onto a clear single interpretable factor. This finding was consistent with other studies (Brackett & Mayer, 2003; Ciarrochi et al., 2001; Gignac et al., 2005; Schutte et al., 1998; 2001). Therefore, the total score was used to examine the convergent validity of my measure with the Emotional Intelligence Scale.

Consistent with Hypothesis 2, the STCS (Version 5) and SPS (Version 2) had convergent validity with the Emotional Intelligence Scale. The results of a correlational analysis revealed that there were small to medium correlations between the scales. Therefore, there was not a high degree of overlap between constructs, which suggested that the measures were theoretically related but distinct.

The finding that the correlation between the persistence subscale and the Emotional Intelligence Scale was nonsignificant, ($r = .01, p = .91, N = 132$) was unexpected. It is possible that this finding was artefactual because the persistence items loaded onto a separate factor in the factor analysis. That is, they were incorrect or misleading due to a bias in the data.

The Relationship between Task Difficulty, Social and Task Competence and Task Performance

The findings partially supported Hypothesis 3 that participants in the difficult condition should perceive that the task was more difficult than participants in the

easy condition. This prediction was true for participants with low persistence and high strategizing. These participants may not have been confident that they could spend the time to search for words when they knew that they had a long, arduous task ahead of them.

Consistent with Hypothesis 4, participants with high task competence and low self-protection perceived that the word search task was more difficult than participants with low task competence and low self-protection. That is, among participants with low self-protection, task competence positively predicted task difficulty. This effect may have been due to some sort of compensation belief among people with low self-competence. People with low self-competence may perceive a task to be easier than it is in order to feel that they have a good chance of completing it successfully: "I'm generally not very good at these sorts of tasks but maybe this one is easy". This interpretation is supported by the fact that self-protection moderated the effect. Only people who did not have good self-protection defenses are likely to exhibit this effect. Those with high self-protection will not consider the possibility of failure and so the would not need to compensate for their low self-competence.

Hypothesis 5 was not supported. Participants did not think that participants would find more words in the easy condition. It is possible that participants were skeptical that the task was easy because they were aware that they were participating in a psychological experiment and so expected to be tricked.

There was qualified support for Hypothesis 6 with the qualification being that low strategisers believed that the word search puzzle contained more words in the easy condition. This effect suggests that low strategizers did not recognize the value of using strategies for word search tasks.

In summary, the results of manipulation checks suggested that informing participants that the task was difficult, when it was actually the same task as the easy condition, influenced their perceptions of task difficulty. The wider implications of these findings are that how people *think* about a task may influence their task performance. The effect of task difficulty on self-competence, self-protection and performance was then examined.

Predictive Validity of the STCS and SPS

Consistent with Hypothesis 7, high task competence led to a greater number of words being found, but only for high self-protection participants. Only high self-protection participants found more words in the difficult task condition that in the easy task condition. Furthermore, high self-protection benefited both high and low task competence participants. For high persistence, high self-protection participants, those with high strategizing used more strategies than those with low strategizing. However, participants with high persistence did not spend significantly longer on the word search task. In fact, the STCS (Version 5) did not predict the performance factors: words found and time unless self-protection was entered into the regression equation. When this happened, the results revealed a different story. High self-protection, high task competence participants found more words in the difficult condition than in the easy condition. High self-protection, high task competence in the difficult condition may have prepared themselves for a difficult task, whereas it seems that high self-protection, high task competence in the easy condition may have underestimated the task because it was not as easy as they thought. Thus, how difficult people *think* that a task is, interacts with task competence and self-protection to effect preparation for a task and subsequent performance.

Consistent with Hypothesis 8, self-protection led to a great number of words being found, for high and low persistence participants, but only for high self-protection. For high task competence participants, this effect suggests that high self-protection participants were less motivated to spend time searching for words than low self-protection participants. High task competence participants may have believed that they would succeed on the task because they knew that they could commit to finishing it. Therefore they did not need the motivating benefits of self-protection. This interpretation is supported by high persistence, high self-protection participants who seemed to have lost motivation to spend time on the task because they spent less time searching for words. This effect suggested that high self-protection participants were more motivated to succeed than low self-protection participants. The effect was qualified by task competence. Low task competence participants may not have believed that they could succeed at the task because they did not think that they had the staying power and so they may have been more motivated to search for words. Participants own self-acknowledged lack of task competence on tasks motivated high self-protection participants to find more words.

Finally, the results supported Hypothesis 9. High social competence predicted use of more strategies in the easy condition. High social competence participants would have expected most people to do well in the easy condition because they perceived that it was easy. Therefore, they could have been more motivated to find words in order to create a favourable impression.

Overall, the results from Study 4 were important for self-competence theory for two reasons. First, the findings from this study highlighted some of the theoretical relationships between task competence and self-protection that have been proposed in this thesis. Second, the findings provided evidence that task performance is

influenced by the relationship between self-competence, self-protection processes and perceived task difficulty.

One limitation of this study is that there was no control condition. That is, participants were induced to believe that the task was either easy or difficult in the easy or difficult condition respectively. The design of the study could be improved in future by including a third condition that provided neutral instructions that did not induce participants to believe that the task was either easy or difficult to complete, in order to obtain a true measure of task performance. The addition of a control condition would allow clearer conclusions to be drawn. The control participants would have a "normal" perception of the task that researchers could compare with each experimental condition in order to provide a clearer test of the effectiveness of the task condition. For example, researchers could compare participants in the easy condition with participants who have not been influenced that the task was easy and participants in the difficult condition with participants who have not been influenced that the task was difficult.

A second limitation of this study is that the word search task was a simple task that may not have been representative of the complex tasks that people encounter in real work settings. Wood (1986) observed that there is a lack of standardization of the definition of tasks and types of tasks that are used in experimental research, which makes integrating evidence about task effects difficult (Wood, 1986). Therefore, the conclusions that have been drawn in this study should be viewed with caution.

In conclusion, the results from Study 4 demonstrated some of the specific relationships that would be expected if the STCS (Version 5) and SPS (Version 2) are able to predict task performance. The results provide some evidence of the

construct validity of these measures through their convergent validity with a reliable measure of emotional intelligence and their predictive validity with task performance. Finally, the findings provided some important information about the cognitive processes that potentially underlie task performance.

CHAPTER 9: GENERAL DISCUSSION AND CONCLUSIONS

Summary

The reliability and validity of the STCS is evaluated in light of the research findings from Studies 1 to 4. The theoretical implications of the research findings are evaluated in view of the multidimensionality of self-competence, the relationship between self-esteem and self-competence, the relationship between self-regulation and self-competence and the influence of self-protection on self-regulation and self-competence. The implications for the prediction of work performance and personnel selection are discussed in light of these research findings. Finally, the limitations of the present research are discussed and suggestions are made for future research.

Summary of the Reliability and Validity of the Social and Task Competence Scale and Self-Protection Scale

The Factor Structure and Reliability of the Social and Task Competence Scale

The data from Study 1 produced a two factor solution that included 18 items that reflected social and task competence. The average of the interitem correlations fell within the range recommended by made by Clarke and Watson (1995) but the number of interitem correlations that fell within the recommended range was too low. Furthermore, the alpha for the actual scale (.52) was too low. However, the alpha for the ideal scale was good: .75.

The data from Study 2 produced a three factor solution that included 15 items. The first factor was deemed to measure task competence. The second and third factors contained items from the communication and identification dimensions of

social competence. The loading of these items onto two separate factors introduced the possibility that these factors represented the social dimension of task competence rather than social competence per se. The number of interitem correlations that fell in the desired range was again too low, although the average interitem correlation was acceptable. The three-factor solution also produced acceptable alphas of .62 for the actual scale and .63 for the ideal scale.

The data from Study 3 produced method factors of positive and negative items in the initial factor analysis. Following Russell (2002), the positive and negative items were re-analysed in separate factor analyses. These factor analyses yielded two factors that included 11 items that were interpreted as measuring the strategising and persistence dimensions of task competence. The social competence items loaded onto the factor deemed to measure persistence. This unexpected finding introduced the possibility that persistence was a multidimensional construct comprising both social and task dimensions. The average interitem correlation and the number of interitem correlations were both acceptable. Furthermore, alphas for the STCS were also acceptable: .79 for the actual scale and .83 for the ideal scale.

The data from Study 4 produced a two factor solution that included 11 items. The first factor was interpreted as self-competence because it contained items that measured social competence and the planning and strategising dimensions of task competence. The second factor contained negative persistence items. The loading of the persistence items onto a separate factor was another unexpected finding. However, it is possible that this factor was a method factor created by the promax procedure because it contained only negative items from the persistence subscale. The average of the interitem correlations and the number of interitem correlations

were both acceptable. Furthermore, alpha for the STCS in Study 4 was also acceptable: .66 for the actual scale[32].

Overall, the results of the present research findings imply that the factor structure of the STCS may be unstable. The EFA did not always support the formation of some subscales and in some cases, the internal reliabilities of the subscales was low. Therefore, the reader is urged to interpret the results of the present research with caution.

There are several possible explanations for the unstable factor structure and low reliability of the STCS. First, it is possible that the items did not have vignette equivalence. The assumption of vignette equivalence is that the level of the variable described in the vignette is perceived in the same way by all respondents (King et al., 2004). However, the subtle meanings that should be derived from the vignettes are open to different interpretations (King et al., 2004). This could have caused participants to differ with each other in the way that they perceived the level of the variable described in the vignette, which would have increased the covariance among items and impacted on their factor loadings (King et al., 2004). This vulnerability of a vignette approach represents a significant disadvantage of a vignette approach over single-statement items.

The difficulty obtaining vignette equivalence is complicated further if the malleability of self-competence beliefs is considered. The changeable nature of self-competence beliefs means that they are likely to cause variations in perceptions and behaviour *within* individuals over time and across situations (Bandura, 1997).

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[32] Recall from Chapter 8 that the ideal scale was dropped in this study.

Therefore, self-competence beliefs themselves are likely to cause response inconsistency and in turn, impact of vignette equivalence.

A second explanation of the unstable factor structure and low reliability of the STCS is that it is easier for readers to miss words and sentences in vignettes than single-statement items (de Vraus, 1995). This could have led to different perceptions of the level of the variable described in the vignette and in turn, led to response inconsistency among respondents (de Vraus, 1995). This would have influenced the factor loadings and interitem correlations in each study, and ultimately affected reliability. Thus, the present research findings suggest that the vignette approach to self-competence scale construction has difficulties but still holds promise.

The format of the STCS in Studies 1 to 3 could also have influenced the interitem reliabilities and factor structure. Recall that two scales (actual and ideal) were linked to the vignettes in these studies. Even though format changes were made in Study 2 and Study 3, it is still possible that the use of two scales to measure the same item is problematic. First, participants could have been influenced to respond to the second scale question in a certain way because of their responses to the first scale question. Second, they could have become fatigued because they had to read the same vignette twice. Third, they could have become confused between the two scale questions because the wording of the scale questions was either unclear, as in Study 1, or too similar, as in Study 2 and Study 3. However, the issues may have been resolved because the ideal scale was dropped in Study 4.

The Factor Structure and Reliability of the Self-Protection Scale

The psychometric properties of the SPS were examined in Study 3 and Study 4. In Study 3, the data produced a two factor solution that included 17 items from the 40 items that were piloted in this study. The 17 items represented the dimensions of

denial and reaction formation. The average of the interitem correlations and the number of interitem correlations was good. Furthermore, alpha for the SPS was also good: .77 for the actual scale and .80 for the ideal scale.

Following item revisions, the data from Study 4 produced one factor that included 16 items that measured the four dimensions of self-protection: denial, reaction formation, isolation and emotion-focused coping. The interitem correlations were good and alpha was an acceptable .73 for the actual scale.

In summary, the results of the EFA and reliability analyses were not optimal and it is likely that further scale revisions will be necessary before it can be shown that social and task competence and self-protection are empirically valid scales. However, do the results of Studies 1 to 4 mean that the STCS is not measuring its latent theoretical constructs? A disadvantage of using alphas and factor loadings to decide whether a measure is an empirically valid scale is that they overemphasise consistency between items for a particular group of respondents. However, if respondents were high in one dimension and low on another dimension then a scale would not have a high alpha, or all the items factor together, but may still be perfectly meaningful. Finally, alphas and factors relate to covariance and therefore variance within a particular population of respondents.

Summary of the Convergent and Discriminant Validity of the STCS and SPS

The correlational relationships between social and task competence in Study 3 provided tentative support for the convergent and discriminant validity of the STCS. Hypothesis 2 that social competence should be positively correlated with self-protection was supported. Furthermore, Hypothesis 3 that task competence should be positively correlated with self-protection was also supported. The STCS (Version 4) and its subscales were positively and significantly correlated with several reliable

measures of self-competence and self-esteem. The correlations were small enough for the constructs of social and task competence and self-protection to be considered to be independent from one another. However, they were large enough to suggest that these constructs are empirically related to one another in a theoretically consistent way.

The STCS and SPS also showed preliminary evidence of convergent and discriminant validity in the present research. The findings from Study3 that showed that the STCS correlated significantly and positively with two reliable self-competence measures: Sense of Competence Questionnaire (Wagner & Morse, 1975) and the Self-Efficacy Scale (Sherer et al., 1982) in Study 3. Additionally, the STCS correlated significantly and positively with two reliable self-esteem measures: the Self-Competence/Self-Liking Scale (Tafarodi & Swann, 1995) and Self-Esteem Scale (Rosenberg, 1965) in Study 3. The correlations between the STCS and these measures were not so high that the STCS was tapping the same dimensions of self-competence. This observation leads to the conclusion that the STCS measured different characteristics of self-competence to the characteristics of self-competence measured in the four other measures.

Finally, the STCS had significant positive correlations with four of the Big Five personality factors: extraversion, openness to experience, agreeableness and conscientiousness. The strategising and persistence items correlated the highest with conscientiousness, possibly because they are closest in meaning to the conscientiousness factor.

The finding that the SPS was negatively correlated with the Neuroticism factor may also be important, particularly because measures of emotional intelligence have a considerable overlap with neuroticism (Zeidner et al., 2008). The correlation

between the SPS and neuroticism highlights the distinction between neuroticism traits such as emotional instability, anxiety, pessimism and self-consciousness and self-protection processes. Neuroticism reflects a tendency to overreact to situations, whereas self-protection processes prevent the very same overreaction that is tapped by neuroticism. Therefore, if the SPS was doing its job correctly, it should have had discriminant validity with neuroticism.

Notably, the research findings showed that the denial subscale was positively correlated with Neuroticism. Several of the items in the denial subscale described feeling anxious in work situations. Therefore, they could be positively related to Neuroticism. It is also possible that denial is both an adaptive self-protection strategy and a maladaptive response because the more that participants denied negative feedback from their everyday lives, the more anxious they became.

The finding that the STCS did not have convergent validity with the Self-Monitoring Scale (Snyder, 1974) was also an unexpected one. Theoretically, the STCS should have had convergent validity with the Self-Monitoring Scale (Snyder, 1974) because self-competence provides an explanation of the causal processes that potentially underlie self-monitoring. One possible explanation of this finding is that the STCS, the Self-Monitoring Scale (Snyder, 1974) or both are unreliable. Several studies have provided evidence that the Self-Monitoring Scale is measuring facets of the personality trait: Acting and defensive and acquisitive self-monitoring rather than high and low self-monitoring (for a review, see Gangestad & Snyder, 2000). The finding that the denial subscale was positively correlated with defensive self-monitoring adds support to this explanation.

Further validity evidence for the STCS was shown in Study 3 through the STCS's nonsignificant correlation with the Marlowe-Crowne Scale (Crowne &

Marlowe, 1960), which suggested that the STCS had discriminant validity with this measure. The STCS should have discriminant validity with measures of socially desirable responding because the STCS measures socially desirable traits and not socially desirable responding. Therefore, the finding that the STCS correlated positively with another measure of socially desirable responding in the same study, the Balanced Inventory of Desirable Responding (Paulhus, 1984; 1988), was unexpected. However, examination of the correlations between the STCS and the Balanced Inventory of Desirable Responding subscales revealed that the STCS was only significantly correlated with the self-deceptive enhancement subscale and not the impression management subscale. This finding suggested that participants had tried to deceive themselves that they were more competent than they may have actually been rather than deliberately trying to create a favourable impression. This may have occurred due to defensive selectivity that protected participants from the threatening implications that would have been associated with admitting that they were not as competent as they desired to be. Hence, this could have negative implications for the predictive validity of the STCS because it introduces the possibility that the STCS is not measuring participants' *true* self-competence beliefs.

Finally, as predicted in Study 4, the STCS had convergent validity with the emotional intelligence scale (Schutte et al., 1998). The only exception was the persistence subscale. The nonsignificant correlation between persistence and emotion intelligence may have occurred because persistence is not theoretically related to emotional intelligence. Persistence is concerned with perseverance in the face of difficulty, whereas emotional intelligence refers to a person's ability to manage their emotions (Law, Wong & Song, 2004). Therefore, they are not theoretically related.

Summary of the Predictive Validity of the STCS

The Effects of Social Competence

Recall from Chapter 4 that I made predictions about the effects of social and task competence and self-protection based on my social and task competence model. The results of Studies 2 and 4 provided support for Hypothesis 1 that high social competence participants should perform better than low social competence participants. The results of Study 2 suggested that self-protection motivated low social competence participants to protect themselves from perceiving that they had some unacceptable traits. Furthermore, participants who did not want to be socially competenct but had high protection, made more plans. The results of Study 4 showed that high social competence participants performed better (used more strategies) than low social competence participants.

These results provided preliminary evidence for a construct of social competence. The positive correlations between social competence and self-protection found in Studies 2 and 4 supported Hypothesis 2 that social competence should be positively correlated with self-protection. Thus, as social competence increases, self-protection increases. One tentative conclusion is that people with high social competence feel more threatened in social situations than people with low social competence and so they need higher protection. Therefore, social competence as it is conceptualised in my social and task competence model, may well be a causal variable underlying social behaviour. The results of Study 2 did not bear this out. First, there was no effect of task setting on social competence and so how the presence of other people affected participants with high and low social competence and, the relationship between social competence and self-protection, is still unclear. Second, social competence was not significantly correlated with self-monitoring and

so it is too early to state that social competence is a causal variable underlying self-monitoring behavior. The nonsignificant correlations of the STCS and the self-monitoring scale suggest the opposite. That is, social and task competence are not related to self-monitoring. Alternatively, this finding could be attributed to problems with the reliability of the STCS (Version 4).

Notably, the findings from Study 4 that showed that high social competence predicted task performance (number of strategies), but only when people thought that the task was easy to perform. This effect suggested that people with high social competence were more motivated to try hard on easy tasks possibly because they had high task competence and so they knew that they could create a positive impression. One implication of this effect is that social competence has an effect on task performance through its interaction with task competence. The interaction of social and task competence, and the effect of this interaction on task and social performances, was not studied in the present research. The need for investigation of these relationships provides an avenue for future research.

The Effects of Task Competence

The results of Studies 2 and 4 provided support for Hypothesis 3 that high task competence participants should perform better than low task competence participants. The results of Study 2 showed that high task competence participants tended to perform better when they were alone and low task competence (persistence) participants performed better in a group. The alone condition seems to have allowed high task competence participants to focus more on problem solving performance, whereas the presence of others during task performance possibly motivated low task competence participants to overcome their doubts and try harder at problem solving.

This finding adds to the existing research findings on self-competence showing the influence of social situations on work performance (e.g., Bandura & Jourden, 1991; Wood & Bandura, 1989a). In the present research, the presence of other people during task performance increased the performance of low task competence participants more than high task competence participants. It is possible that the presence of other participants motivated participants with low task competence to try harder, consistent with both social comparisons (e.g., Bandura & Jourden, 1991) and social facilitation effects (for a review, see Uziel, 2007).

Participants with low task competence should also have been intimidated by the anagram task in Study 2. Hence, it is possible that when they encountered the insoluble anagrams, self-protection processes were activated that prevented them from becoming anxious and focusing on task failure, which enabled them to try harder. For example, they could have denied that the negative feedback (e.g., I must be incompetent) that they would have received from not solving the problems.

The Effects of Self-Protection

Hypothesis 5 that self-protection should moderate the relationship between task competence and task performance such that the relationship between task competence and performance should be stronger for high self-protection participants and less or non-existent for low self-protection participants was supported. Hypothesis 6 that self-protection should moderate the effects of social competence on social performance such that the relationship between social competence and social performance should be stronger for high self-protection participants and less or non-existent for low self-protection participants was also supported. The results from Studies 2 and 4 showed that self-protection moderated the effects of both task competence and social competence on performance. In Study 2, the results showed

that high self-protection (denial) participants performed better than low self-protection participants, but only in the alone condition. This finding is important for showing the effects of self-protection on task performance because the alone condition should have provided fewer external threats. The results showed that high self-protection participants were more sensitive to negative feedback from the task. The positive and significant relationships that was found between (actual) strategising and number of anagrams when actual self-protection was high and (ideal) task persistence (ideal) and number of strategies when actual self-protection (denial) was high both support this conclusion. Thus, task competence only seems to predict task performance and number of strategies for people who are high in self-protection (denial, full scale of self-protection).

The results of Study 4 provided more evidence of the moderating effects of self-protection on task competence and task performance. Notably, in this study the effects of self-competence on performance were only observed when self-protection and self-competence were entered into the regression equation together. Hence, Bandura's (1997) claim that these two processes are independent of each other may not be correct.

Participants with high self-competence and low self-protection perceived that the word search task was more difficult than participants with low self-competence and low self-protection. That is, among people with low self-protection, self-competence positively predicted perceptions of task difficulty. Perceptions of task difficulty are self-evaluations about how difficult a task is that are influenced by task knowledge, task skills and interpretations of other people's evaluations about task difficulty. That is, perceived task difficulty is the psychological component of actual task difficulty.

Therefore, the results of Study 4 linked self-competence beliefs and self-protection processes to the psychological component of task difficulty.

People with low self-protection seemed to be unable to protect themselves from perceiving task difficulty. In contrast, people with high self-protection appeared to be able to block out the negative self-evaluations associated with perceiving task difficulty because only high self-protection participants performed better (found more words) in the difficult task condition. This effect suggests that when people do not think that they have enough time to complete a task, they are inclined to perceive that the task is more difficult than when people perceive that they do have enough time available to them. High self-protection participants should have been more motivated to avoid failure in order to protect the self from negative feedback. Hence, high self-protection participants may have been more motivated not to fail in the difficult condition because they thought that the task was particularly hard, and this motivation may have encouraged them to find more words.

Self-protection led to a great number of words being found, for high and low task competence (persistence) participants. Again, this effect suggests that high self-protection participants were more motivated to succeed than low self-protection participants. However, this time the effect was qualified by task competence rather than task difficulty. High self-protection participants may have been more motivated to avoid failure and so they tried harder to find words. In contrast, low task competence participants may not have believed that they would succeed at the task because they did not think that they had the endurance and so they may have been more motivated to search for words. That is, participants own self-acknowledged lack of persistence on tasks motivated high self-protection participants to find more words.

Self-protection led to longer time spent on the task but only among high task competence (persistence), low self-protection participants who spent longer on the task than high task competence, high self-protection participants. Although this result sounds paradoxical, it supports the conclusion that high task competence participants are more motivated to achieve. This effect occurred because high task competence people are more concerned about reaching their goals and so spending longer on tasks in order to prevent themselves from failing is a strategy that pays off because they find more words as a consequence.

The results of Studies 2 showed that self-protection processes moderated the effects of social competence on task performance also. The results of Study 2 revealed that self-protection interacted with social competence such that high self-protection participants who did not want to be socially competent made more plans. Furthermore, participants who did not want to be socially competent, but perceived they had some unacceptable traits, responded to this perception by behaving in a way that showed them to have the opposite trait. Hence, they persisted for longer on the anagram task. These effects suggest that self-protection motivates people to perform better in social situations, even when the do not have a goal to perform to a higher standard. High self-protection may have helped low socially competent participants to overlook their fear of social embarrassment and so produce better social performances.

Overall, the results from the present research suggested that the STCS has predictive validity with task performance. First, Studies 2 and 4 provided preliminary evidence that the STCS and its subscales predicted task performance. The findings in Study 4 showed that the strategising subscale predicted use of strategies and the persistence subscale predicted time spent. The results from Study 2

showed that the effect of task persistence on performance was true for people who thought that it was important to persist and people who doubted their ability to persist.

Limitations of the Present Research

The present research had several limitations. First, the format of the STCS in Studies 1 – 3 could have increased the variability in participants' responses, and in turn, reduced the reliability, convergent, discriminant and predictive validity of the STCS. The vignettes contained descriptions of complex work situations that involved multiple skills and motivations. It is possible that participants related to part of the vignette rather than all of it. Therefore, their responses could have reflected this connection. Alternatively, participants could have related with the entire vignette and found it difficult to respond to the scale question with a single similarity answer. Despite these problems, vignettes have one important advantage over single self-contained statements. They provide a more specific context and so reduces individual differences in interpretation (de Vaus, 1995). Therefore, it is possible that vignettes may increase the ecological validity of a measure.

Second, task performance was measured according to performance on an anagram and word search task. Anagram and word search tasks are not very representative of task performance in real work situations. It is possible that more informative results could have been obtained if an assessment centre exercise (e.g., in-basket, leaderless group discussion, group problem-solving exercise) was used, because these types of tasks are more representative of real work performance (Bartram, 2004).

Third, subscales were formed on a priori theoretical grounds and not because they were supported by EFA. While subscales formed on the basis of an underlying

theoretical model is considered to be better than a single composite score for predicting a criterion (Clarke & Watson, 1995), the failure of the items to load onto separate factors in four studies introduces uncertainty about their predictability.

Fourth, the findings about the predictive validity of the STCS and SPS were also limited because the research designs of Study 2 and Study 4 did not include a control group. The addition of a control condition would allow clearer conclusions to be drawn. The control participants would have a "normal" perception of the task that researchers could compare with each experimental conditions in order to provide a clearer test of the effectiveness of the task condition

Fifth, some of the data was collected from participants who were recruited via the internet. Some of the social factors that occur in real situations are not present in the internet (Birnbaum, 2004). For example, when people are performing in groups, they are able to more easily evaluate how other people are progressing with a task. A group condition in Study 4 would have enabled participants to observe other people's emotional reactions to task (easy/difficult) and their progress during task performance. The results may have been different had the data been collected from laboratory-based participants because, in addition to providing a social setting, a laboratory provides a research context for participation in experimental research that could motivate participants to pay more attention to how they respond (Birnbaum, 2004). Therefore, participation over the internet in Study 4 may have prejudiced the effects of social competence and social situations on task performance.

Sixth, I predicted in my theoretical model that social competence should moderate the relationship between social abilities and social performance because social competence is beliefs about abilities to control social performances. However, this hypothesis was not tested in any of the studies that I completed. One reason that

this hypothesis was not tested is that social performances were not measured directly in Study 2, but rather implied through the alone versus group conditions.

Seventh, the dimensionality of the STCS varied across studies. In Study 1, the STCS consisted of social and task competence items only, whereas in the remaining three studies, the STCS consisted of social and task competence and self-protection items. The discrepancy in the dimensionality of the STCS occurred because the SPS was not piloted until Study 2.

Directions for Future Research

While the present research was exploratory, the findings still provide new foundations and a new framework for future self-competence research based on a new interpretation of self-competence. Several possibilities for future research have been introduced. First, my self-competence model provides a new understanding of the phenomena studied in previous research. Researchers could use the structural framework of my self-competence model to ask how phenomena studied in future research are related to the domain of self-competence. For example, researchers could investigate whether the phenomena are related to self-competence or one of its dimensions.

Second, the present research findings may encourage organizational researchers who are interested in self-competence to widen the scope of investigation from a study of task performance to a study of (1) the social factors of task performance (as the current research did), (2) the social factors of social performance, (3) the concurrent effects of social and task factors in combined social and task performances, (4) the relationship between social competence and social performance and (5) the relationship between self-competence and emotional intelligence.

Third, the present research findings provided preliminary evidence of self-protection processes in the relationship between self-competence and task performance. The research designs in Study 3 and Study 4 investigated perceptions of self-protection processes rather than self-protection per se and did not permit the measurement of unconscious defense mechanisms. Future research could incorporate innovative research designs that enable the effects of self-protection on self-competence to be studied (for a review, see Jacoby & Toth, 1992).

Fourth, future researchers could improve the psychometric properties of the STCS and SPS. First, the replicability of the factor structure and reliability of the STCS (Version 5) could be examined in future research through confirmatory factor analysis. Confirmatory factor analysis is a statistical technique that allows reasearchers to test how well a hypothesized factor structure "fits" the observed data (Russell, 2002) because it . Confirmatory factor analysis enables the constraint of certain loadings to be zero, whereas exploratory factor analysis allows correlations between latent factors to vary (Russell, 2002). Therefore, with exploratory factor analysis, it is not possible to construct a model and make predictions about the number of factors that underlie a set of measures and predict which factors they will load onto, then assess the fit of the proposed model (Russell, 2002). Confirmatory factor analysis is able to measure how well a proposed model captures the covariance between all of the items on the test (Russell, 2002).The present research findings indicate that the STCS and SPS have the potential to be suitable for use as scales in scientific research. However, their internal factor structure and interitem reliabilities still need be improved if they are to reach their empirical and commercial potential as reliable and valid measures of self-competence.

The relationship between denial and neuroticism also needs to be further investigated. Theoretically, denial should be negative correlated with neuroticism because denial prevents the very responses that are accounted for by neuroticism. Hence, the items from the denial subscale should be carefully evaluated for their content validity.

Finally, there is an opportunity for future researchers to refine the vignettes approach adopted in the STCS and SPS so that participants are responding to a single aspect of social or task performance in a specific setting. This could lead to clearer distinctions between social and task competence as well as more insights into the effects of these constructs on social and/or task performance.

Theoretical Implications Derived From the Present Research Findings

The Multidimensionality of Self-Competence

The results of the present research provided tentative evidence of the multidimensionality of the self-competence construct. While the Social Competence Scale had problems, the construct of social competence appears to be a useful idea for future research. A two-component approach to self-competence has several advantages over generalised models of self-competence (e.g., Bandura, 1997; Tafarodi & Swann, 1995; Williams & Lillibridge, 1992). First, the existence of social and task dimensions of self-competence is potentially more representative of self-competence beliefs than generalised self-competence is in specific performance situations. For example, the existence of social competence addresses the failure of the generalised models (e.g., Bandura, 1997; Williams & Lillibridge, 1992) to account for the social aspects of work performance. This is particularly important for the study of work performance because work performance is mostly socially

situated. Therefore, social competence provides an avenue for the study of the social factors in social performance, task performance and social and task performance.

A construct of social competence also provides an explanation for some of the underlying causal processes in self-monitoring (Snyder, 1974) and self-esteem (Tafarodi & Swann, 1995). Snyder (1974) did not provide any clues about the causes of self-monitoring in his theory. Additionally, Tafarodi and Swann (1995) did not provide a clear explanation of the social factors that linked their generalised self-competence construct to self-liking. Therefore, conceptualizing self-competence as social and task competence both extends, and synthesizes these two contemporary self theories.

Finally, conceptualizing self-competence in terms of social and task competence helps to clarify the differences between self-competence and emotional intelligence. Recall from Chapter 4 that social competence is closely related to the conceptualisation of emotional intelligence as a mixed ability through its relationship with social skills and relationship management (Zeidner et al., 2004). A construct of social competence emphasizes the difference between people's beliefs about their social abilities, whereas emotional intelligence focuses on their *potential* for learning social skills and emotional competencies (Goleman, 2001).

The Relationship between Self-Esteem and Self-Competence

The results from the present research provided some new insights into the theoretical relationship between self-esteem and self-competence. First, self-protection processes may protect people with high self-esteem from developing low self-esteem if they experienced the negative emotions connected with repeated task failure. Second, self-protection processes could protect people with low self-esteem from experiencing the negative emotions that are associated with their negative

expectations. Research has shown that people with low self-esteem tend to respond more negatively to failure compared to people with high self-esteem (e.g., Brockner, 1979). Therefore, the interaction of self-protection processes and social competence should protect people with low self-esteem from experiencing the negative emotions associated with social rejection. Similarly, the interaction of self-protection processes and task competence should protect people with low self-esteem from experiencing the negative emotions associated with task failure. Thus, self-protection processes should prevent people from realizing that they may be incompetent during social and task performances.

A construct of social competence is also theoretically important for theorizing about social worth. Social worth is a component that has long featured in accounts of self-esteem (e.g., James, 1890/1948, Cooley, 1902, Tafarodi & Swann, 1995). Social competence represents internal standards about what constitutes good and bad social performance. People should refer to their internal standards of social competence in order to judge their social worth. Therefore, social competence provides a theoretical explanation of the development and maintenance of the social aspects of self-esteem.

The Relationship between Self-Regulation and Self-Competence

The results of the present research provided support for Williams and Lillibridge's (1992) proposition that self-competence operates as a reference standard in the negative feedback system. According to Williams and Lillibridge (1992), when a behavioural discrepancy is perceived, people compare the behaviour to the standard of competence that they believe they are capable of producing. If the standard of competence is higher than the actual behavioural attainments, then a discrepancy between the goal and standard is produced. The discrepancy is predicted to motivate people to persevere and try harder to reach the standard. The results from

the present research provided preliminary support for this proposition through the effects of high task competence, high strategising and high identification on task performance in Study 2.

The constructs of social and task competence increase knowledge about the effects of standards of performance on task performance. Standards of performance are vital in self-regulation because they provide an indication about what is acceptable goal behavior (Carver & Scheier, 1998). The results of the present research showed that these constructs are standards of performance that exert a powerful effect on task performance. For example, the results of Study 2 showed that high task competence and high identification influenced problem solving both with and without social distractions and how high social competence, high persistence and low strategising influenced problem solving. Therefore, the social and task competence model could potentially expand self-regulation theories (e.g., William & Lillibridge, 1992) through the provision of information about the specific reference standards that operate in self-regulation.

The Influence of Self-Protection on Self-Regulation and Self-Competence

The present research findings revealed some important information about the relationship between self-protection, self-regulation and self-competence. First, they provided insight that discrepancies between goals and performances may be detected and managed through self-protection processes. This raises some interesting questions about Bandura's (1997) theorizing on the relationship between self-protection and self-efficacy. Bandura's (1997) assumed that self-protection processes operate in positive feedback loops that are maladaptive because they create distance between the perceived effects of behaviour and a desired goal state. The results of the present research suggested that the opposite of this assertion may be true. People

who possessed high self-protection were less likely to detect discrepancies between their reference standards and actual task performance. For example, in Studies 2 and 4, high self-protection, low task competence participants performed better even though they would not have high expectations about the task performances that they could produce. Therefore, the results provided some important information about current theorizing on self-competence.

Implications of the Present Research in the Organizational Setting

The Prediction of Performance Outcomes

Measurement of future work performance is important for organizations because it helps organizations to work towards increasing their effectiveness, both strategically and tactically (Bartram, 2004). With further refinements, the STCS and SPS have the potential to provide better prediction of work performance in specific situations than measures of either emotional intelligence (e.g., Schutte et al., 1998) or personality (e.g., Costa & McCrae, 1992).

In his paper on current practices and merging trends in assessment in organizations, Bartram (2004) argued that while meta-analyses have revolutionized thinking in the area of personnel selection, they are still dependent on the data sets used. Therefore, "it is probably true to say that, in the past ten years, we have now exhausted the information that can be drawn from the body of studies that exists in the literature" (Bartram, 2004, p. 241). The STCS and SPS are based on a model of self-competence that increases our understanding of the self-regulation processes that explain work performance (e.g., Carver & Scheier, 1998, Williams & Lillibridge, 1992). Therefore, through the STCS and SPS, my self-competence model provides exciting new possibilities for the theory and measurement of self-

competence and work performance. For example, the STCS addresses concerns about the validity of predictions made from generalised measures of self-competence (e.g., Vancouver, Thompson & Williams, 2001) and trait approaches to work performance (e.g., Hurtz & Donovan, 2000). Furthermore, the SPS recognizes the importance of affect in the relationship between self-competence and work performance. High social and task competence should be among the most important personal characteristics for organizations.

The linkages between persistence and strategising and conscientiousness that have been found in the present research may potentially provide personnel selectors with the opportunity to use a competency-based scale that compliments the measurement of conscientiousness personality traits. Over the past 10 years, conscientiousness has emerged as one of the most valid predictors of work performance because people who possess conscientiousness traits (dependable, careful, thorough and hardworking) should produce better performances (Barrick, Mount & Judge, 2001; 2005; Hurtz & Donovan, 2000). Conscientious is regarded by employers as more important than qualifications, training and experience (Bartram, 2004). However, the magnitude of the validities between conscientiousness and work performance that has been found in these studies has consistently been found to be low, with true correlation coefficients between conscientiousness and work performance reported at .20 (Barrick & Mount, 1991; Hurtz & Donovan, 2000). This small amount of explained variance has raised questions about the practical contribution of conscientiousness to predicting work performance (Hurtz & Donovan, 2000). However, as Hurtz and Donovan (2000) pointed out, the Big Five are uncorrelated with other key predictors of work performance (e.g., cognitive

abilities). Therefore, any contribution made by the Big Five in the prediction of work performance is important (Hurtz & Donovan, 2000; Wood & Beckmann, 2006).

The correlations found between strategising and persistence and conscientious in the present research may be important for personnel selection because strategising and persistence deal with competency beliefs for the very behaviours that are the outcomes of conscientiousness traits. Therefore, strategising and persistence scores have the potential to provide important adjunctive information about how conscientiousness traits are manifested in work performance. This additional information that the STCS and SPS could potentially provide would enable personnel selectors interested in using a competency-based approach to selection and assessment to be more accurate in their predictions of work performance. Therefore, the practical utility of the STCS and SPS cannot be understated.

In conclusion, the findings of the present research contribute to the literature and assist in developing theories on self-competence by stimulating theory-building and future research on self-competence. My social and task competence model addresses the failure of existing self-competence theories to account for the potential effects of social competence beliefs and self-protection processes in the self-regulation of social and task performances.

Meanwhile, Ms Watson finishes her closing argument. Despite her nerves, she thinks that she has done well. She looks purposefully at each juror and then turns to face the judge. She knows that she has a good chance of winning the case. Later that night, she sits on the balcony sipping a margarita and listening to the waves breaking gently. For now at least, she has forgotten about her case and her fear of public speaking.

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Appendix A: Social and Task Competence Scale (Version 2)

	READ EACH OF THE FOLLOWING SCENARIOS AND INDICATE YOUR RESPONSE BY CIRCLING THE CORRESPONDING NUMBER	How would you have behaved in this situation?	In your opinion, how ideal is the behaviour described in the scenario?
		1 = very differently; 2 = differently; 3 = somewhat differently; 4 = undecided; 5 = somewhat similarly; 6 = similarly; 7 = very similarly	1 = very ideal; 2 = ideal; 3 = somewhat ideal; 4 = undecided; 5 = not that ideal; 6 = not ideal; 7 = not ideal at all
1	Imagine you are an insurance claims officer and your computer program is not working. You ask a colleague for the manual so you can work out what the problem is.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
2	You have submitted a tender and you think you made a mistake that nobody else has noticed. You are not sure so you decide to check the calculations before you tell anyone.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	Imagine you have solved a problem for a client, which took you longer than you		

#								Item							
3	1	2	3	4	5	6	7	were allowed. Pleased with your effort, you think, "I usually figure a way out in these situations".	1	2	3	4	5	6	7
4	1	2	3	4	5	6	7	Imagine you are a sales manager, sales are down 25% and you have been offered another job. You keep trying to improve sales in your present job.	1	2	3	4	5	6	7
5	1	2	3	4	5	6	7	Imagine you are a secretary and you have lost a report on computer. As you type it again, you decide you will make a personal backup of all files every week so this does not happen again.	1	2	3	4	5	6	7
6	1	2	3	4	5	6	7	Imagine you start annual leave tomorrow and the temporary relief person you have been training just quit. Annoyed, you immediately cancel your leave.	1	2	3	4	5	6	7
7	1	2	3	4	5	6	7	Imagine you are at work and you have a headache. You decide to keep working because if you go home, you might not finish your share of the work in time.	1	2	3	4	5	6	7
8	1	2	3	4	5	6	7	Imagine that you are reading your email when a co-worker seeks your assistance. You log-off, thinking you can go back to it anyway.	1	2	3	4	5	6	7
9	1	2	3	4	5	6	7	Imagine you work in a bank and your job for the day is to locate missing monies. After an hour, you have had no luck so you ask for some assistance.	1	2	3	4	5	6	7
10	1	2	3	4	5	6	7	You've invited to an office Christmas party and the dress code is formal. It will cost you a week's salary but it will be worth it otherwise, you will feel uncomfortable and out of place.	1	2	3	4	5	6	7

						Item	Statement							
1	2	3	4	5	6	7	**11**	Imagine you are listening to a colleague tell a joke and you are the only person who does not laugh. Everybody stares at you so you truthfully explain you did not understand.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	**12**	Imagine you have been given corporate tickets to the cricket and everyone at work is planning to go. You hate the game so you offer the tickets to someone else.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	**13**	Imagine a client wants to play golf and you do not know how to play. You start to panic as you hear yourself agreeing to tee off at 7.00am the next morning.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	**14**	You have offered to take a colleague with a problem out to lunch. You want to help but you also see it as an opportunity to make a good impression with everyone in the office.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	**15**	Everyone in the office is going out for drinks. You are not dressed right so you make an excuse that you have a lot of work to finish and you do not go.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	**16**	Imagine arriving at a conference and there is nobody there you know. Although you feel nervous, you look confident as you approach some people to introduce yourself.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	**17**	Imagine a colleague informs you that you have been cranky lately. You did not mean to upset anyone and worry if you can make it up to them.	1	2	3	4	5	6	7
1	2	3	4	5	6	7	**18**	A co-worker is promoted instead of you. You are disappointed and think how unfair it is, but you act as if it does not bother you as you do not want people to think you	1	2	3	4	5	6	7

		are upset.	
19	1 2 3 4 5 6 7	Imagine your colleagues have asked for your opinion. You know if you tell the truth, they might blame you, so you tell them what you think they want to hear.	1 2 3 4 5 6 7
20	1 2 3 4 5 6 7	Imagine you have just started a new office job. As you meet the staff for the first time, you look at how they behave to see how well you fit in.	1 2 3 4 5 6 7
21	1 2 3 4 5 6 7	Imagine you are a hairdresser and a client has complained that a haircut you gave is uneven. You let another hairdresser check the haircut, as you are sure it is straight.	1 2 3 4 5 6 7
22	1 2 3 4 5 6 7	Imagine you are a broker and your colleagues are discussing the stock market crash. You want to join them but you decide to return calls from your worried clients.	1 2 3 4 5 6 7
23	1 2 3 4 5 6 7	Imagine you are a sales assistant and your boss thinks you spend too long with customers. Your boss is right. You did not realise and decide to try harder.	1 2 3 4 5 6 7
24	1 2 3 4 5 6 7	Imagine you are a lawyer and you have just made your closing argument on a case. You think you will lose but when you win, you wonder if you were too hard on yourself.	1 2 3 4 5 6 7
25	1 2 3 4 5 6 7	Imagine you are a financial advisor and quarterly reports need to be finished. You could get some help but you decide to put in a big effort to get the job done in time.	1 2 3 4 5 6 7

Appendix B: Interitem Correlations for the STCS (Version 2)

Table B1

Intrasubscale Correlations for Actual Identify Subscale

Item	10	20
10	-	.15*
20		-

*Note:** p =.01; * p =.05.*

Table B2

Intrasubscale Correlations for Ideal Identify Subscale

Item	10	20
10	-	.18**
20		-

*Note:** p =.01; * p =.05.*

Table B3

Intrasubscale Correlations for Actual Cooperate Subscale

Item	13	14
13	-	.01
14		-

*Note:** p =.01; * p =.05.*

Table B4

Intrasubscale Correlations for Ideal Cooperate Subscale

Item	13	14
13	-	.28**
14		-

*Note:** p =.01; * p =.05.*

Table B5

Intrasubscale Correlations for Actual Communicate Subscale

Item	15	19
15	-	.32**
19		-

*Note:** p =.01; * p =.05.*

Table B6

Intrasubscale Correlations for Ideal Communicate Subscale

Item	15	19
15	-	.44**
19		-

*Note:** p =.01; * p =.05.*

Table B7

Intrasubcale Correlations for Actual Plan Subscale

Item	4	5	16	22
4	-	.17*	.16*	.17*
5		-	.19*	.16*
16			-	.16*
22				-

*Note:** p =.01; * p =.05.*

Table B8

Intrasubcale Correlations for Ideal Plan Subscale

Item	4	5	16	22
4	-	.35**	.24**	.19**
5		-	.41**	.30**
16			-	.34**
22				-

*Note:** p =.01; * p =.05.*

Table B9

Intrasubcale Correlations for Actual Persistence Subscale

Item	6	7	23	25
6	-	.25**	.24**	.08
7		-	.05	.13
23			-	.04
25				-

*Note:** p =.01; * p =.05.*

Table B10

Intrasubcale Correlations for Ideal Persistence Subscale

Item	6	7	23	25
6	-	.40	.20**	.26
7		-	.26**	.30**
23			-	.30**
25				-

*Note:** p =.01; * p =.05.*

Table B11

Intrasubcale Correlations for Actual Strategising Subscale

Item	4	5	16	22
4	-	.17*	.16*	.17*
5		-	.19*	.16*
16			-	.16*
22				-

*Note:** p =.01; * p =.05.*

Table B12

Intrasubcale Correlations for Ideal Strategising Subscale

Item	4	5	16	22
4	-	.35*	.24**	.19**
5		-	.41**	.30**
16			-	.34**
22				-

*Note:** p =.01; * p =.05.*

Table B13

Interitem Correlations for the Actual Social Competence Subscale

Scale	Communication	Cooperation	Identification
Communication	-	.20**	.26**
Cooperation		-	.21**
Identification			-

*Note: n = 186, p =.01; * p =.05.*

Table B14

Interitem Correlations for the Ideal Social Competence Subscale

Scale	Communication	Cooperation	Identification
Communication	-	.37**	.26**
Cooperation		-	.30**
Identification			-

*Note: n = 186, p =.01; * p =.05.*

Table B15

Interitem Correlations for the Actual Task Competence Subscale

Scale	Planning	Persistence	Strategising
Planning	-	.35**	.10
Persistence		-	.17*
Strategising			-

*Note: n = 186, p =.01; * p =.05.*

Table B16

Interitem Correlations for the Ideal Task Competence Subscale

Scale	Planning	Persistence	Strategising
Planning	-	.18*	.01
Persistence		-	.93
Strategising			-

*Note: n = 186, p =.01; * p =.05.*

Appendix C: Item-Total Correlations from the Social and Task Competence Scale

(Version 2)

Table C1

R*etained STCS Items with Corrected Item -Total Correlations for the Actual Scale*

Item	Corrected Item-Total Correlation	Alpha if Item deleted
1	.15	.55
4	.18	.55
5	.23	.54
6	.30	.53
7	.22	.54
8	.18	.55
9	.16	.55
10	.35	.51
13	.14	.56
14	.08	.56
15	.21	.54
16	.11	.56
19	.15	.55
20	.21	.54
21	.16	.55
22	.25	.54
23	.23	.54
25	.15	.55

Note: n = 190

Table C2

Retained STCS Items with Corrected Item-Total Correlations for the Ideal Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
1	.29	.73
4	.35	.72
5	.41	.72
6	.38	.72
7	.39	.72
8	.33	.73
9	.39	.72
10	.31	.73
13	.14	.74
14	.21	.74
15	.25	.73
16	.26	.73
19	.23	.73
20	.34	.73
21	.38	.72
22	.25	.73
23	.39	.72
25	.40	.72

Note: n = 190

Table C3

Retained Social Competence Items with Corrected Item-Total Correlations for the Actual Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
10	.27	.44
13	.19	.48
14	.21	.47
15	.28	.43
19	.36	.39
20	.21	.47

Note: n = 190

Table C4

Retained Social Competence Items with Corrected Item-Total Correlations for the Ideal Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
10	.28	.62
13	.36	.59
14	.40	.57
15	.49	.54
19	.36	.59
20	.28	.61

Note: n = 190

Table C5

Retained Identify Items with Corrected Item-total Correlations for the Actual Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
10	.15	a*
20	.15	a*

Note: n = 190; *a = no value

Table C6

Retained Identify Items with Corrected Item-total Correlations for the Ideal Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
10	.19	a*
20	.19	a*

Note: n = 190; *a = no value

Table C7

Retained Cooperate Items with Corrected Item-Total Correlations for the Actual Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted

13	.10	a*
14	.10	a*

Note: n = 190; *a = no value

Table C8

Retained Cooperate Items with Corrected Item-Total Correlations for the Ideal Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
13	.28	a*
14	.28	a*

Note: n = 190; *a = no value

Table C9

Retained Communicate Items with Corrected Item-Total Correlations for the Actual Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
15	.32	a*
19	.32	a*

Note: n = 190; *a = no value

Table C10

Retained Communicate with Corrected Item-Total Correlations for the Ideal Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
15	.44	a*
19	.44	a*

Note: n = 190; *a = no value

Table C11

Retained Task Competence Items with Corrected Item-Total Correlations for the

Actual Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
1	.15	.53
4	.25	.50
5	.27	.50
6	.33	.48
7	.22	.51
8	.20	.51
9	.10	.54
20	.23	.50
21	.12	.53
22	.28	.49
23	.23	.51
25	.17	.52

Note: n = 190

Table C12

Retained Task Competence Items with Corrected Item-Total Correlations for the

Ideal Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
1	.33	.75
4	.34	.74
5	.50	.73
6	.37	.74
7	.42	.74
8	.43	.73
9	.43	.73
20	.39	.74
21	.40	.74
22	.38	.74
23	.37	.74
25	.34	.74

Note: n = 190

Table C13

Retained Strategising Items with Corrected Item-Total Correlations for the Actual

Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
1	.12	.22
8	.15	.18
9	.15	.18
21	.10	.24

Note: n = 190

Table C14

Retained Strategising Items with Corrected Item-Total Correlations for the Ideal

Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
1	.36	.53
8	.33	.55
9	.45	.46
21	.36	.53

Note: n = 190

Table C15

Retained Persistence Items with Corrected Item-Total Correlations for the Actual

Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
6	.26	.21
7	.23	.25
23	.18	.31
25	.10	.39

Note: n = 190

Table C16

Retained Persistence Items with Corrected Item-Total Correlations for the Ideal

Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
6	.40	.54
7	.46	.49
23	.34	.58
25	.40	.55

Note: n = 190

Table C17

Retained Planning Items with Corrected Item-Total Correlations for the Actual Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
4	.25	.37
5	.26	.37
16	.25	.37
22	.24	.38

Note: n = 190

Table C18

Retained Planning Items with Corrected Item-Total Correlations for the Ideal Scale

Item	Corrected Item-Total Correlation	Alpha if Item deleted
4	.35	.62
5	.50	.50
16	.45	.54
22	.36	.60

Note: n= 190

Appendix D: Social and Task Competence Scale (Version 3)

Test 1

Please read each situation and answer the questions as well as you can. There are no right or wrong answers. Try to give your first response. You should tick 60 boxes. If you make a mistake, cross it out and tick another box. Instructions are given throughout the test to guide and help you. Please follow them carefully.

How similar would you behave if you were in this situation?

1. A salesperson is unfairly blamed by the manager for lost sales. Although the salesperson could easily find another job, he/she tries hard to increase sales instead.

❑	❑	❑	❑	❑	❑	❑
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

2. You are invited to an office Christmas party. Although you could wear clothes you already own, you spend a week's salary on a new outfit so you feel comfortable on the night.

❑	❑	❑	❑	❑	❑	❑
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very Similarly

3. You are a hair stylist and a customer is complaining that the haircut you gave is uneven. You are sure that the cut is straight, but check it again and then plan to call the boss.

❑	❑	❑	❑	❑	❑	❑
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

4. A business manager is asked to play golf by a major client. The manager could explain he/she has never played golf, but the manager simply offers to play a game next week.

❑	❑	❑	❑	❑	❑	❑
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

5. You have spent the past month training a manager to run your business so you can take a holiday. The manager quits the day before you leave and so you postpone your plans.

❑   ❑   ❑   ❑   ❑   ❑   ❑

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

6. You have gone to a noisy bar with a group of colleagues who start betting on the horses. You are opposed to gambling, but pretend you like it and place a small bet instead.

❑   ❑   ❑   ❑   ❑   ❑   ❑

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

7. Imagine that you have lots of work to finish but you have a bad headache. You want to go home but you take a Panadol instead**.**

❑   ❑   ❑   ❑   ❑   ❑   ❑

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

8. A senior colleague asks for your opinion on a sensitive issue. Honesty could ruin your chances for promotion, so you act as if you agree with your colleague's opinion instead.

❑   ❑   ❑   ❑   ❑   ❑   ❑

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

9. A co-worker is promoted ahead of you. You try to hide your disappointment while you consider if it is worthwhile to appeal.

❑   ❑   ❑   ❑   ❑   ❑   ❑

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

10. A bank teller is completing a complicated business transaction. The teller could seek help from a supervisor and save time but is determined to sort out the problem alone instead.

❑   ❑   ❑   ❑   ❑   ❑   ❑

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

11. An office worker is reading email but stops when a colleague asks for help. The office worker knows the colleague could wait but plans to make time to read the emails later.

❏   ❏   ❏   ❏   ❏   ❏   ❏

| Very Differently | Differently | Somewhat Differently | Undecided | Somewhat Similarly | Similarly | Very similarly |

12. You are a stockbroker. From your desk, you see colleagues talking excitedly. You decide to join them after returning several urgent phone calls from clients.

❏   ❏   ❏   ❏   ❏   ❏   ❏

| Very Differently | Differently | Somewhat Differently | Undecided | Somewhat Similarly | Similarly | Very similarly |

13. An accountant needs to finish company tax returns today if tomorrow's deadline is to be met. He/she wants to ask for help to take the pressure off but puts in a big effort to try and finish the work alone instead.

❏   ❏   ❏   ❏   ❏   ❏   ❏

| Very Differently | Differently | Somewhat Differently | Undecided | Somewhat Similarly | Similarly | Very similarly |

14. A waiter is cautioned by the new manager for being rude to a customer. The waiter, who considers that he/she gives good customer service, asks the manager to explain.

❏   ❏   ❏   ❏   ❏   ❏   ❏

| Very Differently | Differently | Somewhat Differently | Undecided | Somewhat Similarly | Similarly | Very similarly |

15. A counselor takes a senior colleague who is troubled by a tough case, out to lunch. The counselor is not that interested in the case, but talks about it with the colleague anyway.

❏   ❏   ❏   ❏   ❏   ❏   ❏

| Very Differently | Differently | Somewhat Differently | Undecided | Somewhat Similarly | Similarly | Very Similarly |

16. A manager, who has just started a new job, is meeting staff for the first time. The manager could be working, but pays attention to what staff do, to see if he/she will fit in instead.

❏   ❏   ❏   ❏   ❏   ❏   ❏

| Very Differently | Differently | Somewhat Differently | Undecided | Somewhat Similarly | Similarly | Very similarly |

17. A company accountant suspects he/she has made a mistake that could cost them a lucrative contract. He/she could do nothing, but re-checks the calculations prior to telling the boss instead.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very Differently   Differently   Somewhat Differently   Undecided   Somewhat Similarly   Similarly   Very similarly

18. You are a financial adviser. The data that you keyed into the computer yesterday is missing. As you re-enter the data, you vow you will backup your work daily from now on.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very Differently   Differently   Somewhat Differently   Undecided   Somewhat Similarly   Similarly   Very similarly

19. Imagine arriving at a meeting and no-one that you know has arrived. You could pretend that you have left a document on your desk and return later, but you think this would look bad so you sit down instead.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very Differently   Differently   Somewhat Differently   Undecided   Somewhat Similarly   Similarly   Very similarly

20. You hear gossip that your workmates think you are difficult to work with and feel offended. Athough you could ignore the rumour, you try to be extra co-operative instead.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very Differently   Differently   Somewhat Differently   Undecided   Somewhat Similarly   Similarly   Very similarly

THE NEXT SITUATION APPLIES TO QUESTIONS 21-28.

You are a lawyer and you are unable to solve a client's problem. Your job depends on it. Time has run out and your boss asks if you have solved it.

To what extent would you react similarly?

21. You say you are close to finding a solution.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very Differently   Differently   Somewhat Differently   Undecided   Somewhat Similarly   Similarly   Very similarly

22. You complain that you do not have enough information.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

23. You wish you were still on holidays.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

24. You feel yourself breaking out in a sweat.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

25. You think it would have been easier if you had started the work earlier.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

26. You tell your boss the situation is not as bad as it looks.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

27. You think to yourself "What problem?"

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

28. You cheerfully ask for more time.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

THE NEXT SITUATION APPLIES TO QUESTIONS 29-36

Now consider that the boss offers to assign another consultant to help you find a solution to the problem.

To what extent would you react similarly?

29.   You think to yourself that you can solve the problem on your own.

❏   ❏   ❏   ❏   ❏   ❏   ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

30. You convince yourself that there is no problem.

❏   ❏   ❏   ❏   ❏   ❏   ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

31. You feel as though you cannot think straight.

❏   ❏   ❏   ❏   ❏   ❏   ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

32. You decide that the problem is not that difficult.

❏   ❏   ❏   ❏   ❏   ❏   ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

33.   You suddenly think about your plans for the weekend.

❏   ❏   ❏   ❏   ❏   ❏   ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

34. You feel upset that your boss thinks you need help.

❏   ❏   ❏   ❏   ❏   ❏   ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

35.   You are determined to show your boss that you can solve the problem on your own.

❏   ❏   ❏   ❏   ❏   ❏   ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

36. You think what bad luck you are having.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

THE NEXT SITUATION APPLIES TO QUESTIONS 37-44

Imagine you come across confidential documents lying on the floor in the photocopier room. You pick them up with the intention of returning them to the right owner. Suddenly, the door opens and you are discovered holding them.

To what extent would you react similarly?

37. You act as though nothing is wrong.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

38. You ask for the time

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

39. You quickly explain what you are doing.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

40. You try to think of something to say but can't.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

41. You feel like laughing.

❏	❏	❏	❏	❏	❏	❏
Very Differently	Differently	Somewhat Differently	Undecided	Somewhat Similarly	Similarly	Very similarly

42. You feel as if you need to get out of the room quickly.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

43. You tell yourself it doesn't look that bad.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

44. You think to yourself "Why do bad things always happen to me?"

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

THE NEXT SITUATION APPLIES TO QUESTIONS 45-52

Now suppose you are involved in a workplace conflict. Your boss has noticed your work is suffering and wants to know what is going on.

To what extent would you react similarly?

45. You explain that you have been a bit distracted lately.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

46. You feel surprised that your work has been affected.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

47. You deny that anything is wrong.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

48. You try to make light of the situation.

❏ ❏ ❏ ❏ ❏ ❏ ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

49. You set out to prove that your boss is wrong.

❏ ❏ ❏ ❏ ❏ ❏ ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

50. You say that you are unable to concentrate.

❏ ❏ ❏ ❏ ❏ ❏ ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

51. You think how unlucky you are.

❏ ❏ ❏ ❏ ❏ ❏ ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

52. You try to think about something positive.

❏ ❏ ❏ ❏ ❏ ❏ ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

THE NEXT SITUATION APPLIES TO QUESTIONS 53-60

Now imagine that a co-worker has made a mistake and you know about it. If you do nothing, you will lose your job. If you tell your boss, you will lose a friend. You decide to tell your boss. The co-worker asks you what you intend to do.
To what extent would you react similarly?

53. You say that you did not hear the question.

❏ ❏ ❏ ❏ ❏ ❏ ❏
Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

54. You think how you could do with a cup of coffee about now.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

55. You realise that you feel sick in the stomach.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

56. You offer the co-worker a cup of coffee.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

57. You think about how you have never been in this position before.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

58. You think to yourself "What mistake?"

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

59. You feel as though your heart rate has increased.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

60. You think to yourself that you are an honest person.

❏   ❏   ❏   ❏   ❏   ❏   ❏

Very   Differently   Somewhat   Undecided   Somewhat   Similarly   Very
Differently   Differently   Similarly   similarly

Thank you.
That is the end of Test 1
Turn this page to go to Test 2

Test 2

Read each situation again and give **your opinion about how ideal** you think the person's behaviour is. There are no right or wrong answers. Try to give your first response. You should tick 60 boxes. If you make a mistake, cross it out and tick another box. Instructions are given throughout the test to guide and help you. Please follow them carefully.

In your opinion, how ideal is the behaviour described in this situation?

1. A salesperson is unfairly blamed by the manager for lost sales. Although the salesperson
   could easily find another job, he/she tries hard to increase sales instead.

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

2. You are invited to an office Christmas party. Although you could wear clothes you already own, you spend a week's salary on a new outfit so you feel comfortable on the night**.**

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

3. You are a hair stylist and a customer is complaining that the haircut you gave is uneven. You are sure that the cut is straight, but check it again and then plan to call the boss.

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

4. A business manager is asked to play golf by a major client. The manager could explain he/she has never played golf, but the manager simply offers to play a game next week.

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

5. You have spent the past month training a manager to run your business so you can take a holiday. The manager quits the day before you leave and so you postpone your plans.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very Ideal Somewhat Undecided Not That Not Ideal Not Ideal
Ideal Ideal Ideal At All

6. You have gone to a noisy bar with a group of colleagues who start betting on the horses. You are opposed to gambling, but pretend you like it and place a small bet instead.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very Ideal Somewhat Undecided Not That Not Ideal Not Ideal
Ideal Ideal Ideal At All

7. Imagine that you have lots of work to finish but you have a bad headache. You want to go home but you take a Panadol instead**.**

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very Ideal Somewhat Undecided Not That Not Ideal Not Ideal
Ideal Ideal Ideal At All

8. A senior colleague asks for your opinion on a sensitive issue. Honesty could ruin your chances for promotion, so you act as if you agree with the colleague opinion instead.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very Ideal Somewhat Undecided Not That Not Ideal Not Ideal
Ideal Ideal Ideal At All

9. A co-worker is promoted ahead of you. You try to hide your disappointment while you consider if it is worthwhile to appeal.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very Ideal Somewhat Undecided Not That Not Ideal Not Ideal
Ideal Ideal Ideal At All

10. A bank teller is completing a complicated business transaction. The teller could seek help from a supervisor and save time but is determined to sort out the problem alone instead.

❑   ❑   ❑   ❑   ❑   ❑   ❑

| Very Ideal | Ideal | Somewhat Ideal | Undecided | Not That Ideal | Not Ideal | Not Ideal At All |

11. An office worker is reading email but stops when a colleague asks for help. The office worker knows the colleague could wait but plans to make time to read the emails later.

❑   ❑   ❑   ❑   ❑   ❑   ❑

| Very Ideal | Ideal | Somewhat Ideal | Undecided | Not That Ideal | Not Ideal | Not Ideal At All |

12. You are a stockbroker. From your desk, you see colleagues talking excitedly. You decide to join them after returning several urgent phone calls from clients.

❑   ❑   ❑   ❑   ❑   ❑   ❑

| Very Ideal | Ideal | Somewhat Ideal | Undecided | Not That Ideal | Not Ideal | Not Ideal At All |

13. An accountant needs to finish company tax returns today if tomorrow's deadline is to be met. He/she wants to ask for help to take the pressure off but puts in a big effort to try and finish the work alone instead.

❑   ❑   ❑   ❑   ❑   ❑   ❑

| Very Ideal | Ideal | Somewhat Ideal | Undecided | Not That Ideal | Not Ideal | Not Ideal At All |

14. A waiter is cautioned by the new manager for being rude to a customer. The waiter, who considers that he/she gives good customer service, asks the manager to explain.

❑   ❑   ❑   ❑   ❑   ❑   ❑

| Very Ideal | Ideal | Somewhat Ideal | Undecided | Not That Ideal | Not Ideal | Not Ideal At All |

15. A counselor takes a senior colleague who is troubled by a tough case, out to lunch. The counselor is not that interested in the case, but talks about it with the colleague anyway.

❑   ❑   ❑   ❑   ❑   ❑   ❑

| Very | Ideal | Somewhat | Undecided | Not That | Not Ideal | Not Ideal |

Ideal	Ideal	Ideal	At All

16. A manager, who has just started a new job, is meeting staff for the first time. The manager could be working, but pays attention to what staff do, to see if he/she will fit in instead.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

17. A company accountant suspects he/she has made a mistake that could cost them a lucrative contract. He/she could do nothing, but re-checks the calculations prior to telling the boss instead.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

18. You are a financial adviser. The data that you keyed into the computer yesterday is missing. As you re-enter the data, you vow you will backup your work daily from now on.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

19. Imagine arriving at a meeting and no-one that you know has arrived. You could pretend that you have left a document on your desk and return later, but you think this would look bad so you sit down instead.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

20. You hear gossip that your workmates think you are difficult to work with and feel offended. Athough you could ignore the rumour, you try to be extra co-operative instead.

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

THE NEXT SITUATION APPLIES TO QUESTIONS 21-28.

You are a lawyer and you are unable to solve a client's problem. Your job depends on it. Time has run out and your boss asks if you have solved it.

In your opinion, how ideal is the response to the situation?

21. You say you are close to finding a solution.

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

22. You complain that you do not have enough information.

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

23. You wish you were still on holidays.

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

24. You feel yourself breaking out in a sweat.

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

25. You think it would have been easier if you had started the work earlier.

❏	❏	❏	❏	❏	❏	❏
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

26. You tell your boss the situation is not as bad as it looks.

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

27. You think to yourself "What problem?"

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

28. You cheerfully ask for more time.

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

THE NEXT SITUATION APPLIES TO QUESTIONS 29-36

Now consider that the boss offers to assign another consultant to help you find a solution to the problem.

In your opinion, how ideal is the response to the situation?

29. You think to yourself that you can solve the problem on your own.

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

30. You convince yourself that there is no problem.

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

31. You feel as though you cannot think straight.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

32. You decide that the problem is not that difficult.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

33. You suddenly think about your plans for the weekend.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

34. You feel upset that your boss thinks you need help.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

35. You are determined to show your boss that you can solve the problem on your own.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

36. You think what bad luck you are having.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

THE NEXT SITUATION APPLIES TO QUESTIONS 37-44

Imagine you come across confidential documents lying on the floor in the photocopier room. You pick them up with the intention of returning them to the

right owner. Suddenly, the door opens and you are discovered holding them.

In your opinion, how ideal is the response to the situation?

37. You act as though nothing is wrong.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

38. You ask for the time.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

39. You quickly explain what you are doing.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

40. You try to think of something to say but can't.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

41. You feel like laughing.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

42. You feel as if you need to get out of the room quickly.

❑	❑	❑	❑	❑	❑	❑
Very Ideal	Ideal	Somewhat Ideal	Undecided	Not That Ideal	Not Ideal	Not Ideal At All

43. You tell yourself it doesn't look that bad.

❏ | ❏ | ❏ | ❏ | ❏ | ❏ | ❏

Very Ideal   Ideal   Somewhat Ideal   Undecided   Not That Ideal   Not Ideal   Not Ideal At All

44. You think to yourself "why do bad things always happen to me?"

❏ | ❏ | ❏ | ❏ | ❏ | ❏ | ❏

Very Ideal   Ideal   Somewhat Ideal   Undecided   Not That Ideal   Not Ideal   Not Ideal At All

THE NEXT SITUATION APPLIES TO QUESTIONS 45-52

Now suppose you are involved in a workplace conflict. Your boss has noticed your work is suffering and wants to know what is going on.

In your opinion, how ideal is the response to the situation?

45. You explain that you have been a bit distracted lately.

❏ | ❏ | ❏ | ❏ | ❏ | ❏ | ❏

Very Ideal   Ideal   Somewhat Ideal   Undecided   Not That Ideal   Not Ideal   Not Ideal At All

46. You feel surprised that your work has been affected.

❏ | ❏ | ❏ | ❏ | ❏ | ❏ | ❏

Very Ideal   Ideal   Somewhat Ideal   Undecided   Not That Ideal   Not Ideal   Not Ideal At All

47. You deny that anything is wrong.

❏ | ❏ | ❏ | ❏ | ❏ | ❏ | ❏

Very Ideal   Ideal   Somewhat Ideal   Undecided   Not That Ideal   Not Ideal   Not Ideal At All

48. You try to make light of the situation.

❏ | ❏ | ❏ | ❏ | ❏ | ❏ | ❏

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal

Ideal   Ideal   Ideal   At All

49. You set out to prove that your boss is wrong.

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

50. You say that you are unable to concentrate.

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

51. You think how unlucky you are.

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

52. You try to think about something positive.

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

THE NEXT SITUATION APPLIES TO QUESTIONS 53-60

Now imagine that a co-worker has made a mistake and you know about it. If you do nothing, you will lose your job. If you tell your boss, you will lose a friend. You decide to tell your boss. The co-worker asks you what you intend to do.

In your opinion, how ideal is the response to the situation?

53. You say that you did not hear the question.

☐   ☐   ☐   ☐   ☐   ☐   ☐

Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

54. You think how you could do with a cup of coffee about now.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

55. You realise that you feel sick in the stomach.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

56. You offer the co-worker a cup of coffee.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

57. You think about how you have never been in this position before.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

58. You think to yourself "What mistake?"

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

59. You feel as though your heart rate has increased.

❑ ❑ ❑ ❑ ❑ ❑ ❑
Very   Ideal   Somewhat   Undecided   Not That   Not Ideal   Not Ideal
Ideal   Ideal   Ideal   At All

60. Your think to yourself that you are an honest person.

❏ Very Ideal   ❏ Ideal   ❏ Somewhat Ideal   ❏ Undecided   ❏ Not That Ideal   ❏ Not Ideal   ❏ Not Ideal At All

Appendix E: Plans Questionnaire Used in Study 2

Shortly, you will be asked to rearrange the letters in 15 anagrams using the clues provided.   Here's an example:

> RIATA
> *Jeweled crown*
>
> **TIARA**
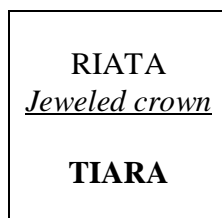
Before you begin, please write down how you plan to complete the task. Please write down one plan next to each number.

For example: *I plan to read all of the anagrams and clues first.*

1………………………………………………………………………………………
.
2………………………………………………………………………………………

………………………………………………………………………………………

3………………………………………………………………………………………

………………………………………………………………………………………

4………………………………………………………………………………………

………………………………………………………………………………………

5.………………………………………………………………………………………

……………………………………………………………………………………….

Appendix F: Anagram Task Used In Study 2

Please rearrange the letters in each of the following anagrams to make a new word. You may use the clues *(in italics below)* to assist you.

1 ASKEW *Arouses* WAKES[a]	2 PIQUE *Outfit* EQUIP	3 VIAND *Couch* DIVAN	4 LIMES *Grin* SMILE	5 RAFEL *Change* INSOLUBLE
6 SNARE *Merits* EARNS[a]	7 VEILS *Subsist* LIVES	8 STARE *Blackboard* INSOLUBLE	9 SIREN *Bridle parts* REINS	10 CANOE *Atlantic e.g* OCEAN
11 GRIEF *Filament* INSOLUBLE	12 CRETE *Upright* ERECT	13 VOILE *Salad garnish* OLIVE	14 MOIST *Leaves out* OMITS	15 SALEM *Dinner* MEALS

Note. [a] = the solutions to the anagrams.

Appendix G: Strategies Questionnaire Used In Study 2

Strategies

Please indicate the extent to which you used each of the following strategies during the anagram task by placing a cross ('X') in the corresponding box.

	Never	Occasionally	Frequently	Very Often	Always
1. Used the clues only					
2. Used the words only					
3. Used the clues and words					
4. Read the entire list first to identification the easiest and then completed them					
5. Started at the top and skipped over the difficult ones until the end					
6. Tried a set number of solutions and then gave up					
7. Looked at the word and thought of what the letters reminded me of					
8. Looked for familiar words first					
9. Tried to solve by pairing consonants with vowels					
10. Adopted a systematic approach by trying different letter combinations					
11. Looked for small words first and then built on this					

Appendix H: Reliability and Factor Structure of the Social and Task Competence

Scale and Self-Protection Scale

The preliminary reliability of the STCS (Version 3) was computed using the

Spearman-Brown prediction formula (Nunnally & Bernstein, 1994). Researchers

commonly use this formula to make alphas comparable for differing length subscales

when they are examining the reliability of a scale (Nunnally & Bernstein, 1994).

Alphas for the actual and ideal scales for the 60-item STCS (Version 3) and its

subscales are shown in Table H1. The revisions to the STCS (Version 2) and the

addition of two new items improved the reliability of the Social Competence Scale

(Version 3) and Task Competence Scale (Version 3). However, the strategising

subscale, identification subscale and the cooperation subscale produced very low

alphas, indicating that these subscales were not reliable. In contrast, the initial

reliabilities of the SPS (Version 1) were better: moderate to high with alphas ranging

from .28 to .80.

Table H1

Preliminary Reliability of the Social and Task Competence Scales (Version 3)

Scale	Items	Alpha	
		Actual scale	Ideal scale
STCS	1…60	.65	.71
Task competence	1, 3, 5, 7, 10, 11, 12, 13, 17, 18, 19, 20	.51	.64
Persistence	5, 7, 10, 13	.33	.27
Planning	1, 12, 18, 19	.39	.24
Strategising	3, 11, 17, 20	.15	.35
Social competence	2, 4, 8, 9, 15, 16	.24	-.02
Identification	2, 16	-.13	.14
Cooperation	4, 15	.15	.29
Communication	8, 9	.32	.35
Self-protection	21…60	.69	.80
Emotion focused coping	24, 25, 31, 34, 40, 42, 44, 45, 50, 55, 59	.63	.75
Denial	22, 27, 30, 36, 43, 47, 51, 53, 58	.60	.79
Reaction formation	21, 28, 29, 35, 37, 39, 41, 46, 49, 54, 60	.28	.28
Isolation	23, 26, 32, 33, 38, 48, 52, 56, 57	.33	.37

Factor Structure of the Social and Task Competence Scale

A principal axis factor analysis with promax rotation was performed in order to analyse the factor structure of the STCS (Version 3). The population size of 120 participants was considered to be acceptable because results of EFAs have been found to be consistent even when sample sizes are as low as 100 cases with lower communality levels (MacCallum, Widaman, Zhang & Hong, 1999). The items failed to converge in 25 iterations when all 60 items were entered into the factor analyses. Therefore, the number of iterations was raised to 100 in a separate factor analysis. The items converged in 46 iterations. However, the KMO statistic was .47 and indicated that was not suitable for factoring. Cattell's scree criterion had no bend in the elbow. Hence, it did not show a factor structure. Therefore, a separate analysis was performed on the SPS (Version 1). The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) statistic for the data from the actual scales was less than .60, indicating that the data was not suitable for factoring. There was no elbow in the scree plot for the data from the actual scales, which also indicated that the data was not suitable for factoring. Therefore, the assumptions of factor analysis were violated for data from the actual scales. However, these assumptions were met when the data from the ideal scales was used in the factor analysis. Bartlett's Test of Sphericity was significant, χ^2 (190) = 329.50, $p < .01$, and the KMO statistic was .60, which indicated that the data was suitable for factoring. Cattell's scree criterion showed a three factor structure. Therefore, three factors were extracted. The three factors accounted for 32.21% of the total variance.

Items that loaded onto more than one factor to approximately the same degree (+/- .20) were deleted. The rotated factor loadings of the STCS (Version 3) are shown in Table H2. Factor 1 had an eigenvalue of 13.63. Eight items (Items 1, 3, 5,

8, 9, 11, 18 and 20) loaded ≥ .30 on Factor 1 and explained 10% of the total

variance. This factor was named Task Competence. In this set of eight items, three of

the items (Items 1, 11 and 18) came from among those generated for the STCS

(Version 3) for the planning dimension of task competence, two of the items (Items 5

and 8) came from among those generated for the persistence dimension of task

competence and three of the items (Items 3, 9 and 20) came from those generated for

the strategising dimension of task competence. Two of the items that loaded on this

factor were originally considered to be communication items. Item 8 read: "a senior

colleague asks for your opinion on a sensitive issue. Honesty could ruin your

chances of promotion, so you act as if you agree with your colleague's opinion

instead" and Item 9 read: "a co-worker is promoted ahead of you. You hide your

disappointment while you consider if it is worthwhile to appeal". The strength of the

loadings of these two items on Factor 1 in this study (.41 for Item 8 and .40 for Item

9) indicated that these two items may be tapping the strategising subscale of task

competence instead.

Factor 2 had an eigenvalue of 9.19. The three items (Items 4, 6 and16) that

loaded onto Factor 2 accounted for a further 6.12% of the total explained variance.

This factor was named Identification because the items represented social

competence along the dimension of identification.

Factor 3 had an eigenvalue of 8.66. The four items (Items 12, 14, 15 and 17) that

loaded on Factor 3 accounted for a further 5.03% of the total variance. Factor 3 was

named Communication because the items that loaded onto the factor represented

social competence along the dimension of people's perceived ability to exchange

verbal and non-verbal information with others.

The items from the cooperation subscale did not load significantly on any of the factors. Therefore, the cooperation subscale was dropped from the further analyses in this study.

Table H2

Rotated Factor Loadings of the Social and Task Competence Scales (Version 3)

Item	Communality	Factor 1	Factor 2	Factor 3
5	.51	.72		
1	.47	.63	.21	-.11
18	.32	.56		.13
20	.25	.48		-.11
11	.24	.42		.23
3	.21	.42		.18
7	.30	.37		.26
13	.25	.34	.34	
19	.08	.25	-.11	.10
4	.44		.71	.12
9	.42	.40	-.55	
6	.38		.52	-.29
16	.27		.47	.23
10	.20	.10	.42	
2	.17		.30	-.28
17	.42	.28		.58
15	.35		.20	.56
14	.37		-.28	.53
8	.44	.41		-.52
12	.28			.52

Factor Structure of the Self-Protection Scale

A factor analysis was performed on the data from the actual scales for the SPS (Version 1). The KMO statistic was .59 and indicated that the data was not suitable for factoring. Therefore, a factor analysis was performed on the data from the ideal scales for the SPS (Version 1). Bartlett's Test of Sphericity was significant, χ^2 (780) =1903.73, $p < .01$ and the KMO statistic was .71 indicating that the data was suitable for factoring. Cattell's scree criterion showed a four factor structure. The four factors accounted for 38.64% of the total variance. The rotated factor loadings of the SPS are shown in Table H3.

Table H3

Rotated Factor Loadings of the Self-Protection Scale (Version 1)

| | | Factor | | | |
Item	Communality	1	2	3	4
59	.57	.77		-.26	
55	.53	.76		-.18	.12
24	.46	.67		-.32	
23	.47	.66	-.16	.14	
36	.47	.65		.11	.14
31	.56	.64	.14	-.21	-.27
33	.48	.62		.16	
51	.52	.61		.26	
57	.42	.58	-.16	.19	.23
44	.42	.55		.24	
40	.38	.51			-.26
25	.27	.51	-.18		.18
34	.29	.46	.23		
54	.36	.42	-.22	.32	.23
42	.22	.33	.02		.23

50	.13	.32	-.25		
35	.57		.75	-.24	.85
32	.46		.59	-.16	.39
29	.32		.54		
49	.37	-.22	.53		.31
26	.31		.53	.14	
21	.31		.52		-.17
30	.57	.28	.51	.29	
27	.39	.26	.42	.17	-.12
47	.55	.32	.35	.34	-.19
45	.07	.15.	-.24		
38	.47			.69	
53	.49	.26	.14	.52	-.10
39	.27		.29	-.48	
60	.36	.29	.13	-.46	.36
37	.47	-.38		.43	.31
41	.22		.11	.40	.14
58	.42	.33	.16	.39	-.15
22	.24	.26		.33	.20
52	.51	.14		-.22	.68
48	.38		.25		.57
43	.42	.13		.31	.56
56	.40		-.20	.28	.55
28	.30		.17		.54
46	.16	.17		.15	-.27

Factor 1 had an eigenvalue of 7.12 and accounted for 17.80% of the total explained variance. Sixteen items (Items 23, 24, 25, 31, 33, 34, 36, 40, 42, 44, 51, 54, 55, 57 and 59) loaded at .30 or above on Factor 1. Items 47 and 58 loaded to approximately the same degree (+/- .20) hence were deleted. The items that loaded onto Factor 1 represented the emotion-focused coping component of self-protection. This construct represents an emotion-focused coping style.

Factor 2 had an eigenvalue of 3.24 and accounted for a further 8.11% of the total explained variance. The eight items (Items 21, 26, 27, 29, 30, 32, 35 and 49) that loaded on Factor 2 represented the defence mechanism of denial. This construct characterises the tendency to respond to unexpected or threatening events by refusing to accept their negative implications. Making external attributions for failure such as bad luck, task difficulty or flawed sources are common forms of denial (Baumeister, Dale & Sommer, 1998).

Factor 3 had an eigenvalue of 2.69 and accounted for a further 6.71% of the total explained variance. Four items (Items 37, 38, 41 and 53) loaded onto Factor 3. These four items represented the defence mechanism of isolation. This construct characterises people's tendencies to respond emotionally to a distressing stimulus by dismissing it as an isolated incident that is irrelevant to the self-concept or identity. Isolation involves spontaneously thinking of logically unrelated, affectively neutral or positive things. Trivialising the importance of feedback or relegating it to the past are considered to be forms of isolation that protect the self from threatening stimuli (Baumeister et al., 1998).

Factor 4 had an eigenvalue of 2.41 and accounted for 6.02% of the total variance. The five items (Items 28, 43, 48, 52 and 56) that loaded onto Factor 4 represented the defence mechanism of reaction formation. This construct characterises people's tendencies to respond to the implication that they have some unacceptable trait by behaving in a way that shows them to have the opposite trait. People who utilise this defence mechanism are thought to have unrealistically optimistic predictions for future performance after experiencing an initial failure on a task which impaired actual performance. They are also inclined to inflate their self-ratings in response to unfavourable personality feedback (Baumeister et al., 1998).

Reliability of the Retained Items

The reliability of the STCS (Version 3) was computed for the items retained from the factor analysis. The item-total correlations for each scale were also examined, and items with low item-total correlations were considered for deletion. The internal reliability of the measure did not improve beyond .78 if the items with low item-total correlations were deleted. Examination of the item-total correlations for the SPS (Version 1) revealed that the emotion-focused coping subscale improved from .77 to .80 with the deletion of item 54 and 57. Similarly, the reliability of the denial subscale improved from .61 to .63 when item 27 was deleted. Finally, the deletion of item 37, which loaded negatively in the item-total correlations, increased the reliability of the isolation subscale from .32 to .46. In each case, the deletion of these items also improved the conceptual meaning of the subscales.

I examined the interitem correlations for the STCS (Version 3), Social Competence Scale (Version 3) and Task Competence Scale (Version 3) actual and ideal scales next in order to ascertain whether they fell within the range recommended by Clark and Watson (1995) of .15 and .50. Referring to Table H4, it can be seen that the number of interitem correlations that fell within the recommended range for the retained STCS (Version 3) actual scale items was less than desirable, with only 16.6% of interitem correlations falling within the desired range. However, the average interitem correlation was .22, which was within the range that Clark and Watson (1995) recommended.

Referring to Table H5, it can be seen that the number of interitem correlations that fell within the recommended range for the retained STCS (Version 4) ideal scale items was better than the actual scale, though still less desirable, with 39.5% of interitem correlations falling within the desired range. However, the average

interitem correlation for this scale was .09, which was outside of the range that Clark and Watson (1995) recommended.

Table H4

Interitem Correlations between the Retained Items for the STCS (Version 3) Actual Scale

Item	1	3	4	5	6	8	9	10	11	12	15	16	17	18	20
1	-	-.02	.17*	.28**	.05	.13	-.04	.24**	.15	-.01	.16	.06	.09	.07	.19*
3		-	.16	.14	.00	.19*	.08	.15	.04	-.01	.13	.03	.00	.15	-.02
4			-	.06	.21*	.18*	.01	.03	.08	-.10	.08	.08	.02	.04	-.12
5				-	.09	.12	-.17	.09	.01	.04	.09	-.10	.01	.13	.24**
6					-	.31**	.16	.14	.09	.03	.09	.31**	-.03	-.16	.20*
8						-	.19*	.07	.00	.06	.15	.09	.05	.01	.13
9							-	.11	.00	.10	.00	.13	.07	-.01	.18
10								-	.07	.09	.10	.08	.23**	-.01	.16*
11									-	.22*	.20*	.07	.21*	.05	.05
12										-	.07	.23*	.25*	.13	.22*
15											-	.08	.13	-.04	.08
16												-	-.02	.00	.13
17													-	.26**	.19*
18														-	.20*
20															-

Note: * $p < .05$; ** $p < .01$; $N = 120$.

Table H5

Interitem Correlations between the Retained Items for the STCS (Version 3) Ideal Scale

Item	1	3	4	5	8	9	10	11	12	15	16	17	18	20
1	-	.21*	.19*	.47**	.14	-.04	.12	.15	-.05	.07	.03	.20*	.21*	.32**
3		-	.13	.28**	.07	.23*	.04	.17*	.22*	.24**	-.09	.16*	.10	.00
4			-	.11	-.09	-.36**	.16	.17*	-.01	.20*	.11	.02	.06	.04
5				-	0.15	.14	-.06	.24**	.11	.07	-.13	.05	.31**	.29**
8					-	.20*	.07	.00	-.21*	-.03	.08	-.16*	.11	.09
9						-	-.03	.03	.07	.12	-.05	.16*	.12	.06
10							-	.05	.07	-.01	.14	.00	.10	.04
11								-	.14	.12	-.06	.15	.09	.13
12									-	.19*	.04	.17*	.08	.10
15										-	.19*	.20*	.01	-.05
16											-	.13	.03	.13
17												-	.24**	.13
18													-	.25**
20														-

Note: * *p* < .05; ** *p* < .01; *N* = 120.

The interitem correlations of the Social Competence Scale (Version 3) and Task Competence Scale (Version 3) were examined next. Looking at Tables H6 and H7, 23.8% of the interitem correlations from the SCS (Version 3) actual scale and 42.9% from the SCS ideal scale fell within the recommended range of .15 and .50 (Clark & Watson, 1995). The average interitem correlation was .10 for the SCS (Version 3) actual scale and .11 for the SCS (Version 3) ideal scale, which again fell outside of the range of 1.5 to .50 for average interitem correlations that Clark and Watson (1995) recommended.

Table H6

Interitem Correlations between the Retained Items for the Social Competence Scale (Version 3) Actual Scale

Item	4	6	10	12	15	16	17
4	-	.14	.05	-.11	.06	.09	.02
6		-	.12	.01	.15	.34**	-.08
10			-	.09	.10	.09	.27**
12				-	.08	.22**	.25**
15					-	.13	.11
16						-	-.01
17							-

Note: ** $p < .01$, $N = 120$.

Table H7

Interitem Correlations between the Retained Items for the Social Competence Scale

(Version 3) Ideal Scale

Item	4	6	10	12	15	16	17
4	-	.22**	.16	-.01	.20*	.11	.02
6		-	.19*	.03	.07	.27**	-.12
10			-	.07	-.01	.14	.00
12				-	.19*	.04	.17*
15					-	.19*	.20*
16						-	.14
17							-

Note: * $p < .05$; ** $p < .01$; $N = 120$.

The interitem correlations of the Task Competence Scale (Version 3) (see Tables H8 and H9) were similar to those for the Social Competence Scale (Version 3), with 42.8% of the interitem correlations from the SCS (Version 3) actual scale and 53.6% from the Social Competence Scale (Version 3) ideal scale falling within the recommended range of .15 and .50 (Clark & Watson, 1995). The average interitem correlation was .09 for the Task Competence Scale (Version 3) actual scale and .16 for the Task Competence Scale (Version 3) ideal scale. The interitem correlation for the Task Competence Scale (Version 3) actual scale fell outside of the recommended range, but the interitem correlation for the Task Competence Scale (Version 3) ideal scale fell within the recommended range.

Table H8

Interitem Correlations between the Retained Items for the Task Competence Scale

(Version 3) Actual Scale

Item	1	3	5	8	9	11	18	20
1	-	-.02	.29**	.10	-.06	.12	.14	.20*
3		-	.18*	.21*	.12	.00	.17*	-.02
5			-	.08	-.18*	.01	.16*	.19*
8				-	.24**	.01	.01	.16
9					-	.03	-.01	.22**
11						-	.01	.02
18							-	.17*
20								-

Note: $* p < .05$; $** p < .01$; $N = 120$.

Table H9

Interitem Correlations between the Retained Items for the Task Competence Scale

(Version 3) Ideal Scale

Item	1	3	5	8	9	11	18	20
1	-	.21*	.47**	.14	-.04	.15	.21**	.32**
3		-	.28**	.07	.23**	.17*	.10	.00
5			-	.15	.14	.24**	.31**	.29**
8				-	.21*	.00	.11	.10
9					-	.03	.12	.06
11						-	.09	.13
18							-	.25**
20								-

Note: $* p < .05$; $** p < .01$; $N = 120$.

Tables H10 and H11 showed that there were 19.6% of interitem correlations for the retained SPS (Version 1) actual scale and 39.6% of interitem correlations for the retained SPS (Version 1) ideal scale that fell within the desired range, which was less than the recommendations by Clark and Watson (1995). Similarly, the average interitem

correlations for the retained SPS (Version 1) items were below the range of .15 to .50:

.11 for the actual scale and .13 for the ideal scale.

Table H10

Interitem Correlations between Retained Items for the SPS Actual Scale (Version 1)

					Students (n – 120)									
Item	21	23	24	25	26	28	29	30	31	32	33	34	35	36
21	-	.17	.04	.08	.34**	.03	.14	-.03	.20*	-.07	.21*	.08	.24**	.15
23		-	-.01	.18*	.09	-.04	.03	-.01	.25**	-.15	.28**	.18*	.06	.27**
24			-	.24**	.04	-.06	.01	.07	.30**	.06	.02	.20*	.10	.25**
25				-	.25**	.19*	.07	.12	.25**	.09	.14	.20*	.22*	.06
26					-	.02	.21*	.03	.26**	.13	.25**	.23**	.32**	.12
28						-	.06	-.05	-.03	.23**	.10	.06	.07	-.08
29							-	.27**	.12	.23**	.10	.46**	.64**	.13
30								-	.14	.25**	.22*	.21*	.17	.22*
31									-	-.02	.38**	.44**	.31**	.34**
32										-	.07	.10	.31**	.06
33											-	.27**	.18*	.33**
34												-	.54**	.30**
35													-	.21*
36														-

Note: * $p < .05$; ** $p < .01$, $N = 120$.

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Table H10 (continued)

Interitem Correlations between Items for the SPS Actual Scale (Version 1) continued

Item	38	40	41	42	43	44	48	49	51
21	.15	.14	.11	.17	-.05	.03	.08	.16	.10
23	.07	.27	-.06	.11	.03	.17	.10	.30	.25
24	.08	.26**	-.01	.26**	.19*	.24**	-.12	-.07	.24**
25	.12	.14	-.03	.05	-.10	.22**	.10	.17	.12
26	.19*	.16	.18*	.23**	-.22**	.13	.09	.22**	.22**
28	.03	-.12	-.02	-.03	.01	-.01	.08	.06	-.10
29	.04	-.06	.10	.11	.01	.02	.15	.17	.00
30	.14	.09	.01	-.17	.00	.09	.10	.00	.13
31	.09	.21*	-.03	.24**	.00	.27**	.04	.17	.26**
32	.13	-.07	.04	.02	.07	.04	.27**	.06	-.04
33	.17	.11	.12	.25**	-.03	.24**	.18*	.00	.27**
34	.01	.11	-.04	.14	.04	.25**	.18*	.15	.25**
35	.07	.02	.03	.17	.09	.12	.13	.24**	.09
36	.25**	.27**	-.11	.16	.12	.46**	.16	.10	.58**
38	-	.39**	.23**	.22**	.10	.25**	.08	-.03	.11
40		-	.21*	.37**	-.04	.35**	.03	.00	.41**
41			-	.24**	-.05	.05	.11	.04	.03
42				-	.07	.30**	.16	-.01	.29**
43					-	.02	.03	-.01	-.03
44						-	-.02	.15	.63**
48							-	.19*	-.01
49								-	.15
51									-

Note: * *p* < .05; ** *p* < .01, *N* = 120.

Table H10 (continued)

Interitem Correlations between Items for the SPS Actual Scale continued

Item	52	53	55	56	59
21	-.02	.25**	-.02	.13	-.10
23	-.06	.13	.03	-.01	.07
24	-.10	.09	.29**	.04	.34**
25	-.07	.20*	.05	.07	-.01
26	-.09	.28**	.06	.16	-.10
28	.22**	-.12	-.11	-.06	-.09
29	-.04	.04	-.09	.20*	-.14
30	.02	.33**	.00	.18*	-.18*
31	-.17	.22**	.21*	.11	.22*
32	.21*	.14	-.14	.12	-.04
33	-.07	.19*	.07	.14	.12
34	.00	.18*	.12	.21*	.12
35	-.03	.13	.00	.20*	-.05
36	-.07	.23**	.21*	.29**	.08
38	-.12	.42**	-.20*	.24**	-.22*
40	-.16	.38**	.21*	.25**	.00
41	.15	.04	-.14	.17	.01
42	-.06	.19*	.15	.10	.28**
43	.07	-.07	.18*	.24**	.20*
44	-.05	.26**	.23**	.21*	.26**
48	.21*	.14	-.10	.05	-.08
49	-.10	.10	-.01	-.08	-.02
51	-.19*	.29**	.34**	.25**	.22*
52	-	-.22**	-.02	.03	.11
53		-	.19*	.30**	-.07
55			-	.23**	.39**
56				-	0.03
59					-

Note: * $p < .05$; ** $p < .01$, $N = 120$.

Table H11

Interitem Correlations between Items for the SPS Ideal Scale

	21	23	24	25	26	28	29	30	31	32	33	34	35	36
21	-	.19*	-.03	-.08	.43**	.04	.26**	.32**	.12	.12	.19*	-.06	.22*	-.04
23		-	.24**	.30**	.07	-.05	.12	.27**	.35**	-.07	.63**	.18	-.17	.37**
24			-	.31**	.04	-.03	.12	.17	.46**	-.08	.27**	.32**	.02	.26**
25				-	-.02	.22*	.08	.07	.16	-.17	.26**	.14	-.07	.21*
26					--	.13	.25**	.30**	.07	.19*	.12	.08	.29**	-.10
28						-	-.05	-.01	-.07	.20*	.02	.00	.10	.01
29							-	.42**	.10	.27**	.17	.14	.38**	.07
30								-	.29**	.19*	.36**	.27**	.16	.31**
31									-	.00	.39**	.37**	.10	.31**
32										-	.10	.09	.43**	.09
33											-	.36	-.10	.41
34												-	.22*	.33**
35													-	.09
36														-

Note: * $p < .05$; ** $p < .01$, $N = 120$.

Table H11 (continued)

Interitem correlations between Items for the SPS Ideal Scale continued

Item	38	40	41	42	43	44	48	49	51
21	.09	.11	.01	.10	-.11	-.02	.06	.00	.12
23	.07	.20	.14	.09	.15	.40	-.01	-.22	.41
24	-.15	.26	.05	.05	-.04	.25	-.11	-.02	.21
25	.17	.28	-.01	.24	.18	.19	-.03	-.04	.11
26	.16	-.03	.18	.01	.10	-.01	.18	.11	.04
28	.02	-.14	.11	.06	.19	-.17	.34	.14	-.12
29	.11	.04	.03	.24	-.02	.11	.13	.13	.13
30	.24	.29	.13	.24	.13	.27	.05	.14	.38
31	.02	.46	-.01	.17	-.15	.30	-.15	-.08	.41
32	-.17	-.09	.20	.04	.24	.06	.24	.25	.04
33	.11	.27	.31	.13	.07	.36	.10	-.09	.44
34	.08	.24	.09	.29	.04	.20	.03	.07	.24
35	.01	-.03	.00	.19	-.09	.02	.15	.44	-.05
36	.04	.26	.10	.24	.18	.70	.06	.10	.68
38	-	.13	.21	.23	.19	.14	.06	.19	.12
40		-	.10	.26	.07	.23	-.06	.00	.34
41			-	.04	.18	.17	.10	.12	.14
42				-	.13	.16	.13	.15	.21
43					-	.14	.22	.08	.14
44						-	-.03	.01	.71
48							-	.27	-.01
49								-	-.07
51									-

Note: * *p* < .05; ** *p* < .01, *N* = 120.

Table H11 (continued)

Interitem Correlations between Items for the SPS Ideal Scale continued

Item	52	53	55	56	59
21	-.06	.15	-.03	-.13	.10
23	.04	.26**	.41**	-.05	.38**
24	.06	.18	.47**	.06	.55**
25	.12	.18*	.26**	.03	.26**
26	-.05	.18*	.13	.03	.03
28	.34**	.02	.03	.16	-.08
29	-.13	.19*	.07	.02	.06
30	-.11	.39**	.16	.01	.12
31	-.10	.21*	.45**	-.18	.45**
32	.11	-.08	.03	.03	-.09
33	-.12	.24**	.40**	-.06	.33**
34	-.04	.14	.25**	-.13	.28**
35	.04	.11	.05	.00	.11
36	.00	.26	.34	.07	.33
38	-.03	.36**	-.05	.16	-.08
40	-.09	.30**	.33**	-.09	.36**
41	-.01	.29**	.11	.03	.13
42	.24	.21*	.23**	.06	.24**
43	.35**	.06	.08	.22	-.02
44	-.06	.37**	.23*	.07	.33**
48	.18	-.02	.00	.32**	-.12
49	.14	.09	-.13	.10	-.14
51	-.12	.35**	.31**	.06	.36**
52	-	-.15	.06	.24**	.12
53		-	.15	.12	.24**
55			-	.08	.64**
56				-	-.03
59					-

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Note: * $p < .05$; ** $p < .01$, $N = 120$.

Appendix I: Correlations between the STCS and Dependent Variables for Group Setting

	1	2	3	4	5	6	7	8	9	10
1. Task planning	-									
2. No. of Anagrams solved	.07	-								
3. Task persistence (time)	-.02	-.11	-							
4. No. of Strategies	.00	-.15	.17	-						
5. Actual Social Competence	-.08	-.08	.00	-.02	-					
6. Ideal Social Competence	-.03	.06	-.19	-.03	.39**	-				
7. Actual Identification	-.12	-.20	.03	-.13	.78**	.24	-			
8. Ideal Identification	.05	.04	-.14	.01	.22	.70**	.26	-		
9. Actual Communication	-.09	-.02	.13	.20	.44**	.13	-.06	-.15	-	
10. Ideal Communication	.02	.12	-.09	.04	.31*	.55**	.07	.16	.38**	-

Note: * $p < .05$; ** $p < .01$, $N \leq 60$.

	11	12	13	14	15	16	17	18	19	20
1. Task planning	-.10	-.20	.03	.01	-.23	-.29*	-.13	-.34**	-.15	.03
2. No. of Anagrams solved	.17	.14	.15	.11	.18	.17	.11	.09	-.05	.00
3. Task persistence (time)	.18	-.04	.02	.01	-.08	.08	.14	-.05	.24*	.15
4. No. of Strategies	-.16	-.08	-.13	-.07	-.22	-.17	.06	-.01	.03	.09
5. Actual Social Competence	.14	.23	.09	.09	.19	.20	.12	.08	.21	-.06
6. Ideal Social Competence	-.12	.30*	.10	-.04	.01	.22	.12	.35**	.28*	.21
7. Actual Identification	.13	.09	.09	.03	.32*	.10	-.01	-.04	.36*	.25
8. Ideal Identification	-.07	.31*	.10	-.13	.06	.38*	-.01	.19	.29*	.36**
9. Actual Communication	.05	-.03	-.06	-.01	-.04	-.10	.14	-.05	-.11	-.33**
10. Ideal Communication	-.11	-.02	-.16	.04	-.13	-.14	.15	.10	-.09	-.11
11. Actual Task Competence	-	.39**	.45**	.47**	.71**	.45**	.68**	.32*	.35**	.13
12. Ideal Task Competence	.39**	-	.38*	.56**	.34*	.92**	.32*	.81**	.41**	.36**

13. Actual Strategise	-	.55**	.45**	.47**	.16	.18	.16	.15
14. Ideal Strategise		-	.37**	.59**	.21	.23	.36**	.29*
15. Actual Persist			-	.46**	.39**	.25	.42**	.18
16. Ideal Persist				-	.30*	.65**	.39**	.39*
17. Actual Planning					-	.49**	.28*	.15
18. Ideal Planning						-	.38**	.31*
19. Actual Self-Protection							-	.48**

Note: * $p < .05$; ** $p < .01$, $N \leq 60$.

	21	22	23	24	25	26	27	28
1. Task planning	-.03	.07	-.24	-.05	.00	-.07	-.07	.01
2. No. of Anagrams solved	-.10	.03	-.07	-.03	.20	.13	-.11	-.04
3. Task persistence (time)	.23	.18	.25	.18	-.03	-.04	.21	.11
4. No. of Strategies	.09	.24	-.16	-.03	-.08	-.11	.02	-.02
5. Actual Social Competence	.10	-.21	.18	.10	.08	-.06	.18	.33*
6. Ideal Social Competence	.28*	.07	.11	-.10	-.01	-.04	.22	.32*
7. Actual Identification	.24	.08	.28	.16	.08	.08	-.08	0.18
8. Ideal Identification	.32**	.29*	.15	-.10	.03	-.04	.12	.23
9. Actual Communication	-.14	-.26*	-.11	.00	-.15	-.18	.34**	.20*
10. Ideal Communication	.01	-.33**	-.27*	-.22	-.12	-.08	.25	.33*
11. Actual Task Competence	.21	-.01	0.23	.19	.20	.03	.30*	.15
12. Ideal Task Competence	.34**	.19	.07	.04	.21	.28*	.39*	.31
13. Actual Strategise	.24	.18	.11	-.04	.15	.12	.08	.04
14. Ideal Strategise	.34*	.04	.02	-.01	.31*	.31*	.16	.31*
15. Actual Persist	.19	.07	.24	.10	.34**	.01	.01	.15
16. Ideal Persist	.31*	.20	.12	.08	.31*	.26	.35*	.34*
17. Actual Planning	.25	.01	.05	.11	.02	-.08	.29*	.16
18. Ideal Planning	.27*	.14	.25	.12	.21	.18	.34*	.19
19. Actual Self-Protection	.74**	.38**	.47**	.18	.42**	.18	.24	.30*

20. Ideal Self-Protection	.31*	.74**	.24	.42**	.35**	.51**	.17	.28*
21. Actual Emotion Focused Coping	-	.25*	.22	-.12	.22	.01	.17	.15
22. Ideal Emotion Focused Coping		-	.17	.17	.20	.40**	.00	-.11
23. Actual Denial			-	.47**	.23	-.07	.14	-.05
24. Ideal Denial				-	.09	.19	-.06	-.02
25. Actual Isolation					-	.56**	.09	.12
26. Ideal Isolation						-	.18	.21
27. Actual Reaction Formation							-	.45**
28. Idea Reaction Formation								-

Note: $* p < .05$; $** p < .01$, $N \leq 60$.

Appendix I: Additional Results of Regression Analysis for Number of Anagrams from

Study 2.

The results revealed that actual persist (IV1), ideal persist (IV2) and actual reaction formation (IV3) and ideal reaction formation (IV4) did not independently predict problem solving in Step 1, $ps \geq .26$. However, entry of the two-way interaction terms in Step 2, the three-way interaction terms in Step 3 and the four-way interaction terms in Step 4 of the analysis significantly improved the prediction of number of anagrams. A disordinal two-way interaction between actual persist and ideal reaction formation predicted number of anagrams, $\beta = .73$, t (119) = 2.24, $p < .05$.

To decompose this interaction, I plotted it (see Figure I1) and then performed a simple linear regression analysis after I split the data by each factor. First, I split the data by actual persist and tested the simple effects of ideal reaction formation at each level of actual persist. Next, I split the data by ideal reaction formation and tested the simple effects of actual persist at each level of ideal reaction formation.

The test of simple effects examining the relationship between actual persist and number of anagrams was significant when ideal reaction formation was high, $\beta = .61$, t (50) = 1.96, $p = .05$ but not when actual self-protection was low, $\beta = -.18$, t (57) = -.05, $p = .96$. Thus, the number of anagrams that high actually persist, high ideal reaction formation participants solved increased the more that they wanted to minimise feedback from their everyday lives. This result provided further support for Hypothesis 7 that self-protection should moderate the relationship between task competence and problem

solving such that higher self-protection should be associated with higher task

competence and more problem solving.

Figure I1. Number of Anagrams as a Function of Actual Persist and Ideal Reaction Formation.
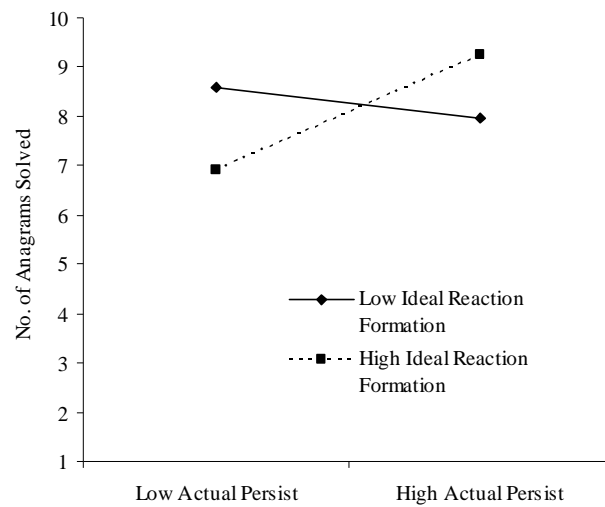
Appendix J: Additional Results of Regression Analysis for Task Persistence (time)

The results of the regression analysis for actual communication, ideal communication, actual reaction formation and ideal reaction formation for task persistence (time) revealed that ideal communication independently predicted task persistence (time) in Step 1, $\beta = -1.99$, t (119) = -2.48, $p = .01$. Entry of the interaction terms in Step 2 of the analysis significantly improved the prediction of task prediction (time). A disordinal two-way interaction between ideal communication and actual reaction formation predicted task persistence (time), $\beta = -2.49$, t (119) = -2.25, $p < .05$.

To decompose this interaction, I plotted it (see Figure I1) and then performed a simple linear regression analysis after I split the data by each factor. First, I split the data by ideal communication and tested the simple effects of actual reaction at each level of ideal communication. Next, I split the data by actual reaction formation and tested the simple effects of ideal communication at each level of actual reaction formation.

Figure J.1. Task Persistence (time) as a Function of Ideal Communication and Actual Reaction Formation.
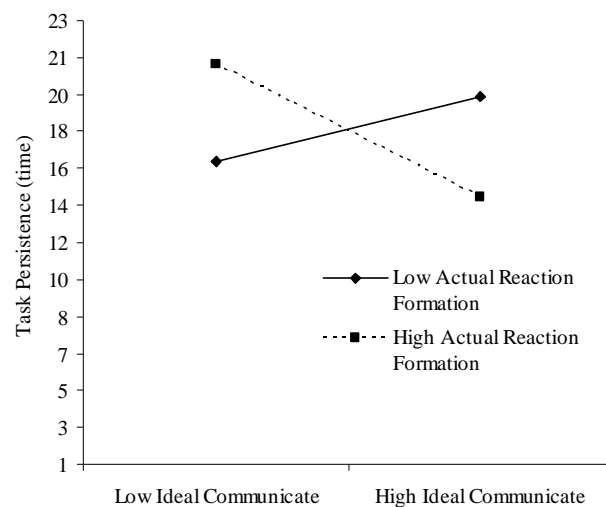
The test of simple effects examining the relationship between ideal communication and task persistence (time) was significant when actual reaction formation was high, $\beta =$ -3.12, t (53) = -2.51, $p < .05$ but not when actual self-protection was low, $\beta = -.37$, t (54) = -.42, $p = .67$. Thus, the length of time that low ideal communication, high actual reaction formation participants persisted increased the more that they wanted to minimise feedback from their everyday lives. This result provided further support for Hypothesis 6 that self-protection should moderate the relationship between social competence and problem solving such that higher self-protection should be associated with lower social competence and more problem solving.

Appendix J: The Social and Task Competence Scale (Version 4)

1. You have been unfairly blamed by your manager for losing sales. You could easily find another job, but you try hard to improve your sales instead.

2. You have three tasks to do today. Instead of making a start on the first task straightaway, you make a plan of how long each task will take and then, after looking at your schedule, decide which task to tackle first.

3. A customer has complained about the quality of your work. You think that you did a good job, but you spend some time checking your work to make sure.

4. Your boss asks you to take charge of a new project, but he is not very clear about exactly what he wants you to do. You could try to fill in the details yourself later, but you ask your boss for a clearer explanation instead.

5. Your boss asks you to work on a project with a colleague. You could try to impress your boss by making it look like your colleague has not put in as much work on the project as you have, but you decide to co-operate with your colleague instead in order to produce the best work.

6. You have just started a new job. Although it is your first day at work, you feel that you are a part of the organisation.

7. You have lots of work to finish, but you have a bad headache. You could take a pain-killer and carry on working, but you stop working and go home instead.

8. Your manager has asked you to give a talk to some colleagues. You could make some notes about what to say in your talk, but you are pressed for time and so you give your talk without any preparation.

9. You have just started a new job. You could keep track of your work productivity in order get some idea of how well you are doing, but this would be time-consuming and so you decide not to bother.

10. You make a comment during a busy meeting. The other members of the meeting seem to misunderstand. You could try to clarify what you meant, but you keep quiet instead.

11. You have been given a lot of work to do with two other colleagues, but they are not in their offices. You could try to find your two colleagues to ask them to help you, but you decide to start the work on your own.

12. You have worked in the same company for 10 years. Although you could join a more prestigious company, you feel a strong sense of allegiance to your own company.

13. You need to finish some work before you meet your client tomorrow. You could break for lunch, but you continue working throughout your lunch hour.

14. Your manager has assigned you to an important project that will take a long time to complete. You could start off by making a work plan, but you prefer to start working on the project straightaway.

15. You think that you may have made a mistake in some calculations that you have been doing. Although you need to finish your work quickly, you re- check your calculations.

16. You are speaking to a client on your mobile phone when your phone suddenly becomes crackly and you can't hear some of the things that your client is saying. You could ask your client to repeat herself, but finish the call instead.

17. You are busy working on an assignment when a colleague interrupts you to complain that the office photocopier is jammed. Although you know how to fix the photocopier, you are too busy and so don't offer to help.

18. You are considering leaving your company. Although you have tried to commit yourself to your company, you have never been able to feel like you belong there.

19. You have been asked to perform a time-consuming task by your boss. You become tired half-way through the task, and so you leave the rest of the work until tomorrow.

20. While working together on a project, you find that your colleague is making decisions without discussing them with you. You could stop working on the project, but you keep trying to make a contribution to the project instead.

Appendix K: The Self-Protection Scale (Version 2)

How would you ACTUALLY behave in each of the following situations?
How would you IDEALLY behave in each of the following situation?

Your manager tells you that if you cannot fix a mistake that you have made within a few hours, you will lose your job. Although you would like to keep your job, you do not feel confident that you will be able to fix your mistake. You are still trying to solve the problem when your manager asks you for the solution.

21. You tell your manager that you are confident you will solve the problem very soon.
22. You prepare to lose your job.
23. You think that the situation is a one-off experience.
24. You propose that it would be helpful to discuss your ideas with a colleague.
25. You consider that you are having bad luck.
26. You think that you will never be able to solve these types of problems.
27. You break out in a cold sweat.
28. You think how you always make costly mistakes.

You have attended a meeting with several colleagues to discuss progress on an important project. You have been working hard on this project and think that your work is good. The team leader tells you in front of everyone who is present that your work is unsatisfactory and asks you for an explanation.

29. You say that you have just had a bad week this week.
30. You can see what your team leader is saying and you are open to suggestions.
31. You suddenly feel as if you cannot think straight.
32. You say that you think that you will never be good enough for this team.
33. You try to prove to your team that your work is satisfactory.
34. You ask for suggestions to improve your work.
35. You think that your team leader is joking.
36. You think that you are not as good as the other team members.

You find a confidential report on the floor of your office and you are not sure what to do with it. While you are considering your options, your manager sees you holding the report and angrily asks you to explain what you are doing with it.

37. You say that you are not doing anything.
38. You hide the report.
39. You think that this has never happened to you before when you have tried to do the right thing.
40. You ask your manager if he owns the report and you offer to hand it back.
41. You think that you are a very honest person and you try to prove it.

42. You think how bad the situation must look to your manager.
43. You freeze.
44. You believe that everyone in the office will think that you are a snoop now.

Some work has taken you much longer to complete than you planned and you do not think that you can charge your client for all of your time. You ask a senior colleague for some advice about how much to charge. Instead of giving you advice, your colleague informs you that he intends to tell the manager that you cannot do your job properly.

45 Your worry about what your manager will do when he finds out.
46. You begin to doubt that you will be able to finish your work on time in future
47. You tell your colleague that this is the first time that you have taken so long to do your work.
48. You wonder whether you can do your job properly.
49. You plan to finish your work early in future.
50. You think of several good reasons to tell your manager that will explain your actions.
51. You believe that you have done your job properly.
52. You accept that it looks like you cannot do your job properly.

A close colleague tells you that she has breached company policy and your company stands to lose its biggest client. You and your colleague agree that you will tell your manager, but without mentioning your colleague's name. Your manager considers that you are untrustworthy and threatens to fire you if you do not reveal to him who is responsible.

53. You say that you cannot reveal who is responsible.
54. You do not believe that your manager is serious about firing you.
55. You think how you could do with a cup of coffee about now.
56. In your opinion, it is more important to focus on how to keep your biggest client.
57. You tell your manager who is responsible.
58. You think that your manager is serious about firing you.
59. You think about how you have never been in this position before.
60. You feel sick in the stomach.

Appendix L: Reliability and Factor Structure of the STCS (Version 4) and the SPS

(Version 1)

Reliability of the Social and Task Competence Scale and Self-Protection Scale

Alphas for the actual and ideal scales of the STCS (Version 4) and its subscales are

shown in Table L1.

Table L1

Alpha Coefficients for the Revised STCS (Version 4)

Scale	Items	Alpha	
		Actual	Ideal
STCS	1…20	.69	.83
Task Competence	1, 2, 3, 7, 8, 9, 13, 14, 15, 19	.65	.72
Planning	2, 8, 14	.60	.46
Persistence	1, 7, 13, 19	.28	.64
Strategise	3, 9, 15	.59	.64
Social Competence	4, 5, 6, 10, 11, 12, 16, 17, 18, 20	.33	.63
Communication	4, 10, 16	.40	.62
Cooperation	5, 11, 17, 20	-.02	.24
Identification	6, 12, 18	.18	.32
Self-Protection	21…60	.51	.64
Emotion focused coping	24, 27, 31, 34, 40, 43, 45, 50, 56, 60	.50	.70
Denial	22, 25, 30, 35, 37, 42, 51, 52, 54, 58	.11	.08
Isolation	23, 26, 29, 36, 39, 44, 47, 48, 55, 59	.27	.62
Reaction Formation	21, 28, 32, 33, 38, 41, 46, 49, 53, 57	.63	.57

For the actual scales, the STCS (Version 4) had the highest reliability, $\alpha = .69$,

followed by the Task Competence Scale and Persistence Subscale, $\alpha = .65$ and $\alpha = .60$

respectively. The only other scale with an acceptable reliability was the Reaction

Formation Subscale with an alpha value of $\alpha = .63$. The alpha values of most of the

other subscales were less than the alpha value of .60 recommended by Nunnally (1978) for scales to be used in basic research. The Cooperation Subscale had an α value of -.02 and indicated that the assumptions of the reliability model were violated. Therefore, this subscale was excluded from the subsequent statistical analyses.

Factor Structure of the Social and Task Competence Scale

I performed a principal axis factor analysis with promax rotation in order to analyse the factor structure of the STCS (Version 4). The rotation failed to converge in 25 iterations when I entered the 60 items from the STCS (Version 4) in the analysis of either the actual or ideal scale. The rotation also failed to converge in 25 iterations when the 40 actual and ideal social and task competence items were entered in the same analysis and when the 80 actual and ideal self-protection items were entered in the same analyses. Therefore, the number of iterations was raised to 100 in a separate factor analysis. The items converged in 29 iterations. However, the solution was difficult to interpret. Therefore, I completed separate factor analyses on subsets of actual social and task competence items, ideal social and task competence items.

For the actual and ideal social and task competence items, the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) statistic was above .60. For the actual and ideal social and task competence items, the Bartlett's Test of Sphericity was significant: χ^2 (190) = 654.05, p < .01 and χ^2 (190) = 1003.14, p < .01 respectively. Therefore, both datasets were suitable for factoring. Cattell's scree criterion showed a two factor structure for both the actual social and task competence items and the ideal social and task competence items. Therefore, two factors were extracted.

Items that loaded onto more than one factor to approximately the same degree (+/-.20) were deleted. The factors in the factor analysis of the actual social and task competence items accounted for 23.35% of the total variance and the factor analysis of ideal social and task competence items accounted for 33.46% of the total variance. For the factor analysis of actual social and task competence items, positive items (Items 3, 4, 5, 12, 13 and 15) loaded the highest on Factor 1 and negative items (Items 7, 8, 9, 10, 14, 16, 17 and 19) loaded the highest on Factor 2. Similarly, for the ideal scale, positive social and task competence items (Items 1, 2, 3, 4, 5, 6, 12, 13, 15 and 20) loaded the highest on Factor 1 and negative social and task competence items (Items 7, 8, 9, 10, 11, 14, 16, 17, 18 and 19) loaded the highest on Factor 2. These factors appeared to be method factors that reflected consistent patterns of responding as a function of item wording.

In order to interpret the data independent of these method factors, I analysed the positive actual and ideal social and task competence items and negative actual and ideal social and task competence items in separate factor analyses. Cattell's scree plots in the analyses of both the positive and negative actual and ideal social and task competence items supported a one factor solution. Bartlett's Test of Sphericity was significant, χ^2 (190) = 1170.25, p < .01. The KMO statistic was .72, which indicated that the data was suitable for factoring. The positive actual items (Items 3, 4, 5, 13, 15, and 20) and positive ideal items (Items 2, 3, 4, 5, 6, 12, 13, 15 and 20) loaded the highest onto Factor 1 and explained 22.86% of the total variance. These results suggested that participants may not have discriminated between the actual and ideal questions for these items.

The factor analysis of negative actual and ideal social and task competence items showed similar results. Cattell's scree plot indicated that a one factor solution was appropriate. Bartlett's Test of Sphericity was significant, χ^2 (190) = 1162.623, p< .01. The KMO statistic was .71 and indicated that the data was suitable for factoring. The negative actual social and task competence items (Items 7, 8, 9, 10, 16, 17 and 19) and negative ideal social and task competence items (Items 7, 8, 9, 10, 16, 17 and 19) loaded the highest onto Factor 1, which explained 22.48% of the total variance. The loading of social and task competence items onto the same factor suggested that the items are related to the same underlying construct. However, the loading of actual and ideal items onto the same factor suggested that respondents may not have discriminated between the actual and ideal questions for almost all of the reverse scored items. Therefore, I performed four separate factor analyses on the positive actual, positive ideal, negative actual and negative ideal social and task competence items. Cattell's scree plots for each factor analysis indicated that a one factor solution was appropriate.

Factor Analysis of Positive Items

Four items (Items 3, 4, 5 and 15) loaded above .30 onto Factor 1 in the factor analysis of the positive actual social and task competence items. Factor 1 had an eigenvalue of 2.18 and explained 21.82% of the total variance. On the positive ideal social and task competence scale, nine items (Items 1, 2, 3, 4, 5, 12, 13, 15 and 20) loaded above .30 onto Factor 1. This factor had an eigenvalue of 3.22 and explained 35.78% of the total variance. These results almost mirrored the results for the positive actual social and task scale. Item 15, which was a task competence item along the dimension of strategising, loaded the highest onto Factor 1 in both factor analyses.

Examination of item meanings indicated that four items (Items 1, 2, 3, 13 and 15) were constructed as task competence items and four items (Items 4, 5, 12 and 20) were constructed as social competence items. Item 1 was a persistence item measuring increasing effort. Item 2 was a strategising item measuring planning. Item 3 was a strategising item measuring checking. Item 13 was a persistence item measuring persistence (time). Item 15 was a strategising item measuring checking. Item 4 was a communicate item measuring clarification. Item 5 was a cooperation item measuring flexibility. Item 12 was an Identification item measuring loyalty. Item 20 was a Cooperation item measuring flexibility. A review of Items 4, 5, 12 and 20 revealed that these items described the types of strategies that people may use to perform a task in a social situation at work. Therefore, in light of these items loading onto the same factor as the task competence items, I deemed these items to measure the social aspect of task competence along its dimension of strategising. I named this Factor 1: Strategising.

Examination of the interitem correlations in Table L2 revealed that three items (Items 1, 12 and 20) were not significantly correlated with any of the other items that loaded onto Factor 1 in the factor analysis of positive actual social and task competence items. Examination of the interitem correlations in Table L3 revealed that all of the items that loaded onto Factor 1 in the factor analysis of the positive ideal social and task competence items were significantly correlated with one another and fell within the recommended range of .15 to .50 (Clark &Watson, 1995). The average i

Table L2

Correlation Matrix of Items that Loaded onto Factor 1 in the Factor Analysis of

Positive Actual Social and Task Competence Items

Item	1	2	3	4	5	12	13	15	20
1	-	.17*	.13	.15	.06	.03	.01	.16*	.21*
2		-	.23**	.21*	.14	.04	.07	.24**	.09
3			-	.34**	.35**	.24**	.27**	.46**	.28**
4				-	.30**	.10	.22**	.44**	.15
5					-	.36**	.12	.49**	.05
12						-	.19*	.29**	.05
13							-	.28**	-.02
15								-	.20*
20									-
M	4.38	5.02	5.72	5.94	5.81	5.03	5.13	6.15	4.67
SD	1.80	1.93	1.33	1.27	1.57	1.60	1.61	1.18	1.62

*Note: * p < .05; ** p < .01; N = 157*

Table L3

Correlation Matrix of Items that Loaded onto Factor 1 in the Factor Analysis of

Positive Ideal Social and Task Competence Items

Item	1	2	3	4	5	12	13	15	20
1	-	.32**	.37**	.29**	.29**	.27**	.23**	.36**	.37**
2		-	.34**	.28**	.24**	.24**	.22**	.34**	.16*
3			-	.41**	.47**	.35**	.29**	.74**	.34**
4				-	.48**	.31**	.26**	.57**	.29**
5					-	.36**	.24**	.48**	.35**
12						-	.33**	.36**	.24**
13							-	.36**	.23**
15								-	.36**
20									-
M	5.10	5.51	6.03	5.99	5.82	5.18	5.27	6.18	5.18
SD	1.92	1.82	1.19	1.44	1.61	1.75	1.76	1.25	1.68

*Note: * p < .05; ** p < .01; N = 157*

I examined the item-total correlations in Table L4 next. The item-total correlations for actual items (Items 1, 12 and 20) were much lower than the item-total correlations for actual items (Items 3, 4, 5 and 15). In contrast, the item-total correlations for the ideal items were generally consistent. Therefore, I did not include Items 1, 12 and 20 in the subsequent statistical analyses. For the positive actual and ideal social and task competence items, the alpha coefficient for the remaining four items (Items 3, 4, 5 and 15) was .72 and .80 respectively.

An example of a strategising item is: "A customer has complained about the quality of your work. You think that you did a good job, but you spend some time checking your work to make sure". A high strategizing person should agree with this item. In contrast, a low task strategizing person should disagree with this item.

An example of a social-strategising item is "Your boss asks you to take charge of a new project, but he is not very clear about exactly what he wants you to do. You could try to fill in the details yourself later, but you ask your boss for a clearer explanation instead". A high social strategizing person should agree with this item. In contrast, a low social strategizing person should disagree with this item.

Table L4

Item-Total Correlations of Positive Actual and Ideal Social and Task Competence Items

Item		Actual		Ideal	
		Item-Total Correlation	Alpha If Item Deleted	Item-Total Correlation	Alpha If Item Deleted
1	You try harder after your boss unfairly blames you for losing sales	.20	.66	.48	.79
2	You plan how you will complete three new tasks after you check your schedule.	.26	.65	.30	.80
3	You check your work following a customer complaint, even though you think that you did a good job	.54	.59	.64	.78
4	You ask your boss to clarify some instructions after you have been given a new task to do	.43	.61	.57	.78
5	You cooperate you're your colleague instead of showing him up when he is not working as hard as you on a project.	.41	.61	.55	.78
12	You are loyal to the organization that you have worked even though you could easily find another job	.28	.64	.49	.79
13	You finish some work during lunch instead of taking a break	.24	.65	.30	.80
15	You re-check your work for any mistakes even though you are in a hurry	.60	.59	.69	.77
20	You persevere with your work even though you have discovered that your colleague has not consulted you about some important decisions	.23	.65	.44	.80

*Note: * p < .05; ** p < .01; N = 157*

Factor Analysis of Negative Items

Seven items (Items 7, 8, 9, 10, 16, 17 and 19) loaded above .30 onto Factor 1 in the factor analysis of the negative actual social and task competence items. This factor had an eigenvalue of 1.97 and explained 19.65% of the total variance. Eight items (Items 7, 8, 9, 10, 14, 16, 17 and 19) loaded the highest onto Factor 1 in the factor analysis of the negative ideal social and task competence items. This factor had an eigenvalue of 3.17 and explained 31.70% of the total variance. These results almost mirrored the results for the negative actual social and task competence items. Item 9 was a task competence item along the dimension of strategizing and loaded the highest onto Factor 1 in both factor analyses.

Examination of item meanings revealed that five items (Items 7, 8, 9, 14 and 19) were constructed as task competence items and thee items (Items 10, 16 and 17) were constructed as social competence items. Items 7 and 19 were persistence items and items 8, 9 and 14 were strategising items. Items 10 and 16 were communicate items measuring clarification, and Item 17 was a cooperation item measuring persistence on a task. Therefore, in light of these items loading onto the same factor as the persistence items, I deemed three items (Items 8, 9, and 14) to measure task-related persistence and three items (Items 10, 16 and 17) to measure the social aspect of task competence along its dimension of persistence. I named Factor 1 in the factor analyses of negative actual social and task competence items and negative ideal social and task competence items: Persistence.

Examination of the inter-item correlations in Table L5 revealed that one item (Item 16) was not significantly correlated with any of the other items that loaded onto Factor 1

in the factor analysis of negative actual social and task competence items. Examination of the inter-item correlations in Table L6 revealed that all of the items that loaded onto Factor 1 in the factor analysis of the negative ideal social and task competence items were significantly correlated with one another and fell within the recommended range of 1.5 to 5.0 (Briggs & Cheek, 1986; Clark &Watson, 1995).

The alpha coefficient for the negative actual items (Items, 7, 8, 9, 10, 16, 17 and 19) was .71 and negative ideal items (Items 7, 8, 9, 10, 14, 16, 17 and 19) was .81. I examined the item-total correlations in Tables L7 next. The item-total correlations for the negative actual social and task competence items (Items 7, 8, 9, 10, 16, 17 and 19) were consistent, and the alpha coefficient did not improve with the deletion of any items. The item-total correlation for one negative ideal social and task item (Item 14) was lower than the other items. Therefore, Item 14 was deleted.

An example of an item measuring task persistence is "You have lots of work to finish, but you have a bad headache. You could take a pain-killer and carry on working, but you stop working and go home instead". A high task persistence person should disagree with this item. In contrast, a low task persistence person should agree with this item. An example of a social persistence item is "You are speaking to a client on your mobile phone when your phone suddenly becomes crackly and you can't hear some of the things that your client is saying. You could ask your client to repeat herself, but finish the call instead". A high social persistence person should disagree with this item. In contrast, a low social persistence person should agree with this item.

Table L5

Correlation Matrix of Items Loading onto Factor 1 in the Factor Analysis of Negative

Actual Social and Task Competence Items

Item	7	8	9	10	16	17	19
7	-	.19*	.34**	.22**	.30**	.17*	.27**
8		-	.34**	.21**	.19*	.25**	.17*
9			-	.38**	.14	.26**	.28**
10				-	.18*	.30**	.28**
16					-	.31**	.35**
17						-	.32**
19							-
M	4.92	4.76	4.16	5.00	5.50	5.20	4.59
SD	2.00	1.81	1.80	1.88	1.64	1.73	1.78

*Note: * p < .05; ** p < .01; N = 157*

Table L6

Correlation Matrix of Items Loading onto Factor 1 in the Factor Analysis of Negative

Ideal Social and Task Competence Items

Item	7	8	9	10	14	16	17	19
7	-	.33**	.40**	.42**	.20*	.32**	.30**	.47**
8		-	.49**	.26**	.18*	.32**	.22**	.31**
9			-	.47**	.44**	.23**	.41**	.62**
10				-	.27**	.44**	.31**	.41**
14					-	.21**	.20*	.31**
16						-	.41**	.35**
17							-	.46**
19								-
M	5.13	4.82	4.74	5.29	4.15	5.54	5.39	4.80
SD	1.94	2.01	1.89	1.71	2.17	1.78	1.78	1.95

*Note: * p < .05; ** p < .01; N = 157*

Table L7

Item-Total Correlations of Negative Actual and Ideal Social and Task Competence

Items

	Actual		Ideal	
Item	Item-Total Correlation	Alpha If Item Deleted	Item-Total Correlation	Alpha If Item Deleted
7	.40	.68	.52	.79
8	.36	.69	.44	.80
9	.48	.66	.68	.76
10	.42	.67	.58	.78
14	.39	.68	.38	.81
16	.43	.67	.48	.79
17	.45	.67	.51	.79
19	.43	.68	.64	.77

*Note: * p < .05; ** p < .01; N = 157*

Factor Analysis of Positive Strategising and Persistence Items

I entered the positive actual strategising and the positive actual persistence items into the same factor analysis. Cattell's scree plot indicated that a two factor solution was appropriate. Bartlett's Test of Sphericity was significant, χ^2 (55) = 318.52, p =< .000. The KMO statistic was .76 and indicated that the data was suitable for factoring. Table L8 shows that the seven persistence items (Items 7, 8, 9. 10, 16, 17, and 19) loaded the highest onto Factor 1. This factor had an eigenvalue of 2.47 and explained 22.5% of the total variance. The four strategising items (Items 3, 4, 5, and 15) loaded the highest onto Factor 2. This factor had an eigenvalue of 2.00 and explained a further 10% of the total variance. The correlation between Factor 1 and Factor 2 was .32 and indicated that the items loading onto each factor measured different aspects of the same underlying construct. I concluded that the underlying construct was task competence

Table L8

Rotated Factors Loadings from the Pattern Matrix for the Positive Actual Strategising

and Persistence Items

Item		Communality	Factor	
			1	2
3	You check your work following a customer complaint, even though you think that you did a good job	.36	-.08	.63
4	You plan to cooperate with your colleague on a new project	.31	.05	.54
5	You ask your boss to clarify some instructions after you have been given a new task to do	.36	-.01	.60
7	You develop a bad headache while you are working and decide to go home instead of taking medication to stop the pain	.25	.53	-.09
8	You decide to ad lib a talk that you have been asked to give on short notice because you do not have the time to prepare	.19	.39	.11
9	You have commenced in a new job and decide that you do not have time to keep track of your productivity	.38	.65	-.14
10	You decide not to clarify something that you said at a meeting with your colleagues when it becomes clear that they have misunderstood you	.28	.50	.06
15	You may have made a mistake and re-check your work even though you are in a hurry	.61	.05	.76
16	You cannot understand what your client is saying during a mobile phone conversation and hang up rather than ask your client to repeat	.25	.40	.19
17	You could assist a colleague to fix the photocopier but you are too busy to offer to help	.29	.46	.16
19	You postpone finishing a time consuming task that your boss asked you to complete because you feel too tired	.29	.54	-.00

*Note: * p < .05; ** p < .01; N = 157*

Factor Analysis of the Actual Self-Protection Items

I performed a principal axis factor analysis with promax rotation in order to analyse the factor structure of the SPS (Version 2). The rotation converged in 25 iterations when the 40 positive and 40 negative actual and ideal self-protection items were entered into the same factor analysis. However, the factors were difficult to interpret. Therefore, I

analysed the positive and negative actual self-protection items and positive and negative ideal self-protection items in separate factor analyses.

Cattell's scree plot for the positive and negative actual self-protection items indicated that a two factor solution was appropriate. Bartlett's Test of Sphericity was significant, χ^2 (780) = 2728.29, p = .000. The KMO statistic was .76 and indicated that the data was suitable for factoring. Factor 1 had an eigenvalue of 7.46 and explained 18.64% of the total variance. Factor 2 had an eigenvalue of 3.94 and explained a further 9.88% of the total variance.

Ten items (Items 22, 26, 28, 32, 36, 38, 44, 46, 48 and 52) loaded above .30 onto Factor 1. Fifteen items (Items 21, 24, 30, 31, 33, 34, 38, 40, 41, 45, 47, 49, 51, 59 and 60) loaded onto Factor 2. Item 38 loaded to approximately the same extent (+/- .20) on both factors, hence, I eliminated this item from the scale.

Examination of the 10 items that loaded onto Factor 1 revealed that three items (Items 22, 36 and 46) were constructed as denial items. Three items (Items 26, 44 and 48) were constructed as isolation items, and three items (Items 28, 32 and 52) were constructed as reaction formation items. With the exception of Item 46, all of the items that loaded onto Factor 1 were reversed scored. Item 26 loaded the highest onto Factor 1.

Next, I reviewed the item meanings. With the exception of Item 46, which was positively worded, eight items (Items 22, 26, 28, 32, 36, 44, 46 and 52) had in common a tendency to respond to threat by catastrophising and making unrealistically pessimistic predictions of future outcomes. In contrast, item 46 described behaving oppositely to unfavourable performance feedback. The meaning of these items was the most

consistent with self-protection along the dimension of reaction formation. Therefore, I named Factor 1: Reaction Formation.

Examination of the interitem correlations in Table L9 revealed that the nine items that loaded onto Factor 1 were significantly, positively and moderately correlated with one another. The alpha coefficient for the Reaction Formation Subscale was .88. The item-total correlations in Table L10 were generally consistent and the alpha coefficient did not improve with the deletion of any item.

Table L9

Correlation Matrix of Actual Items Loading onto Factor 1: Reaction Formation

Item	22	26	28	32	36	44	46	48	52
22	-	.52**	.43**	.32**	.38**	.31**	.32**	.39**	.36**
26		-	.56**	.44**	.57**	.51**	.46**	.49**	.35**
28			-	.52**	.57**	.50**	.52**	.46**	.36**
32				-	.46**	.44**	.45**	.49**	.32**
36					-	.49**	.47**	.52**	.48**
44						-	.55**	.48**	.35**
46							-	.75**	.41**
48								-	.55**
52									-
M	4.34	4.89	5.22	5.51	4.72	4.70	4.63	4.68	4.64
SD	1.81	1.70	1.75	1.56	1.88	1.85	1.90	1.90	1.96

*Note: * $p < .05$; ** $p < .01$; N = 157*

Table L10

Item-Total Correlations of Actual Items Loading onto Factor 1: Reaction Formation

Item	Item-Total Correlation	Alpha If Item Deleted
22	.51	.88
26	.68	.87
28	.68	.87
32	.59	.88
36	.68	.87
44	.62	.87
46	.68	.87
48	.73	.86
52	.54	.88

*Note: * p < .05; ** p < .01; N = 157*

An example of a reaction formation item is "You are still trying to solve the problem when your manager asks you for the solution and you prepare to lose your job". A high reaction formation person should agree with this item. In contrast, a low reaction formation person should disagree with this item.

Examination of the item meanings of the 14 items that loaded onto Factor 2 revealed that six items (Items 24, 31, 34, 40, 51 and 59) were constructed as emotion focused coping items, two items (Items 30 and 47) were constructed as denial items, Item 45 was constructed as an isolation item and five items (Items 21, 33, 41, 49 and 60) were constructed as reaction formation items. Six items (Items 24, 34, 41, 47, 51 and 59) were reversed scored. Item 45 loaded the highest onto Factor 2. A review of the item meanings revealed that these items had in common a tendency to deny the negative implications of negative feedback. Therefore, I named Factor 2: Denial.

Examination of the inter-item correlations in Table L11 revealed that items 21, 24, 30, 31, 47 and 60 had inter-item correlations that did not fall within the recommended

range of .15 to .50 (Clark &Watson, 1995). Therefore, I eliminated these items from the scale. Alpha for the remaining eight items (Items 33, 34, 40, 41, 45, 49, 51 and 59) was .74. An example of a denial item is:

Instead of giving you advice, your colleague informs you that he intends to tell the manager that you cannot do your job properly. You plan to finish your work early in future.

Table L12 shows that the internal consistency of the denial subscale did not improve with the deletion of any of these items. The correlation between Factor 1 and Factor 2 was -.08 indicating that the factors were tapping different self-protection mechanisms.

Table L11

Correlation Matrix of Actual Items Loading onto Factor 2: Denial

Item	21	24	30	31	33	34	40	41	45	47	49	51	59	60
21	-	.13	.18*	.09	.20*	.20*	.14	.20*	.11	.19*	.19*	.24**	.09	.12
24		-	.35**	.05	.14	.43**	.27**	.28**	.02	.08	.10	.27**	.12	.05
30			-	.09	.22**	.54**	.19*	.19*	.15	.08	.25**	.17*	.10	.07
31				-	.12	.00	.11	.31**	.55**	.27**	.19*	-.02	.32**	.53**
33					-	.43**	.31**	.35**	.13	.30**	.36**	.37**	.17*	.06
34						-	.31**	.23**	.03	-.00	.21**	.21**	.07	.04
40							-	.44**	.18*	.09	.22**	.43**	.30**	.14
41								-	.24**	.11	.20*	.45**	.22**	.16*
45									-	.34**	.46**	.03	.37**	.49**
47										-	.31**	.12	.20*	.25**
49											-	.22**	.30**	.16*
51												-	.24**	.12
59													-	.43**
60														-
M	4.9	5.03	4.72	4.15	5.43	5.49	5.79	5.64	4.65	4.66	5.17	5.67	5.05	4.85
SD	1.65	1.55	1.50	1.88	1.38	1.39	1.47	1.62	1.89	1.87	1.48	1.42	1.71	1.89

*Note: * p < .05; ** p < .01; N = 156*

Table L12

Item-Total Correlations of Actual Items Loading onto Factor 2: Denial

Item	Item-Total Correlation	Alpha If Item Deleted
33	.48	.70
34	.32	.73
40	.52	.69
41	.50	.70
45	.34	.73
49	.47	.70
51	.45	.71
59	.40	.72

*Note: * p < .05; ** p < .01; N = 156*

Factor Analysis of the Ideal Self-Protection Items

I factor analysed the positive and negative ideal self-protection items next. Ten items (Items 22, 26, 28, 32, 36, 38, 44, 46, 48 and 52) loaded onto Factor 1. This factor had an eigenvalue of 9.45 and explained 23.64% of the total variance. Twelve items (Items 24, 30, 33, 34, 39, 40, 41, 47, 49, 51, 56 and 59) loaded onto Factor 2. This factor had an eigenvalue of 4.60 and explained a further 11.50% of the total variance. With the exception of item 56 which did not load onto either factor in the factor analysis of the positive and negative actual self-protection items, these results mirrored the results for the positive and negative actual self-protection items. The correlation between Factor 1 and Factor 2 was .15 indicating that the factors were tapping theoretically related, but distinct constructs.

Examination of the inter-item correlations in Table L13 revealed that all of the items that loaded onto Factor 1 in the factor analysis of the positive and negative ideal self-protection items

were significantly and positively correlated. Examination of the inter-item correlations in Table

L14 revealed that all of the items that loaded onto Factor 2 in the factor analysis of the positive

and negative ideal self-protection items were also significantly correlated. The interitem

correlations fell within the recommended range of 1.5 to 5.0 (Briggs & Cheek, 1986; Clark

&Watson, 1995).

Factor 1 (Items 22, 26, 28, 32, 36, 44, 46, 48 and 52) [33] had an alpha of .91. Factor 2 (Items

24, 33, 34, 39, 40, 41, 49, 51, 56 and 59) [34] had an alpha of .79. I examined the item-total

correlations in Tables L15 and L16 next. The item-total correlations for the positive and negative

ideal reaction formation items and positive and negative ideal denial items were approximately

the same as one another and the alpha coefficient did not improve with the deletion of any item.

Table L13

Correlation Matrix of Positive and Negative Ideal Items Loading onto Factor 1

Item	22	26	28	32	36	44	46	48	52
22	-	.51**	.50**	.47**	.50**	.40**	.45**	.44**	.35**
26		-	.76**	.74**	.80**	.51**	.61**	.57**	.34**
28			-	.79**	.74**	.46**	.54**	.58**	.30**
32				-	.78**	.51**	.52**	.52**	.25**
36					-	.48**	.53**	.56**	.38**
38						.39**	.49**	.51**	.21**
44						-	.67**	.57**	.32**

[33] Note that I excluded item 38 from the reliability analysis because I had already deleted it from the scale in the factor analysis of positive and negative actual self-protection items.
[34] Note that I excluded items 30 and 47 from the reliability analysis because I had already deleted these items from the scale in the factor analysis of positive and negative actual self-protection items.

46							-	.77**	.46**
48								-	.48**
52									-
M	4.65	5.52	5.70	5.73	5.55	5.26	5.36	5.41	4.75
SD	1.94	1.75	1.67	1.69	1.88	1.90	1.82	1.79	2.12

Note: * *p* < .05; ** *p* < .01; *N* = 156

Table L14

Correlation Matrix of Positive and Negative Ideal Items Loading onto Factor 2

Item	24	30	33	34	39	40	41	47	49	51	56	59
24	-	.37**	.25**	.43**	.33**	.40**	.24**	.25**	.31**	.45**	.38**	.19*
30		-	.12	.46**	.24**	.27**	.02	.07	.18*	.17*	.34**	.27**
33			-	.41**	.12	.32**	.42**	.11	.33**	.28**	.19*	.07
34				-	.21**	.39**	.34**	.24**	.58**	.29**	.27**	.08
39					-	.16*	.17*	.22**	.23**	.14	.27**	.39**
40						-	.39**	.14	.51**	.41**	.42**	.21**
41							-	.39**	.41**	.34**	.22**	.22**
47								-	.46**	.17*	.16*	.30**
49									-	.37**	.28**	.13
51										-	.28**	.21**
56											-	.24**
59												-
M	5.67	5.55	5.66	6.00	4.37	6.19	5.71	4.68	5.49	5.88	5.61	4.72
SD	1.46	1.62	1.60	1.30	2.11	1.23	1.75	1.98	1.60	1.51	1.67	1.97

Note: * *p* < .05; ** *p* < .01; *N* = 156

Table L15

Item-Total Correlations of Positive and Negative Ideal Items Loading onto Factor 1:

Reaction Formation

Item	Item-Total Correlation	Alpha If Item Deleted
22	.58	.90
26	.79	.89
28	.76	.89
32	.74	.89
36	.78	.89
44	.63	.90
46	.75	.89
48	.74	.89
52	.46	.92

*Note: * p < .05; ** p < .01; N = 156*

Table L16

Item-Total Correlations of Positive and Negative Ideal Denial Items Loading onto

Factor 2: Denial

Item	Item-Total Correlation	Alpha If Item Deleted
24	.54	.76
33	.41	.78
34	.54	.77
39	.37	.79
40	.58	.76
41	.49	.77
49	.56	.76
51	.50	.77
56	.46	.77
59	.33	.79

*Note: * p < .05; ** p < .01; N =156*

Appendix M: Interitem Correlations for Actual STCS Items

Item							Item								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	-	.16*	.12	.14	.05	.03	-.01	-.08	-.07	-.09	-.14	.03	.02	-.16*	.15
2		-	.22*	.20*	.13	.22*	-.09	-.05	.08	.15	-.05	.04	.08	.37**	.23**
3			-	.34**	.35**	.11	.02	.16*	-.03	.12	-.28**	.24**	.28**	.02	.46**
4				-	.30**	.19*	.06	.17*	.03	.29**	-.12	.10	.22**	.04	.44**
5					-	.17*	.02	.12	.08	.10	-.21*	.36**	.13	-.03	.48**
6						-	.00	-.19*	.10	.00	-.08	.17*	.30**	.05	.12
7							-	.19*	.34**	.22*	.12	-.10	.07	.24**	.11
8								-	.33**	.21*	.08	-.06	-.04	.18*	.19*
9									-	.38**	.18*	-.10	.03	.23**	.14
10										-	.13	-.04	.03	.17*	.15
11											-	-.22*	-.39**	.29**	-.34**
12												-	.19*	-.19*	.29**
13													-	-.04	.29**
14														-	-0.09
15															-
M	4.38	5.02	5.72	5.94	5.81	4.03	4.91	4.76	4.15	5.00	3.15	5.03	5.13	4.04	6.15
SD	1.79	1.93	1.33	1.27	1.57	1.80	1.20	1.82	1.79	1.89	1.67	1.60	1.61	1.93	1.78

Note: * $p < .05$; ** $p < .01$; $N = 156$

Item

Item	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	-.23	-.04	.04	-.05	.22**	.13	-.01	-.02	-.01	-.01	-.11	.00	-.06	.19*	-.18*	.10
2	-.10	.05	.01	.00	.10	.08	.15	.12	-.24**	-.13	.09	-.07	.08	.01	-.04	-.14
3	.14	.11	-.04	.09	.29**	.19*	.06	.01	-.18*	-.05	.08	.18*	.11	-.11	-.15	.04
4	.21*	.15	-.09	.08	.16*	.23**	.09	.05	-.34**	-.03	.15	-.09	.19*	-.18**	-.29**	-.01
5	.25**	.20*	-.11	.08	.06	.10	.08	.01	-.04	-.08	.05	.08	.15	-.23**	-.07	.00
6	-.06	-.04	.07	.03	.00	.04	.15*	.07	-.15*	-.12	.03	-.20*	.11	.04	-.17*	-.23**
7	.30**	.17*	.12	.27**	.11	.10	.40**	-.12	.05	-.43**	.40**	-.27**	.36**	-.22*	.02	-.23**
8	.19*	.25**	-.03	.17*	.09	.01	.07	-.05	-.21*	-.13	.15	-.11	.16*	-.19*	-.06	.06
9	.14	.26**	.05	.27**	.10	-.08	.18*	-.03	.02	-.27**	.25**	-.22*	.35**	-.03	-.02	-.27**
10	.18*	.30**	.04	.28**	.07	.15	.28**	-.04	-.13	-.20*	.32**	-.27**	.28**	-.19*	-.05	-.34**
11	-.01	-.20*	-.02	.06	-.06	-.16*	-.06	-.10	.08	-.02	-.03	-.08	-.17*	.08	.12	-.13
12	.17*	.13	.06	-.10	.05	.04	-.09	.06	-.26**	.10	-.07	.13	.05	-.04	-.05	.13
13	.07	.17*	.14	-.02	-.03	.02	.11	.12	-.10	-.08	.08	-.01	.10	-.01	.01	-.07
14	.15	-.05	.10	.17*	.01	-.12	.13	-.06	-.05	-.15	.17*	-.14	.07	-.16*	.01	-.22*
15	.24**	.29**	-.10	.15	.21*	.21*	.07	.07	-.19*	-.16*	.22*	-.03	.35**	-.18*	-.27*	.04
16	-	.31**	.08	.35**	.10	.05	.13	-.19*	-.05	-.24**	.30**	-.14	.25**	-.33**	.01	-.11
17		-	.13	.32**	.03	.03	.24**	-.04	-.19*	-.21*	.28**	-.15	.34**	-.35**	-.01	-.15
18			-	.09	-.02	-.07	.29**	-.10	-.07	-.23**	.15	-.22*	.10	-.20*	.08	-.17*
19				-	.14	-.01	-.16*	-.16*	-.15*	-.39**	.33**	-.30**	.33**	-.39**	.12	-.37**
20					-	.10	.22*	.05	-.13	-.08	-.04	.02	.08	-.14	-.23**	-.05
21						-	-.16*	-.08	-.02	.04	.01	-.06	.13	.10	-.18*	.09
22							-	-.16*	-.15	-.36**	.52**	-.36**	.43**	-.23**	.03	-.31**
23								-	-.15	.11	-.15	.17*	.06	.18*	.04	.08
24									-	-.15	.02	.01	-.03	.01	.35**	-.05
25										-	-.53**	.37**	-.48**	.32**	-.21*	.39**
26											-	.45*	.56**	.32**	.01	-.42**
27												-	.40**	.25**	-.01	.53**
28													-	.37**	.08	-.33**

29	-.19*	.24**
30	-	-.09
31		-
32	-	
33		

Item	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
M	5.50	5.20	3.71	4.58	4.67	4.97	4.33	4.31	2.97	3.53	4.88	3.92	4.88	3.92	5.21	2.56
SD	1.65	1.73	1.76	1.79	1.62	1.62	1.82	1.45	1.55	1.83	1.70	1.91	1.70	1.91	1.75	1.66

*Note: * p < .05; ** p < .01; N = 156*

Item	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
1	-.16*	.17*	.16*	.07	-.18*	.00	-.08	.08	-.15	.02	-.18*	.02	-.06	.13	-.08	.06
2	.04	.09	-.04	-.03	.19*	.01	.01	.13	-.15	.14	.03	-.04	.00	-.18*	.03	.04
3	.12	.20*	-.33**	-.06	.07	.04	.23**	.08	-.39**	.29**	-.06	-.01	.06	.04	-.01	.03
4	.20*	.26**	-.41**	-.10	.17*	.10	.43**	.00	-.41**	.34**	-.19*	-.16*	.10	-.02	.16*	-.10
5	.17*	.17*	-.30**	-.04	.07	-.09	.38**	.04	-.29**	.11	-.06	-0.09	.09	-.08	.21*	-.05
6	-.01	.08	-.17*	.15	.14	.01	.00	.04	-.02	-.05	.22*	-.20*	.15	-.25**	.16*	.02
7	.32**	.06	-.07	-.12	.37**	-.15	.27**	-.13	-.07	-.09	.11	-.39**	.40**	-.16*	.36**	-.18*
8	.18*	-.05	-.13	-.22*	.15	-.11	.27**	-.02	-.11	.05	.00	-.02	.07	.09	.22*	-.15
9	.12	-.14	-.03	-.08	.34**	-.17*	.15*	-.02	.04	-.09	.21*	-.24**	.24**	-.29**	.35**	-.24**
10	.16*	.03	09	-.08	.34**	-.14	.30**	-.14	-.05	.01	.15	-.27**	.26**	-.11	.26**	-.09
11	-.10	-.38**	.24**	.00	.05	-.11	-.22*	-.02	.40**	-.38**	.00	.07	-.05	-.06	.04	-.12
12	-.07	.10	-.20*	.08	-.05	.13	.17*	-.06	-.20*	.10	.07	.14	.03	.04	.03	.14
13	.10	.08	-.07	.02	.05	.06	.16*	-.16*	-.30**	.20*	.05	-.07	.10	-.15*	.09	-.03
14	.19*	-.08	.03	-.08	.38**	-.10	.04	.08	.01	-.01	.05	-.13	.15	-.25**	.18*	.00
15	.25**	.33**	-.42**	-.07	.14	.06	.49**	-.02	-.49**	.33**	-.11	-.11	.15	.06	.18*	-.01
16	.31**	.08	-.21*	-.27**	.22**	-.07	.47**	-.21*	-.16*	.08	.00	-.23**	.24**	-.05	.34**	-.14
17	.23**	.02	-.09	-.10	.22*	-.16*	.31**	-.13	-.17*	.13	.05	-.15*	.25**	-.21*	.29**	-.08
18	.14	-.14	.00	.08	.08	-.23**	-.04	-.16*	.17*	-.19*	.19*	-.07	.27**	-.28**	.14	-.10
19	.35**	-.03	.02	-.24**	.30**	-.08	.24**	-.23**	-.02	-.21*	-.01	-.29**	.36**	-.27**	.38**	-.10
20	.14	.13	-.13	-.08	-.03	.01	.13	.06	-.27**	.07	-.14	-.14	.20*	.07	.10	-.02
21	-.01	.20*	-.20*	-.02	.04	.11	.07	-.08	-.14	.20*	-.08	-.06	.00	.11	.04	.19*

	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
22	.32**	.18*	-.10	-.08	.38**	-.09	.24**	-.07	-.01	.03	.11	-.28**	.30**	-.24**	.32**	-.08
23	-.06	-.03	.08	.20*	-.05	.15	-.16*	.06	-.14	.05	.03	.26**	-.13	.08	-.01	.12
24	.02	-.14	.43**	-.07	-.07	-.05	-.10	-.10	.27**	-.28**	.03	-.08	.01	-.03	.02	-.08
25	-.16*	.02	-.02	.25**	-.39**	.15	-.21*	.13	-.01	.19*	-.11	.48**	-.52**	.33**	-.41**	.23**
26	.44**	.06	-.12	-.11	.57**	-.14	.38**	-.19*	-.10	-.02	.20*	-.50**	.51**	-.33**	.46**	-.24**
27	-.25**	.03	-.04	.05	-.39**	.05	-.21*	.20*	.01	.21*	-.21*	.45**	-.37**	.44**	-.44**	.32**
28	.52**	.21*	.16*	-.13	.57**	-.03	.43**	-.19*	-.13	-.08	.18*	-.39**	.50**	-.32**	.52**	-.13
29	-.57**	-.17*	.06	.18*	-.38**	.06	-.47**	.15	.11	-.01	.04	.33**	-.39**	.24**	-.32**	.02
30	.06	-.22*	.54**	-.08	.05	-.07	-.10	-.20*	.19*	-.19*	.09	-0.02	.09	-.15	0.01	-.08
31	-.28**	-.12	.00	.05	-.50**	.16*	-.08	.22*	-.11	.30**	-.25**	.49**	-.42**	.57**	-.36**	.27**
32	-	.18*	-.11	-.26**	.46**	-.07	.40**	-.13	-.20*	.02	-.08	-.31**	.44**	-.15*	.44**	-.04
33		-	-.42**	-.04	.10	.10	.24**	.08	-.31**	.35**	-.16*	-.05	-.08	.13	.04	.30**
34			-	-.02	-.09	-.05	-.27**	-.03	.31**	-.23**	.08	.05	-.01	-.04	-.01	.00
35				-	-.02	.18*	-.23**	.15	.03	-.10	.05	.15	-.04	-.05	-.03	.01
36					-	.00	.29**	-.09	.01	-.05	.12	-.37**	.49**	-.42**	.47**	-.16
37						-	-.10	.28**	-.12	.14	-.22*	.24**	-.23**	.18*	-.12	.12
38							-	-.20*	-.39**	.28**	-.01	-.32**	.32**	-.08	.37**	-.10
39								-	-.25**	.07	-.16*	.20*	-.33**	.17*	-.24**	.16*
40									-	-.44**	.17*	.05	-.04	-.18*	-.02	-.09
41										-	-.24**	.02	-.13	.25**	-.10	.11
42											-	-.32**	.38**	-.40**	.20*	-.16*
43												-	-.56**	.37**	-.32**	.10
44													-	-.36**	.55**	-.23**
45														-	-.51**	.34**
46															-	-.31**
47																-
M	5.51	5.43	2.51	4.42	4.72	4.00	6.07	5.64	2.21	3.24	3.29	4.65	4.69	4.66	4.62	5.17
SD	1.56	1.38	1.39	2.27	1.89	1.85	1.45	1.68	1.47	1.75	1.86	1.89	1.86	1.87	1.91	1.48

Note: * $p < .05$; ** $p < .01$; $N = 156$

Item	48	49	50	51	52	53	54	55	56	57	58	59	60
1	-.13	.21*	-.14	.05	-.24*	-.09	-.02	-.05	-.09	-.05	-.13	.16*	.05
2	.12	.01	.04	.20*	.18*	.04	.04	-.15*	-.17*	-.03	.01	.11	-.16*
3	.00	.18*	-.26**	.38**	.08	-.21*	-.12	.05	-.24**	-.18*	-.20*	.11	.08
4	.18*	.10	-.18*	.45**	.12	.13	-.22*	-.05	-.24**	.01	-.28**	.18*	-.05
5	.14	.03	-.04	.22*	.23**	-.02	-.20*	-.15	-.06	-.15	-.12	.06	.10
6	.12	-.01	.24**	.09	.19*	.03	.05	.08	-.19*	.13	.16*	-.05	-.17*
7	.39**	.02	-.08	.12	.23**	.08	-.18*	-.23**	-.19*	-.12	.17*	-.11	-.15*
8	.15	-.06	-.07	.01	.07	.14	-.22*	-.06	-.04	-.06	-.11	.03	.06
9	.20*	-.16*	.10	.06	.29**	.11	-.13	-.03	-.10	-.02	.07	-.18*	-.20*
10	.20*	.01	.01	.24**	.29**	.15	-.14	-.13	-.18*	-.05	-.04	-.02	-.14
11	.06	-.27**	.13	-.27**	-.05	.15	-.06	-.01	.15	.09	.08	-.20*	-.11
12	.04	-.09	-.07	.16*	.13	-.11	-.03	.16*	-.10	-.11	-.07	.09	.11
13	.18*	.10	-.01	.26**	.19*	-.03	.13	.09	-.08	.00	-.06	.04	.03
14	.17*	-.18*	.10	.06	.10	.09	-.03	-.19*	-.03	.00	.12	-.12	-.10
15	.18*	.17*	-.31**	.47**	.20*	-.03	-.16*	-.13	-.30**	-.09	-.14	.19*	.07
16	.33**	-.03	.02	.10	.18*	.10	-.31**	-.26**	.03	-.09	-.10	-.02	-.04
17	.30**	-.07	-.05	.25**	.26**	-.12	-.13	-.10	-.01	-.32**	.11	-.09	-.02
18	.13	-.15	.14	-.06	.07	.08	.14	-.09	.06	.01	.11	-.15	-.03
19	.40**	-.11	.10	.05	.16*	.06	-.20*	-.35**	-.07	-.04	.01	-.16*	-.26**
20	.05	.04	-.22*	.15	-.12	-.09	-.07	-.16*	-.20*	-.07	-.26**	.05	-.05
21	.02	.20*	-.13	.24**	.09	.06	-.01	-.11	-.20*	.09	-.05	.09	.12
22	.38**	.06	.08	.12	.36**	.08	-.05	-.25**	-.03	-.16*	.23**	-.13	-.17*
23	-.07	.10	-.04	.06	.02	.00	.18*	.05	-.01	-.01	.27**	.13	.01
24	-.09	-.11	.02	-.27**	-.13	-.05	.00	-.09	.26**	-.07	.05	-.12	-.05
25	-.38**	.06	.07	.00	-.27**	-.07	.03	.34**	.14	.18*	-.11	.13	.33**
26	.49**	-.06	.07	.17*	.35**	.06	-.13	-.27**	-.06	-.27**	.11	-.10	-.31**
27	-.43**	.20*	-.28**	.02	-.23**	-.18*	.07	.19*	.07	.03	-.15	.18*	.47**
28	.46**	-.06	-.01	.34**	.36**	.07	-.10	-.21*	-.16*	-.15	.13	-.16*	-.26**
29	-.38**	.07	.10	-.15	-.28**	-.11	.20*	.30**	.00	.19*	-.06	.09	.18*

	48	49	50	51	52	53	54	55	56	57	58	59	60
30	.10	-.25**	.15	-.17*	.06	.11	.12	-.07	.35**	-.03	.21*	-.10	-.07
31	-.38**	.20*	-.30**	-.02	-.29**	-.03	.03	.18*	.07	.04	-.17*	.32**	.53**
32	.49**	-.05	-.13	.21*	.32**	.14	-.13	-.36**	.00	-.06	.05	-.05	-.12
33	.03	.36**	-.29**	.37**	.09	.04	-.09	-.12	-.19*	-.01	-.15	.16*	.06
34	-.04	-.21*	.16*	-.21*	.01	.03	.18*	-.02	.33**	-.04	.20*	-.07	-.04
35	-.07	-.06	.12	.05	.04	-.03	.31**	.25**	-.12	.07	.26**	-.03	-.02
36	.52**	-.15	.06	.33**	.48**	.09	-.16*	-.20*	-.10	-.16*	.15	-.10	-.32**
37	.02	.08	-.06	.06	-.07	-.15	.15	.06	-.17*	.02	-.10	.32**	.11
38	.32**	.08	-.18*	.34**	.28**	.17*	-.34**	-.26**	-.12	-.09	-.17*	.08	-.05
39	-.17*	.19*	-.02	.04	-.10	-.27**	.20*	.10	-.08	-.10	.00	.23**	.24**
40	-.12	-.22*	.30**	.43**	.00	.11	.08	.00	.28*	.04	.21*	-.30**	-.14
41	-.04	.21*	-.30**	.45**	.05	-.05	-.07	.03	-.18*	-.05	-.07	.22*	.16*
42	.07	-.23**	.27**	-.10	.15	.10	-.03	.02	-.10	.05	.10	-.34**	-.21*
43	-.26**	.05	-.04	-.19*	-.20*	-.10	.09	.22*	.17*	.04	-.13	.27**	.41**
44	.48**	-.18*	.03	.16*	.35**	.14	-.13	-.24**	-.05	-.09	.14	-.30**	-.29**
45	-.47**	.45**	-.40**	.03	-.34**	-.13	-.01	.07	.05	.03	-.20*	.39**	.50**
46	.75**	-.28**	.10	.12	.41**	.21*	-.16*	-.27**	-.13	-.11	.15	-.27**	-.28**
47	-.28**	.31**	-.23**	.12	-.13	-.16*	.16*	-.05	-.05	.01	.00	.20*	.25**
48	-	-.24**	.07	.21*	.55**	.15	-.11	-.21*	-.04	-.12	.14	-.10	-.26**
49		-	-.32**	.22*	-.10	-.18*	.02	-.02	-.14	-.06	-.20*	.31**	.17*
50			-	-.35**	.02	.09	.10	.04	.18*	.09	.14	-.20*	-.23**
51				-	.24**	-.12	-.02	.05	-.19*	-.03	-.06	.24**	.12
52					-	.14	.01	-.09	.03	-.15	.16*	-.08	-.19*
53						-	-.26**	-.25**	.06	.50**	-.02	-.06	-.11
54							-	.11	.05	.05	.29**	.04	.02
55								-	.00	.07	-.08	.14	.11
56									-	-.04	.09	-.02	.05
57										-	-.25**	.08	.03
58											-	-.26**	-.23**
59												-	.42**
60													-
M	4.67	5.17	2.44	5.56	4.63	3.63	3.37	3.36	2.63	4.21	3.17	5.05	4.85

| SD | 1.90 | 1.48 | 1.32 | 1.32 | 1.96 | 1.72 | 1.83 | 2.23 | 1.58 | 1.57 | 1.65 | 1.71 | 1.89 |

Note: $* p < .05; ** p < .01; N = 156$

Appendix N: Correlation Matrix of Actual and Ideal STCS (Version 4) and Criterion Scales

Scale	1	2	3	4	5	6	7	8	9	10
1. Actual Social and Task Competence	-	.74**	.76**	.54**	.62**	.40**	.93**	.72**	.39**	.30**
2. Ideal Social and Task Competence		-	.54**	.76**	.52**	.61**	.68**	.94**	.39**	.43**
3. Actual Persistence			-	.61**	.29**	.16*	.53**	.44**	-.03	.05
4. Ideal Persistence				-	.29**	.18*	.39**	.53**	.06	.03
5. Actual Strategise					-	.54**	.50**	.48**	.50**	.32**
6. Ideal Strategise						-	.38**	.55**	.48**	.57**
7. Actual Self-Protection							-	.73**	.47**	.34**
8. Ideal Self-Protection								-	.43**	.49**
9. Actual Denial									-	.69**
10. Ideal Denial										-
M	5.14	5.40	4.90	5.10	5.91	6.00	5.07	5.38	5.36	5.44
SD	.74	.82	1.08	1.28	.99	1.10	.78	.84	.92	.95

*Note: * p < .05; ** p < .01; N = 157*

Scale	11	12	13	14	15	16	17	18	19	20
1. Actual Social and Task Competence	.81**	.64**	.55**	.55**	.56**	.30**	.48**	.45**	.36**	.50***
2. Ideal Social and Task Competence	.52**	.82**	.46**	.34**	.38**	.10	.35**	.22*	.16*	.26***
3. Actual Persistence	.61**	.47**	.33**	.46**	.47**	.25**	.31**	.37**	.26**	.46***
4. Ideal Persistence	.40**	.59**	.24**	.26**	.27**	.13	.22**	.16*	.08	.25***
5. Actual Strategise	.25**	.36**	.38**	.27**	.28**	.13	.26**	.19*	.18*	.16*
6. Ideal Strategise	.12	.28**	.38**	.14	.18*	-.01	.18*	.04	.02	.06
7. Actual Self-Protection	.83**	.62**	.55**	.51**	.52**	.28**	.49**	.43**	.35**	.46***
8. Ideal Self-Protection	.55**	.85**	.48**	.34**	.38**	.09	.38**	.23**	.20**	.24***
9. Actual Denial	-.10	.08	.21**	.00	.00	-.02	.01	-.10	-.13	-.05
10. Ideal Denial	-0.04	-.05	.30**	.05	.07	-.02	.06	-.05	-.07	-.02
11. Actual Reaction Formation	-	.65**	.49**	.57**	.58**	.33**	.54**	.55**	.48**	.55***
12. Ideal Reaction Formation		-	.37**	.36**	.40**	0.11	.40**	.29**	.27**	.28***
13. Self-Competence Scale			-	.61**	.61**	.39**	.54**	.54**	.45**	.59***
14. Self-Efficacy Scale				-	.96**	.71**	.66**	.76**	.66**	.78***
15. General Self-Efficacy					-	.49**	.67**	.76**	.65**	.79***
16. Social Self-Efficacy						-	.38**	.46**	.42**	.46***
17. Self-Esteem Scale							-	.80**	.81**	.66***
18. Self-Liking/Self-Competence								-	.95**	.90***
19. Self-Liking									-	.73**
20. Self-Competence										-
M	4.81	5.32	5.08	4.68	4.88	4.11	3.08	3.32	3.33	3.31
SD	1.31	1.40	1.00	1.03	1.12	1.25	.63	.79	.99	.71

Note: * $p < .05$; ** $p < .01$; $N = 157$

Scale	21	22	23	24	25	26	27	28	29	30
1. Actual Social and Task Competence	-.40**	.18*	.30**	.32**	.49**	.03	-.02	-.09	.07	.32**
2. Ideal Social and Task Competence	-.17*	.07	.41**	.33**	.32**	-.01	-.11	-.12	-.10	.20*
3. Actual Persistence	-.35**	.09	.09	.30**	.39**	-.08	-.11	-.16*	.08	.17*
4. Ideal Persistence	-.12	.02	.21*	.26**	.16*	.02	-.05	-.02	-.08	.06
5. Actual Strategise	-.16*	.11	.30**	.29**	.35**	-.01	-.12	-.07	.02	.25**
6. Ideal Strategise	-.01	-.04	.25**	.17*	.27**	-.04	-.14	-.09	-.09	.22**
7. Actual Self-Protection	-.38**	.19*	.33**	.24**	.43**	.09	.07	-.03	.06	.33**
8. Ideal Self-Protection	-.19*	.12	.45**	.31**	.32**	-.01	-.10	-.15	-.08	.22**
9. Actual Denial	.23**	.05	.32**	.06	.14	.17	.12	.15	-.12	.15
10. Ideal Denial	.16*	.02	.28**	.07	.15	.06	-.08	-.01	-.10	.11
11. Actual Reaction Formation	-.57**	.18*	.17*	.23**	.40**	.00	.00	-.13	.14	.28**
12. Ideal Reaction Formation	-.31**	.13	.35**	.31**	.28**	-.05	-.06	-.17*	-.03	.18*
13. Self-Competence Scale	-.48**	.31**	.15	.32**	.62**	.00	-.05	-.17*	.22*	.40**
14. Self-Efficacy Scale	-.72**	.49**	.09	.46**	.67**	-.01	-.03	-.19*	.46**	.48**
15. General Self-Efficacy	-.72**	.37**	.15	.47**	.74**	-.12	-.16*	-.28**	.44**	.50**
16. Social Self-Efficacy	-.46**	.60**	-.08	.25**	.26**	.29**	.32**	.12	.33**	.24**
17. Self-Esteem Scale	-.73**	.47**	.16*	.42**	.60**	-.16*	-.18*	-.34**	.32**	.46**
18. Self-Liking/Self-Competence	-.85**	.53**	.04	.43**	.63**	-.06	-.11	-.25**	.48**	.46**
19. Self-Liking	-.85**	.50**	.04	.37**	.52**	-.08	-.13	-.26**	.44**	.42**
20. Self-Competence	-.73**	.49**	.03	.44**	.68**	-.02	-.05	-.19*	.45**	.45**
21. Neuroticism	-	-.44**	.06	-.35**	-.55**	.10	.13	.29**	-.51**	-.49**
22. Extraversion		-	.07	.29**	.26**	.33**	.31**	.08	.30**	.23**
23. Openness			-	.22**	.18*	.12	.00	.09	-.02	.08
24. Agreeableness				-	.45**	-.06	-.18*	-.15	.30**	.22**
25. Conscientiousness					-	-.18*	-.28**	-.28**	.33**	.41**
26. Self-Monitoring Scale						-	.82**	.81**	-.11	-.13
27. Acquisitive Self-Monitoring							-	.71**	-.09	-.12
28. Defensive Self-Monitoring								-	-.10	-.21**

										29	30
29. Marlowe-Crowne Scale										-	
30. BIDR										.55**	-
M	2.89	3.18	3.42	3.52	3.65	.46	.43	.43	.44		
SD	.82	.66	.64	.63	.67	.16	.24	.19	.16	.29	.15

Note: $* p < .05$; $** p < .01$; $N = 157$

Scale	31	32
1. Actual Social and Task Competence	.41**	.15*
2. Ideal Social and Task Competence	.26**	.10
3. Actual Persistence	.23**	.07
4. Ideal Persistence	.10	.00
5. Actual Strategise	.22**	.21**
6. Ideal Strategise	.21**	.19*
7. Actual Self-Protection	.44**	.14
8. Ideal Self-Protection	.28**	.10
9. Actual Denial	.17*	.09
10. Ideal Denial	.13	.07
11. Actual Reaction Formation	.39**	.10
12. Ideal Reaction Formation	.25**	.07
13. Self-Competence Scale	.43**	.26**
14. Self-Efficacy Scale	.46**	.37**
15. General Self-Efficacy	.49**	.37**
16. Social Self-Efficacy	.21**	.21**
17. Self-Esteem Scale	.50**	.30**
18. Self-Liking/Self-Competence	.51**	.30**
19. Self-Liking	.47**	.26**
20. Self-Competence	.49**	.31**
21. Neuroticism	-.52**	-.34**
22. Extraversion	.23**	.17*
23. Openness	.11	.04
24. Agreeableness	.09	.28**
25. Conscientiousness	.42**	.29**
26. Self-Monitoring Scale	-.11	-.11
27. Acquisitive Self-Monitoring	-.07	-.14
28. Defensive Self-Monitoring	-.18*	-.18*
29. Marlowe-Crowne Scale	.43**	.53**
30. BIDR	.87**	.87**
31. Self-Deceptive Rating	-	.52**
32. Impression Management		-
M	.29	.29
SD	.17	.18

Appendix N.1: Social and Task Competence Scale (Version 5)

1. A customer complains about a job you did. You think that you did a good job, but you check your work to make sure.
2. You have lots of work to finish, but you have a bad headache. You could take a pain-killer and carry on working, but you stop working and go home instead.
3. You are invited to attend a work party on short notice. You have an outfit that you could wear, but you buy a new one.
4. Your boss asks you to take charge of a new project, but he is not very clear about exactly what he wants you to do. You could try to fill in the details yourself later, but you ask your boss for a clearer explanation instead.
5. Your boss asks you to give a talk to some colleagues. You could make some notes about what to say in your talk, but you are pressed for time and so you give your talk without any preparation.
6. You do not get the promotion that you applied for. You try hard to hide your disappointment from your colleagues while you consider your options.
7. Your colleague is not working as hard as you on a project that you are doing together. You could make it look like your colleague has not put in as much work on the project as you have, but you co-operate with your colleague in order to produce the best work.
8. You are working in new job. You could keep track of your work productivity in order to get some idea of how well you are doing, but it is too time-consuming to do this and so you do not bother.
9. You can see that some of your colleagues are talking excitedly about something. You want to join them but you take an urgent call first.
10. You may have made a mistake in some calculations that you are doing. You need to complete the work quickly, but you check the calculations again.
11. Your think that your colleagues may have misunderstood a comment you made during a busy meeting. You could try to clarify what you meant, but you keep quiet instead.
12. You hear that some of your colleagues think you are difficult to work with and you feel upset. You could try to discuss what you heard with them, but you try to be more cooperative instead.
13. You are working on an important task when your colleague tells you that the photocopier is jammed. You know how to fix the photocopier, but you are very busy so you do not offer to help.
14. You are doing a boring task and you feel tired. You know that you should try to finish the task, but you leave it until tomorrow.

Appendix O.2: Self-Protection Scale (Version 2)

Your boss threatens to fire you if you do not rectify a mistake that you made very quickly. You really like your job. You are trying to rectify the mistake when he asks you if you have done it.

15. You prepare to lose your job.
16. You think that you will never be able to solve these types of problems.
17. You think how you always make costly mistakes.
18. You break out in a cold sweat.
19. You propose that it would be helpful to discuss the mistake with a colleague.

You are discussing your progress on an important project with some colleagues. You think that you have been doing a good job but the team leader criticises your work in front of everyone who is present and asks you to explain.

20. You think how your work will never be good enough for your team leader.
21. You think that you are not as good as the other team members.
22. You suddenly feel as if you cannot think straight.
23. You can see what your team leader is saying and say you are open to suggestions.
24. You address the issues that your team leader raised.

You find a confidential report on the floor of your office and you are not sure what to do with it. While you are considering your options, your manager sees you holding the report and angrily asks you to explain what you are doing with it.

25. You freeze.
26. You worry about what your boss will think if he finds out.
27. You think everyone in the office will think that you are a snoop now.

It takes you longer than you expect to finish a job and you can't charge for the extra time. Your supervisor thinks that you cannot do your job and informs you that he is going to report the matter to your boss.

28. You begin to doubt your ability to finish your work in a timely manner.
29. You wonder whether you can do your job
30. You accept that it looks like you cannot do your job properly
31. You feel sick in the stomach.

Appendix P: Word Search Task (Easy and Difficult Conditions)

Part 2.

The following word search task has been generated by a computer program. It is designed to be a relatively simple task, and you should find it easy to complete. You should look for food-related words.

```
T  D  K  R  E  V  I  L  R  T  P  X  Q  P  Q  D  T
I  T  K  P  I  C  K  L  E  S  V  Y  C  S  U  U  P
U  R  M  M  L  B  R  W  M  P  E  E  N  N  A  C  G
R  C  H  E  E  S  E  Y  X  K  O  I  N  R  I  K  Y
F  N  E  S  H  H  A  T  R  H  F  T  C  I  L  G  E
Q  R  S  P  V  M  O  U  O  F  W  H  A  R  S  G  T
T  X  S  A  S  R  T  T  U  G  S  T  L  T  G  O  T
U  X  U  G  A  M  T  M  D  A  R  W  C  S  O  T  N
O  C  O  H  N  N  R  R  L  O  R  A  E  L  X  E  Q
R  J  M  E  A  H  X  U  L  R  G  E  C  T  A  R  S
T  U  Q  T  N  N  O  A  T  Y  S  S  T  S  S  M  H
R  I  T  T  A  G  S  O  J  A  J  B  P  S  E  T  S
J  C  D  I  B  A  R  N  U  J  N  M  M  V  B  K  C
M  E  W  G  G  R  L  S  C  R  L  V  E  A  L  O  B
K  L  K  N  A  H  A  M  B  U  R  G  E  R  S  Z  L
L  B  A  C  L  G  Z  F  D  P  M  I  R  H  S  Y  D
G  H  Y  D  E  J  S  A  D  A  L  I  H  C  N  E  J
```

www.WordSearchMaker.com

*1) Type the food-related words that you find in the space below:

*2) How many food-related words do you think the word search puzzle contains?

*3) How many food-related words do you think most people will find in the word search puzzle?

4) How difficult was the word search puzzle for you to complete?

☐ Very difficult

☐ Difficult

☐ Somewhat difficult

☐ Undecided

☐ Somewhat easy

☐ Easy

☐ Very easy

*5) Have you completed word search puzzles before now?

◯ Yes ◯ No

Please click on "Submit"

Part 2

The following word search task has been generated by a computer program. It is designed to be a relatively difficult task, and you should find it hard to complete. You should look for food-related words.

```
T   D   K   R   E   V   I   L   R   T   P   X   Q   P   Q   D   T
I   T   K   P   I   C   K   L   E   S   V   Y   C   S   U   U   P
U   R   M   M   L   B   R   W   M   P   E   E   N   N   A   C   G
R   C   H   E   E   S   E   Y   X   K   O   I   N   R   I   K   Y
F   N   E   S   H   H   A   T   R   H   F   T   C   I   L   G   E
Q   R   S   P   V   M   O   U   O   F   W   H   A   R   S   G   T
T   X   S   A   S   R   T   T   U   G   S   T   L   T   G   O   T
U   X   U   G   A   M   T   M   D   A   R   W   C   S   O   T   N
O   C   O   H   N   N   R   R   L   O   R   A   E   L   X   E   Q
R   J   M   E   A   H   X   U   L   R   G   E   C   T   A   R   S
T   U   Q   T   N   N   O   A   T   Y   S   S   T   S   S   M   H
R   I   T   T   A   G   S   O   J   A   J   B   P   S   E   T   S
J   C   D   I   B   A   R   N   U   J   N   M   M   V   B   K   C
M   E   W   G   G   R   L   S   C   R   L   V   E   A   L   O   B
K   L   K   N   A   H   A   M   B   U   R   G   E   R   S   Z   L
L   B   A   C   L   G   Z   F   D   P   M   I   R   H   S   Y   D
G   H   Y   D   E   J   S   A   D   A   L   I   H   C   N   E   J
```

www.WordSearchMaker.com

*1) Type the food-related words that you find in the space below:

*2) How many food-related words do you think the word search puzzle contains?

*3) How many food-related words do you think most people will find in the word search puzzle?

*4) How difficult was the word search puzzle for you to complete?

☐ Very Difficult

☐ Difficult

☐ Somewhat Difficult

☐ Undecided

☐ Somewhat Easy

☐ Easy

☐ Very Easy

*5) Have you completed word search puzzles before now?

☐ Yes ☐ No

Please click on "Submit"

Appendix Q: Posttask Questionnaires

The Emotional Intelligence Scale(Schutte et al, 1998)

(1.)   I know when to speak about my personal problems to others
(2.)   When I am faced with obstacles, I remember times I faced similar obstacles and overcame them
(3.)   I expect that I will do well on most things I try
(4.)   Other people find it easy to confide in me
(5.)   I find it hard to understand the non-verbal messages of other people*
(6.)   Some of the major events of my life have led me to re-evaluate what is important
         and not important
(7.)   When my mood changes, I see new possibilities
(8.)   Emotions are one of the things that make my life worth living
(9.)   I am aware of my emotions as I experience them
(10.) I expect good things to happen
(11.) I like to share my emotions with others
(12.) When I experience a positive emotion, I know how to make it last
(13.) I arrange events others enjoy
(14.) I seek out activities that make me happy
(15.) I am aware of the non-verbal messages I send to others
(16.) I present myself in a way that makes a good impression on others
(17.) When I am in a positive mood, solving problems is easy for me
(18.) By looking at their facial expressions, I recognize the emotions people are
         experiencing
(19.) I know why my emotions change
(20.) When I am in a positive mood, I am able to come up with new ideas
(21.) I have control over my emotions
(22.) I easily recognize my emotions as I experience them
(23.) I motivate myself by imagining a good outcome to tasks I take on
(24.) I compliment others when they have done something well
(25.) I am aware of the non-verbal messages other people send
(26.) When another person tells me about an important event in his or her life, I
         almost feel as though I have experienced this event myself
(27) When I feel a change in emotions, I tend to come up with new ideas
(28) When I am faced with a challenge, I give up because I believe I will fail*
(29) I know what other people are feeling just by looking at them
(30) I help other people feel better when they are down
(31) I use good moods to help myself keep trying in the face of obstacles
(32) I can tell how people are feeling by listening to the tone of their voice
(33) It is difficult for me to understand why people feel the way they do*

Note: The authors permit free use of the scale for research and clinical purposes.
*These items are reverse scored.

Appendix R: Posttask Questionnaires (Strategies)

Please indicate the extent to which you used each of the following strategies during the Word-Search task.

Strategies for Word-Search without List

Strategy	Never	Occasionally	Frequently	Very Often	Always
1. I looked row by row, horizontally, backwards, and forwards.					
2. I looked row by row, vertically, backwards, and forwards.					
3. I looked diagonally, backwards, and forwards.					
4. I checked to make sure that I did not miss any words.					

Appendix S: Reliability and Factor Analysis of the STCS (Version 5) and SPS (Version

2)

Reliability of the Social and Task Competence Scale

The preliminary reliability of the STCS (Version 5) and SPS (Version 2) was

computed using the Spearman-Brown prediction formula (Nunnally & Bernstein, 1994).

Alphas for the STCS (Version 5) and SPS (Version 2) and their subscales are shown in

Table S1.

Table S1

Alpha Coefficients for the Revised STCS (Version 5) and SPS (Version 2)

Scale	Items	Alpha
STCS	1…31	.43
Task competence	1, 2, 5, 6, 8, 9, 10, 13, 14	.60
Persistence	2, 5, 8, 14	.51
Planning	9, 13	.51
Strategizing	1, 6 , 10	.55
Social competence	3, 4, 7, 11, 12	.39
Identification	3, 7, 12	.29
Communication	4, 11	.33
Self-protection	15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	.67
Emotion focused coping	18, 22, 25, 31	.76
Denial	15, 19, 23, 24, 26, 27	.47
Reaction formation	16, 17, 20, 21	.72
Isolation	28, 29, 30	.80

The preliminary reliability analysis yielded mixed results. The STCS (Version 5)

and SPS (Version 2) produced alpha values of .43 and .67 respectively. The alpha value

of the STCS (Version 5) was less than the alpha value of .60 recommended by Nunnally

(1978) for scales to be used in basic research. On the other hand, the Task Competence

Scale (TCS) yielded an acceptable alpha value of .60. However, the alphas for the

Persistence Subscale (α = .51, Planning Subscale, α = .51 and Strategizing Subscale, α =

.55) fell slightly short of the recommended alpha value of .60. Alpha for the Social

Competence Scale was .39. Alpha values of subscales that are less than .60 are not

unusual in psychological research (Clarke & Watson, 1995). However, the alpha values

of identification and communication were possibly too low (α = .29 and α = .33

respectively) and suggested that these scales may not be reliable. The reliabilities of the

subscales from the SPS (Version 2) were better. The Isolation Subscale produced the

highest alpha (α = .80), followed by the Emotion Focused Coping Subscale (α = .76),

the Reaction Formation Subscale (α = .72) and the Denial Subscale ((α = .47). Thus,

three of the four subscales from the SPS (Version 2) yielded moderate to high alphas in

the preliminary analysis of reliabilities.

Next, I examined the interitem correlations in order to explore the correlational

relationships between the items. The interitem correlations between the self-protection

items and self-competence items were low and/or negative (see Appendix 8.4). The

interitem correlations between the self-protection and the self-competence items

indicated that the strength of the relationship between them was not strong. Hence, they

may be theoretically related but distinct constructs.

Factor Structure of the Social and Task Competence Scale

I performed a principal axis factor analysis with promax rotation in order to analyse

the factor structure of the STCS (Version 5). The Kaiser-Meyer-Olkin measure of

sampling adequacy (KMO) statistics was .74. The Bartlett's Test of Sphericity was

significant: χ^2 (91) = 355.42, p < .01. Therefore, the dataset was suitable for factoring.

Cattell's scree criterion showed a two factor structure. Therefore, two factors were

extracted. The rotated factor loadings of the STCS (Version 5) are shown in Table S2.

Table S2

Rotated Factor Loadings of the Social and Task Competence Scale (Version 5)

			Factor	
Item		Communality	1	2
9	You can see that some of your colleagues are talking excitedly about something. You want to join them but you take an urgent phone first	.60	.84	
10	You have made a mistake in some calculations that you are doing. You need to complete the work quickly, but you check the calculations again	.60	.77	
1	A customer complains about a job you did. You think that you did a good job, but you check you work to make sure	.29	.52	
6	You do not get the promotion that you applied for. You try hard to hide your disappointment from you colleagues while you consider your options	.20	.45	
4	Your boss asks you to take charge of a new project, but he is not very clear about exactly what he wants you to do. You could try and fill in the details yourself later, but you ask your boss for a clearer explanation instead	.19	.44	
13	You are working on an important task when your colleague tells you that the photocopier is jammed. You know how to fix the photocopier, but you are very busy and so you do not offer to help	.25	.41	
7	Your colleague is not working as hard as you on a project that you are doing together. You could make it look like your	.20	.39	

	colleague has not put in as much work on the project as you have, but you co-operate with your colleague in order to produce the best work			
3	You are invited to attend a work part on short notice. You have an outfit that you could wear, but you buy a new one	.17		
12	You hear that some of your colleagues think you are difficult to work with and you feel upset. You could try to discuss what you heard with them, but you try to be more cooperative instead	.21		
8	You are working in a new job. You could keep track of your work productivity in order to get some idea of how well you are doing, but it is too time-consuming to do this and so you do not bother	.25		.61
14	You are doing a boring task and you feel tired. You know that you could try to finish the task, but you leave it until tomorrow	.20		.52
2	You have lots of work to finish, but you have a bad headache. You could take a pain-killer and carry on working, but you stop working and go home instead	.22		.41
5	Your boss asks you to give a talk to some colleagues. You could make some notes about what to say in your talk, but you are pressed for time and so you give your talk without any preparation	.13		.38
11	You think that your colleagues may have misunderstood a comment you made during a busy meeting. You could try to clarify what you meant, but you keep quiet instead	.31	.32	.36

Items that loaded onto more than one factor to approximately the same degree (+/- .20) were deleted. The factors in the factor analysis accounted for 36.91% of the total

variance. Seven items (Items 1, 4, 6, 7, 9, 10 and 13) loaded above .30 onto Factor 1. Factor 1 had an eigenvalue of 3.32 and explained 23.70% of the total variance.

Examination of item meanings showed that Item 1, 9 and Item 10 were measuring strategizing about a task, whereas Items 4, 6, 7 and 13 involved cooperation, identification and communication in social situations. As these items measured the dimensions of both social and task competence, I named Factor 1: Self-Competence. Four items (Items 2, 5, 8 and 14) loaded above .30 onto Factor 2. This factor had an eigenvalue of 1.85 and explained 13.21% of the total variance. Examination of item meanings indicated that these items were reverse scored items that were constructed for the Persistence Subscale. Therefore, I named Factor 2: Persistence.

An example of a self-competence item along its task dimension is "A customer complains about a job you did. You think that you did a good job, but you check your work to make sure". A high self-competence person should agree with this item. In contrast, a low self-competence person should disagree with this item.

An example of a self-competence item along its social dimension is "Your boss asks you to take charge of a new project, but he is not very clear about exactly what he wants you to do. You could try to fill in the details yourself later, but you ask your boss for a clearer explanation instead". A high self-competence person should agree with this item. In contrast, a low self-competence person should disagree with this item.

Factor Analysis of the Self-Protection Items

Clark and Watson (1995) proposed that it is inappropriate to combine scales that measure different constructs into a single scale in order to generate a total score on a test. Therefore, I treated the SPS (Version 2) as a separate scale in the factor analysis. I

performed a principal axis factor analysis with promax rotation on the self-protection

items in order to analyse the factor structure of the SPS (Version 2). Cattell's scree plot

indicated that a one factor solution was appropriate. Bartlett's Test of Sphericity was

significant, χ^2 (136) = 1100.92, p < .01. The KMO statistic was .88 and indicated that

the data was suitable for factoring. Factor 1 had an eigenvalue of 7.03 and explained

41.36% of the total variance. The unrotated factor loadings of the SPS (Version 2) are

shown in Table S3[35].

Table S3

Unrotated Factor Loadings of the Self-Protection Scale (Version 2)

	Item	Communality	Factor 1
29	You question whether you can do your job when your supervisor complains and threatens to tell the boss	.79	.83
21	You think that you are not as good as your colleagues when your boss criticises your work in front of them	.69	.81
28	You question your ability to do the job in time when your supervisor complains that you are taking too long	.73	.77
16	You think that you cannot solve certain problems when your boss threatens to fire you for making a mistake	.61	.71
26	You worry about what your will think when he sees you holding a confidential document	.59	.67
22	You cannot think straight when your supervisor criticises you in front of your	.59	-.67

[35] The solution could not be rotated because the promax procedure extracted only one factor.

colleagues

17	You blame yourself for always making mistakes when your supervisor criticises you in front of your colleagues	.45	.66
25	You freeze when your boss catches you holding a confidential document	.51	-.65
30	You accept that you look incompetent when your supervisor complains and threatens to tell the boss	.51	.64
18	You break out in a cold sweat when your boss threatens to fire you for making a mistake	.56	-.64
27	You fear that your colleagues will not trust you when your boss catches you holding a confidential document	.55	.63
20	You think how your work will never be good enough for your supervisor when he criticises you in front of your colleagues	.47	.59
15	You plan to lose your job after your boss threatens to fire you	.37	.54
31	You feel sick in the stomach when your supervisor complains and threatens to tell the boss	.32	-.35
24	You take responsibility for the issues that your supervisor raised when he criticises you in front of your colleagues	.47	-.51
23	You appreciate what your supervisor is saying when he criticizes you in front of your colleagues	.34	-.30
19	You ask your boss if a colleague could help you when your boss threatens to fire you for making a mistake	.23	

Ten items (Items 15, 16, 17, 20, 21, 26, 27, 28, 29 and 30) loaded positively onto

Factor 1. Three items (Items 15, 26 and 27) were negative items from the Denial

Subscale. Four items (Items 16, 17, 20 and 21) were negative items from the Reaction

Formation Subscale and three items (Items 28, 29 and 30) were negative items from the

Isolation Subscale. Item 29 loaded the highest onto Factor 1 and described self-doubt about job abilities. Item 21 loaded the second highest and described self-doubt about abilities when compared to colleagues. Item 28 loaded the third highest and described self-doubt about job abilities. Item 16 loaded next and described thinking pessimistically about job abilities. Item 26 followed and described worrying about making a negative impression on the boss. The remaining items (Items 15, 17, 20, 27, 30) all described negative outcome expectancies. As these five items were all reversed scored items, they contributed the opposite meaning to Factor 1.

Six items (Items 18, 22, 23, 24, 25 and 31) loaded negatively onto Factor 1. Four items (Items 18, 22, 25 and 31) were positive items from the Emotion Focused Coping Subscale. These items described the somatic symptoms of anxiety. The negative loading of these items onto Factor 1 means that they were contributing the opposite meaning to Factor 1 (no somatic anxiety). Two items (Items 23 and 24) were negative items from the Denial Subscale. Item 23 is about understanding what is being said and Item 24 is about addressing the issues raised. Hence, these items mean not understanding the ramifications of what is being said and not addressing the issues raised. In summary, all of the items that loaded positively and negatively onto Factor 1 were concerned with cognitive and emotional responses to perceived threat. Therefore, I named Factor 1: Self-Protection.

In summary, the factor analysis of the self-protection items revealed that the items constructed to measure isolation, denial, reaction formation and emotion-focused coping loaded onto the same factor. The underlying construct of Factor 1 was, therefore, deemed to be self-protection.

Appendix T: Factor Analysis of the Emotional Intelligence Scale

I performed a principal axis factor analysis with promax rotation in order to analyse the factor structure of the Emotional Intelligence Scale (Schutte et al., 1998). The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) statistics was .86. The Bartlett's Test of Sphericity was significant: χ^2 (528) = 2337.82, p < .01. Therefore, the dataset was suitable for factoring. Cattell's scree criterion showed a one factor structure. Therefore, only one factor was extracted. The unrotated factor loadings of the EIS are shown in Table T1 T. The factor loadings supported a one factor solution.

Table T1

Unrotated Factor Loadings of the Emotional Intelligence Scale

		Factor
Item	Communality	1
13	.60	.78
22	.53	.73
18	.52	.72
29	.52	.72
26	.50	.71
6	.50	.67
19	.45	.64
7	.41	.63
25	.40	.61
2	.38	.61
20	.37	.61
23	.37	.60
24	.36	.60
34	.35	.59
14	.35	.59

12	.34	.58
5	.34	.58
10	.33	.58
36	.33	.57
21	.32	.57
16	.32	.56
28	.31	.55
17	.30	.54
33	.27	.52
31	.24	.49
25	.24	.49
15	.24	.49
8	.22	.47
30	.19	.44
32	.19	-.44
11	.15	.38
9	.11	.33
37	.05	

Appendix U: Additional Linear Regressions for Perceived Task Difficulty

I regressed perceptions of task difficulty onto word search task (IV1), task competence (IV2) and self-protection (IV3) in Step 1 and their two-way interaction terms in Step 2 and their three-way interaction term in Step 3.The analysis of participants' perceptions of task difficulty yielded two main effects in Step 1: a main effect of word search task on perceptions of task difficulty, $\beta = -.29$, $t(131) = -2.20$, $p < .05$ and a main effect of self-protection on perceptions of task difficulty, $\beta = .27$, $t(131) = 1.98$, $p < .05$.

Entry of the interaction terms in Step 2 yielded a significant disordinal two-way interaction between task competence and word search task on perceptions of task difficulty, $\beta = -.33$, $t(131) = -2.47$, $p < .05$. To examine this interaction, I plotted it (see Figure U1 and performed simple linear regressions at each level of word search task.

Figure U1. Perceptions of Task Difficulty as a Function of Task Competence and Word Search Task
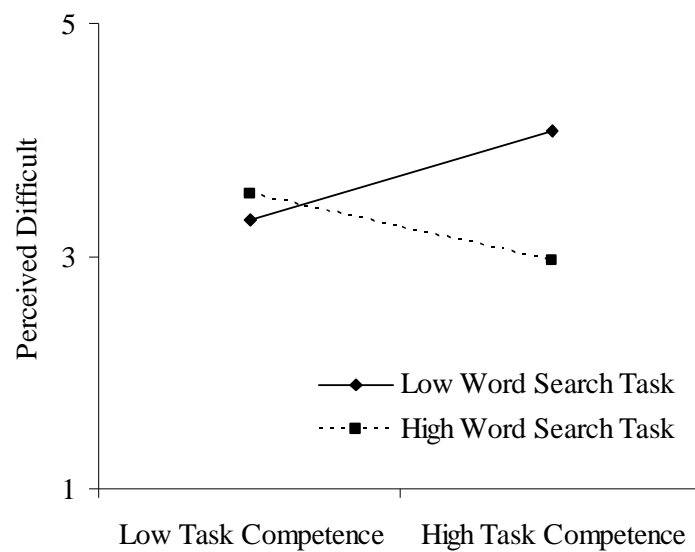
The simple effect of the word search task on perceived task difficulty was

significant among participants who had high task competence, $\beta = .54$, $t(70) = 3.21$, $p <$

.01, but not among participants who had low task competence, $\beta = -.02$, $t(60) = -.11$, $p =$

.91. Thus, participants with high task competence who were told that the task should be

easy found that the task was more difficult than they expected. High task competence

participants in the easy condition possibly underestimated the difficulty of the task

because they were already confident that they would find the task easy. For people with

high task competence in the difficult condition, the trend was that they did not perceive

that the task was difficult. These participants may have prepared themselves for a more

difficult task and so, they should have found it easier to complete. These results

provided partial support for Hypothesis 3.

Appendix V: Additional Linear Regressions for Number of Words Found

A significant two-way interaction between self-protection and strategizing for number of words was found in Step 2 of the regression analysis for word search task (IV1), strategising (IV2) persistence (IV3) and self-protection (IV4) for number of words. A significant disordinal two-way interaction between self-protection and strategizing for number of words that participants believed the word search puzzle contained, $\beta = -4.50$, $t(131) = -2.37$, $p < .05$. To decompose this interaction, I plotted it (see Figure V1) and then performed linear regressions at the level of strategizing.

Figure V1. Number of Words That Participants Thought the Word Search Puzzle Contained as a Function of Strategizing and Self-Protection.
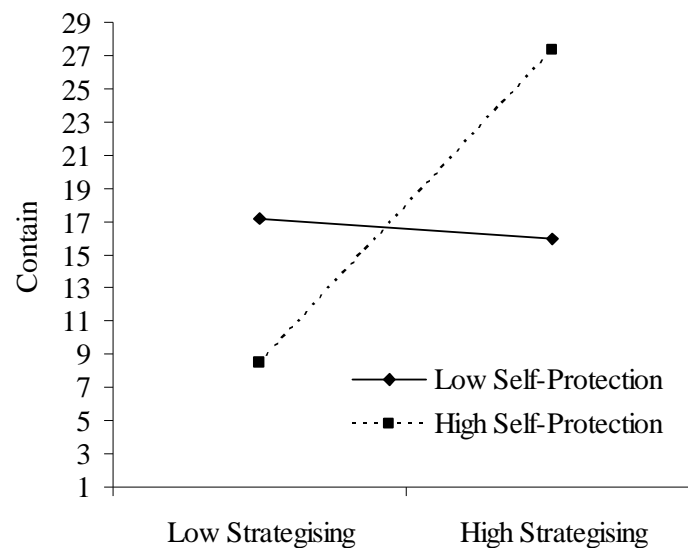
The test of simple effects examining the relationship between self-protection and strategising for the number of words that participants believed the word search puzzle contained was significant among participants with high self-protection, $\beta = 4.81$, $t(68) = 2.16$, $p = .05$, but not among participants with low self-protection, $\beta = -.03$, $t(62) = -.04$, $p = .99$. Thus, high self-protection, high strategizing participants thought that the word search task contained more words than high self-protection, low strategising participants. High self-protectors who were high strategizers seem to have thought that word search tasks require a fair amount of strategising and so, they believed that there were more words.

Appendix W: Additional Linear Regressions for Time

A significant two-way interaction between persistence and strategising for time was found in Step 2 of the regression analysis for word search task (IV1), strategising (IV2) persistence (IV3) and self-protection (IV4) for time. To decompose this interaction, I plotted it (see Figure W1) and then performed linear regressions at the level of persistence.

Figure W1. Time as a Function of Persistence and Strategizing.
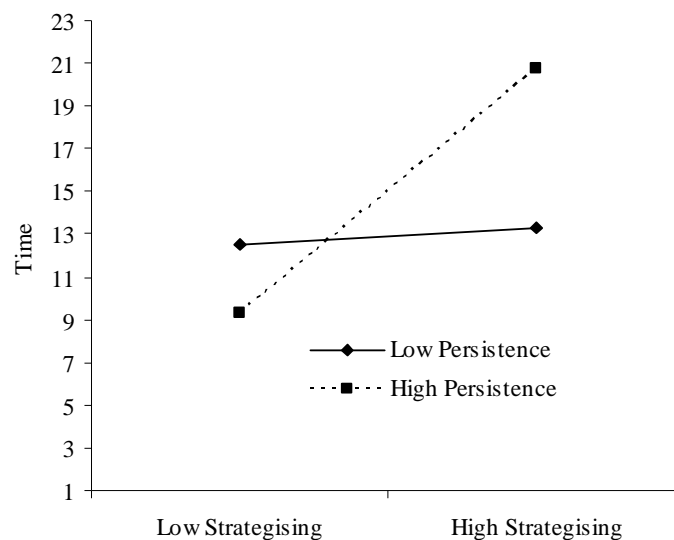
The test of simple effects examining the relationship between strategising and time was significant among participants with high persistence, $\beta = 5.16$, $t(77) = 3.24$, $p < .01$, but not among participants with low persistence, $\beta = -.03$, $t(53) = -.02$, $p = .98$. Thus, high strategizing, high persistence participants spent more time than high strategizing

and low persistence participants. These findings are consistent with the predictions made in my social and task competence model.

Appendix X: Scree Plots

Study 1

Scree plot of the Actual Scale of the STCS (Version 2)
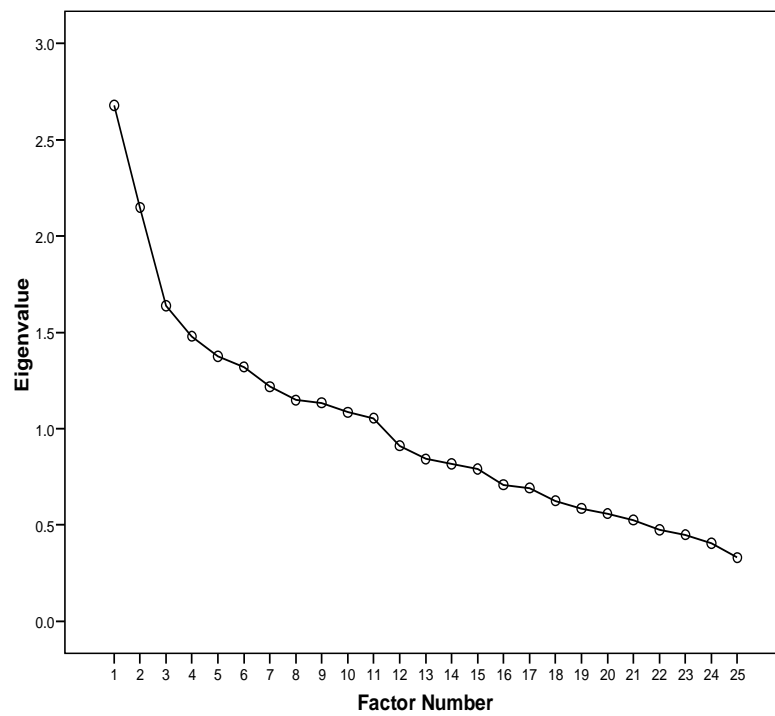
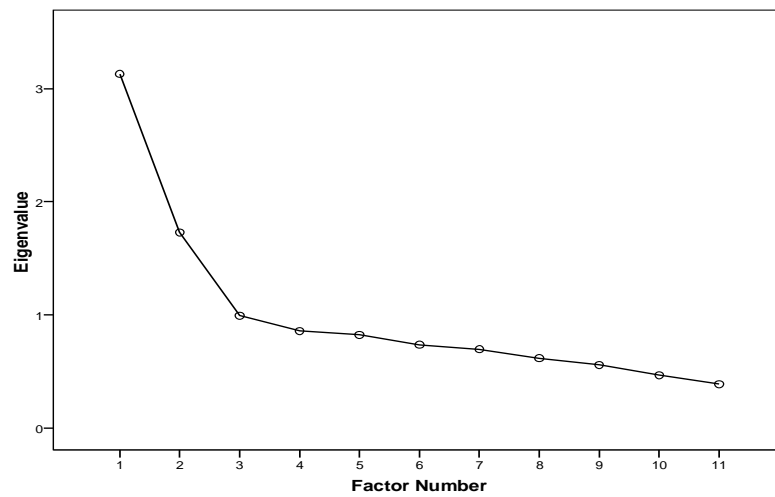Scree Plot of the Ideal Scale of the STCS (Version 2)
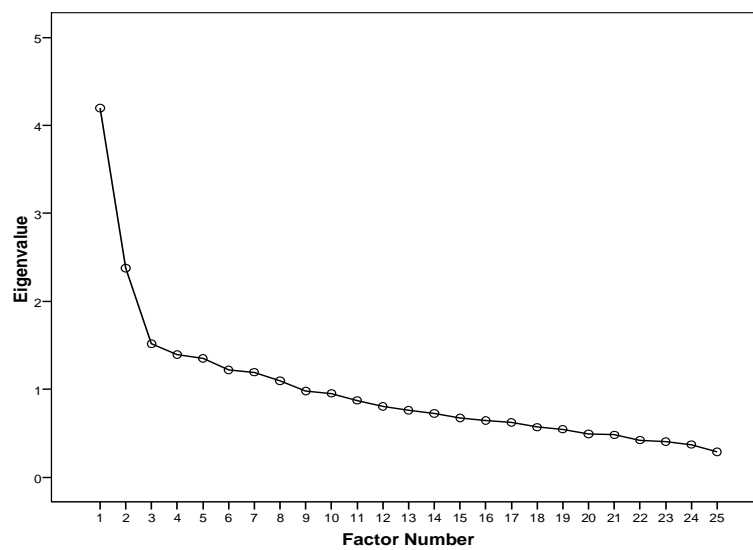
Study 2

Scree plot of the Actual Scale of the STCS (Version 3)
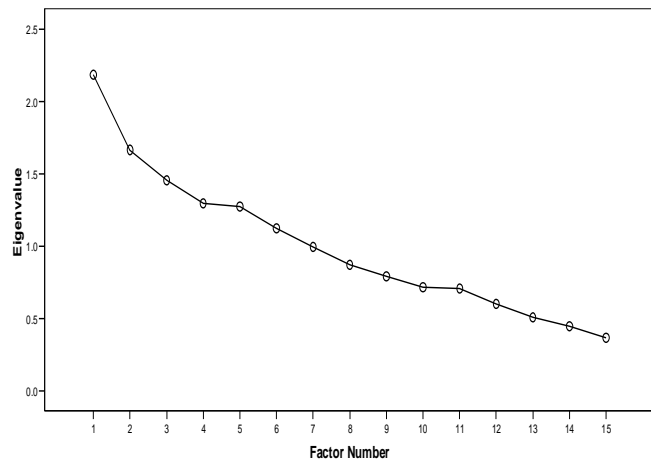
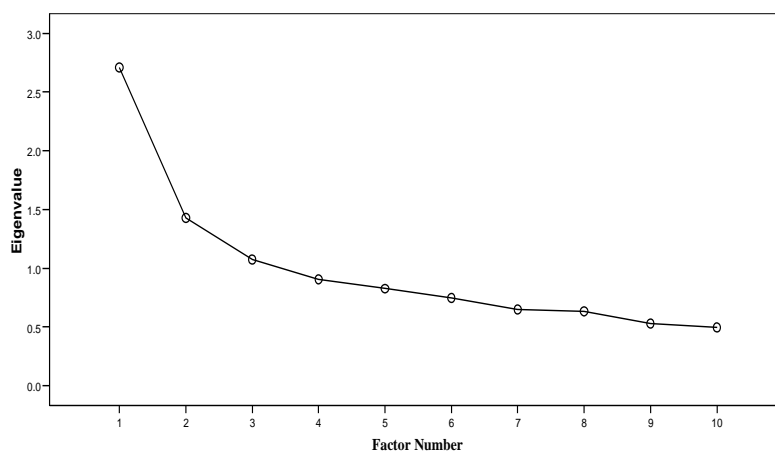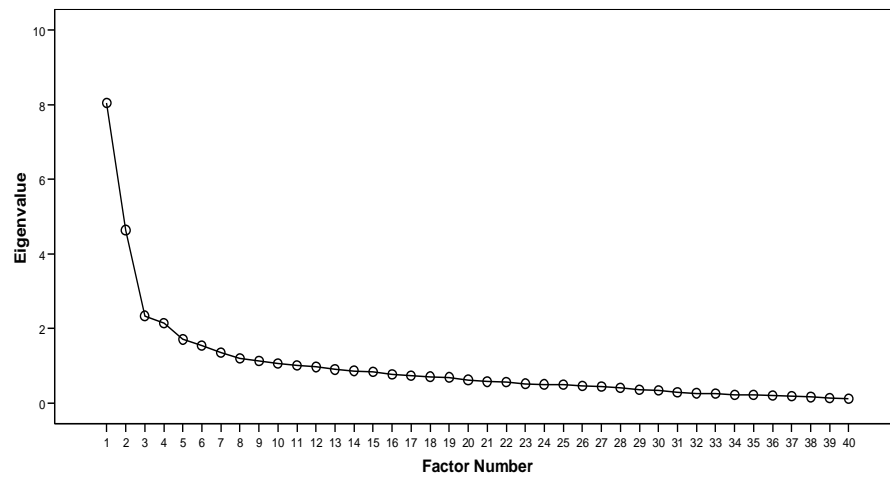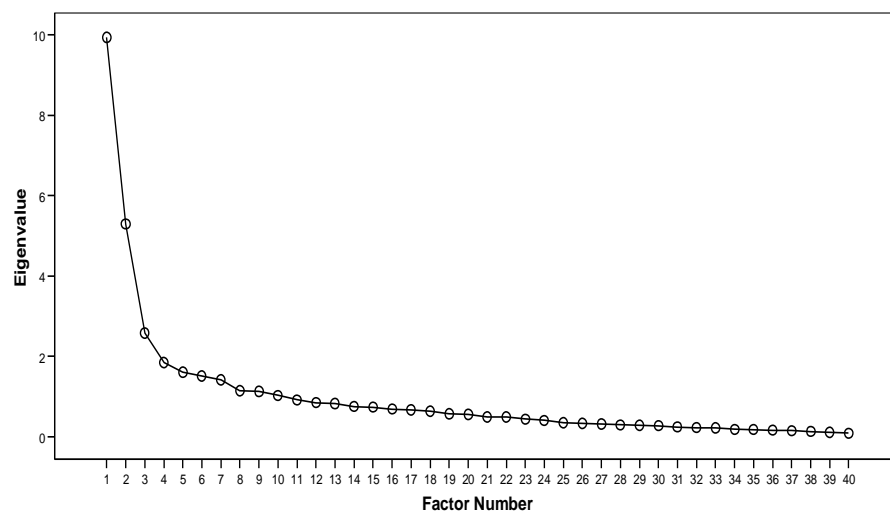

Scree plot of the Ideal Scale of the STCS (Version 3)
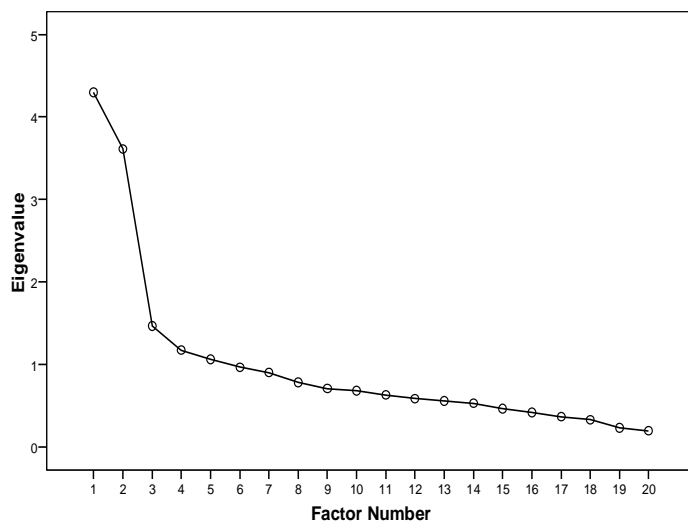
Scree plot of the Actual Scale of the SPS (Version 1)
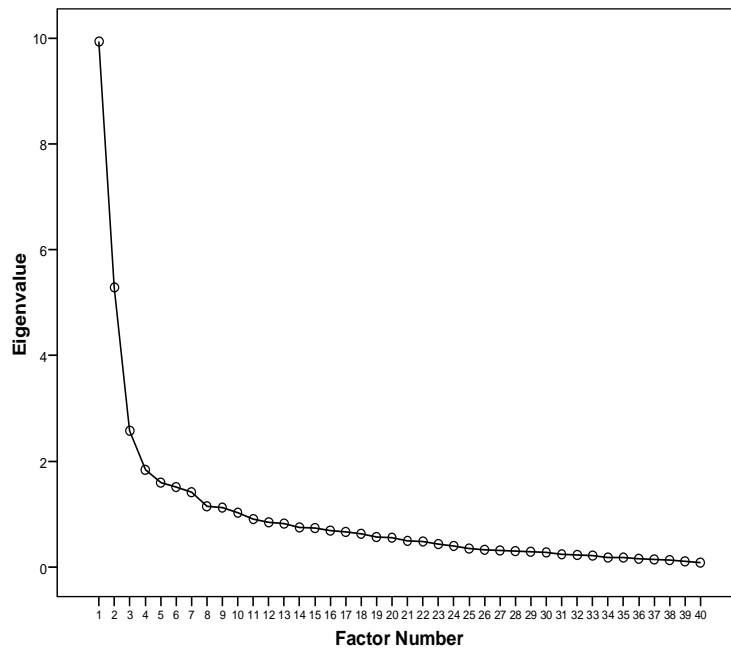
Scree plot of the Ideal Scale of the SPS (Version 1)
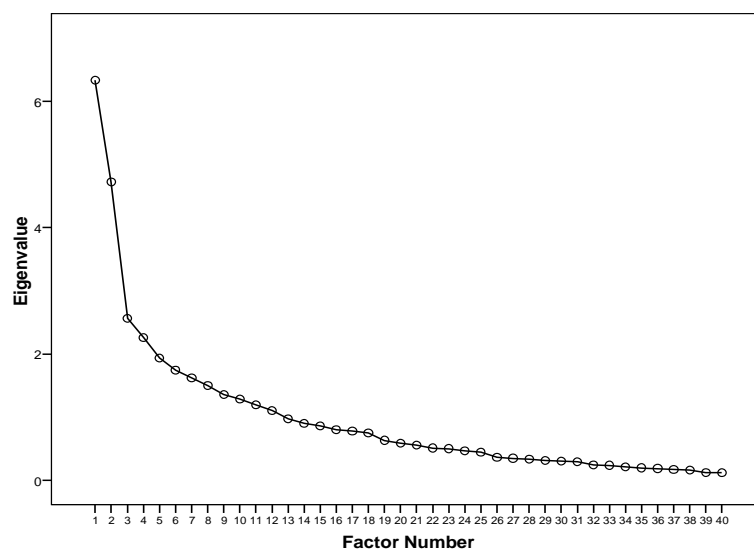
Study 3

Scree plot of the Positive Actual Scale of the STCS (Version 3)

Scree Plot of the Negatrve Actual Scale of the STCS (Version 3)

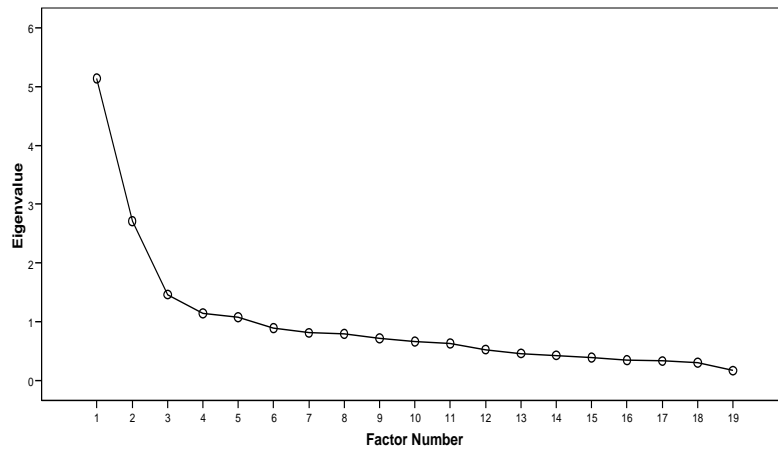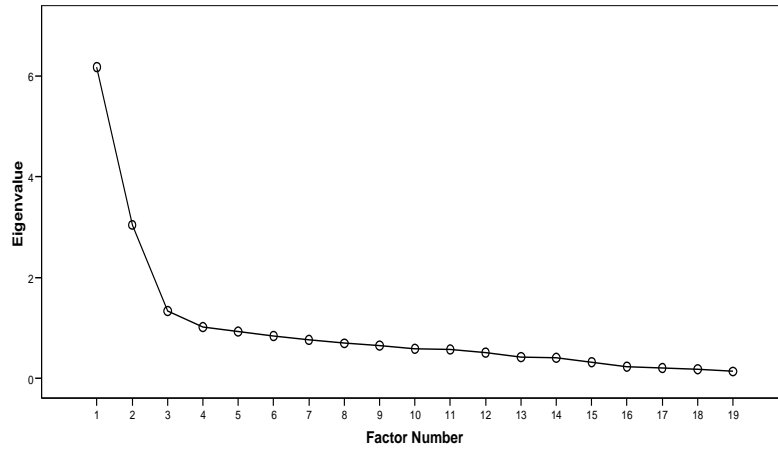Scree Plot of the Positive Actual Scale of the SPS (Version 2)

Scree Plot of the Positive Ideal Scale of the SPS (Version 2)___

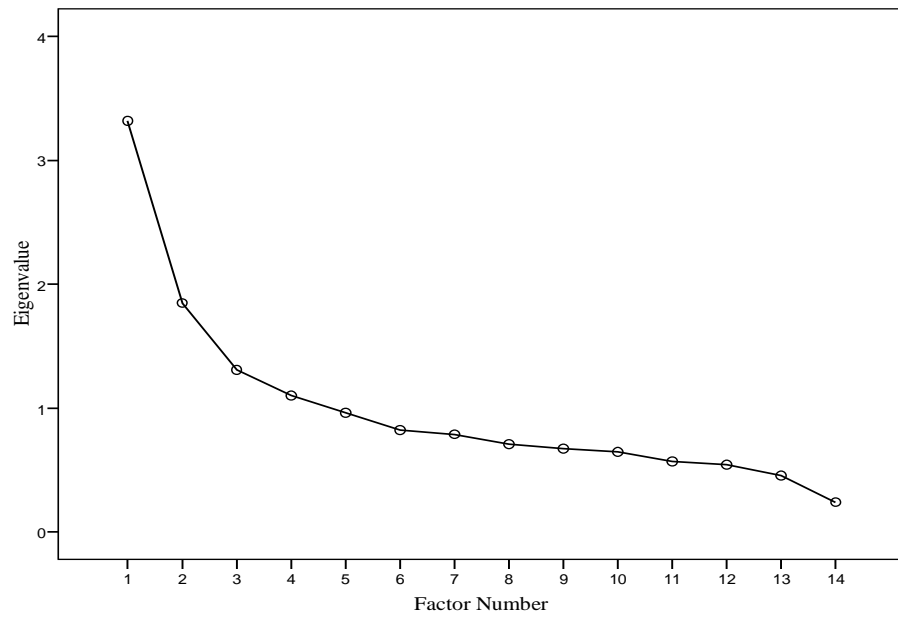Scree Plot of the Negative Actual Scale of the STCS (Version 3)

Scree Plot of the Negative Ideal Scale of the STCS (Version 3)

Study 4

Scree plot of the STCS (Version 5)

Scree plot of the SPS (Version 3)