AUTHENTICITY AND GOAL-DIRECTED BEHAVIOURS AND COGNITIONS.

By

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Declaration of Authorship

- I, DIANA PINTO, declare that this thesis titled, ‘Authenticity and Goal-Directed Behaviours and Cognitions’ and the work presented in it are my own. I confirm that:

- This work was done wholly or mainly while in candidature for a research degree at this University.

- Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated.

- Where I have consulted the published work of others, this is always clearly attributed.

- Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work.

- I have acknowledged all main sources of help.

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AUTHENTICITY AND GOAL-DIRECTED BEHAVIOURS AND COGNITIONS.

ABSTRACT

Aims: This thesis sets out to investigate theoretical conceptualisations of the tripartite model of authenticity and its role within goal-directed behaviours and cognitions. Previous work has mainly been on a theoretical level and focused heavily on personality and counselling literature. The aim of this thesis is to advance the understanding of the tripartite model of authenticity which has previously been supported by both personality and counselling literature. In doing so, this thesis adopts a framework of goal-directed behaviour and cognitions within an individual differences approach, to apply a range of surveys and experimental measures which explore a number of goal-directed behaviours within the tripartite model of authenticity.

Methods: Six studies are presented. Three of these studies assess data through self-report questionnaires in comparison the remaining three employ experimental tasks to measure goal-directed behaviours. Data was analysed using multiple regressions, correlations, t-tests and ANOVA’s.

Results: The thesis presents novel research to explore goal-directed behaviours within the tripartite model of authenticity. Results indicate that: (1) the tripartite model of authenticity is distinct and unique from extant models of personality; (2) authenticity is related to inhibitory and reward seeking behaviours; (3) authenticity is related to reconfiguring mental resources; (4) authenticity does not reflect impulsive decision-making; (5) authenticity does however play a role in general, every day, decision-making strategies; (6) authenticity can predict aggressive responses in unfair situations; (7) authenticity can predict posttraumatic growth in the aftermath of trauma.

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Chapter 1

An introduction to Authenticity
1 Introduction

The concept of authenticity—the subjective feeling of being one’s true self, can be traced back to the early 16th century within the emerging fields of philosophy, politics and literature. During this time, the main focus of authenticity began to concentrate upon negative personality traits such as deception and pretence, suggesting that hiding one’s true self was paramount in the manipulation of others. However, it is only in the last 15 years or so that the study of authenticity has re-emerged within the fields of personality and counselling, mainly because of the difficulties and discrepancies in defining and conceptualising authenticity. The difficulties in defining authenticity have left us with a large body of literature where the main focus is upon false self behaviours. Harter (2005) likens this existing body of research to “unconnected islands that address different aspects of authenticity in a rather piecemeal fashion” (p. 382). It is in response to Harter’s call for a more integrated approach that drives this thesis to draw together both counselling and personality schools of thought upon authenticity and in doing so will adopt an empirical approach to the study of the authentic self.

There are two common features that recur across both counselling and personality theories of authenticity; mainly authentic behaviours and cognitions. For instance, authenticity, the impression of being one’s true self, has the potential to influence an individual’s cognitive processes (Wood, Linley, Maltby, Baliousis & Joseph, 2008). However, to be able to explore individual differences in cognitive processes it is essential to observe individual difference in behaviours. Furthermore, the impact that personal goals have upon an individual’s cognitive processing is an important aspect of understanding human behaviour (Locke & Latham, 1990). In addition, goals can dominate people’s attention as they plan ways to execute their objectives. For instance, goals can influence recollection, observation and interpretation of information (Ditto & Lopez, 1992), suggesting that individuals may focus on goal relevant information from memory to seek and attend to events in their environment that are relevant to their goals. They may even interpret behaviours and events in the light of their goals.
The influence of authenticity on cognitive processing is an interesting area of research considering the effect that goals have upon an individual’s behavioural choice, effort and persistence at tasks. Thus, if authenticity has the potential to influence a person’s cognitive processes, then how authentic an individual feels may have implications for understanding the goals, behaviours and cognitions that this individual possesses. Therefore, to examine what it means to be authentic, this thesis will draw together both counselling and personality approaches of authenticity to explore goal-directed behaviours and cognitions to bring together a more integrated approach to the study of authenticity.

1.1 Thesis Aims

The existing literature surrounding the study of the authentic self has mainly focused upon personality and counselling theories of authenticity and thus this thesis will introduce a perspective of goals, behaviours and cognitions into existing personality and counselling theories of authenticity.

The thesis will focus on the tripartite model of authenticity developed and reconceptualised by Wood et al. (2008) and will report findings from six empirical studies that were conducted to examine the relationships between authenticity and diverse aspects of goals, behaviours and cognitions. The six studies that are presented here pertain to a series of concepts that have arisen in the literature, comprising the following: Study 1 will explore inhibition and approach seeking behaviours; Study 2 will explore cognitive flexibility in response to a changing environment; Study 3 will look at impulsive and reward seeking decision-making strategies; Study 4 will address general decision-making styles; Study 5 will look at aggressive responses in unfair situations; finally, Study 6 will address positive growth in the aftermath of trauma.
1.2 Chapter Overview

This chapter introduces the main topic of being true to one’s self which is termed authenticity. The chapter starts with a brief outline of the theoretical origins of the concept of authenticity and then proceeds to outline problems in defining authenticity. The two main theoretical perspectives that underpin the modern day understanding of authenticity (counselling and personality) which partly establish the potential usefulness of authenticity to psychology will be presented. This chapter then introduces a particular model of authenticity, termed the tripartite model of authenticity together with its accompanying measure; the Authenticity Scale (Wood et al., 2008), and establishes that to date the major focus of authenticity has been within two areas: (1) personality and individual differences correlates and (2) well-being variables. The novel nature of this model, particularly in terms of measurement will be outlined and the tripartite model of authenticity as the central focus of this thesis will be established. The chapter will then provide a contemporary critical review of the empirical work on authenticity and proceed to link authenticity to goals, behaviours and cognitions, such as: behavioural inhibition and approach behaviours; cognitive flexibility; decision-making; aggressive purposeful behaviour; and finally posttraumatic growth in the aftermath of trauma. The chapter will subsequently summarise the key aspects of authenticity and then outline the methodological approaches and considerations used to extend current considerations of authenticity which is to adopt a more experimental approach that is mainly focused upon individual differences in goals, behaviours and cognitions. An overview of the research design will then be indicated, followed by the introduction of the three themes that have emerged within the thesis. These are as follows: Theme 1: Physiological Goal Direction; Theme 2: Decision Making; Theme 3: Anger and Well-being. The chapter then sets out the key research questions to be considered in the rest of the thesis which address: (1) physiological goal direction; (2) decision-making; (3) anger and well-being; (4) posttraumatic growth.
1.3 Theoretical Traditions of Authenticity

During the 16th century, the knowledge that not all people would act according to their true beliefs was paramount in unveiling the behaviour of others to reach the truth of who could be trusted and taken at his word (Baumeister, 1987). These earlier works did not address authentic behaviours but only focused upon whether a true self existed and if so whether individuals were able to control the enactment of the true self. However, it was the later works such as Trillin (1971) and Adorno (1973) who gave these questions further consideration by moving away from philosophising about the existence of the authentic self and focusing upon the subjective nature of authenticity and its existential roots. This subjective approach has now been integrated into the measurement of authenticity which is adopted today.

Authenticity has also been studied within the multifaceted self approach. For instance William James (1890) highlighted the many components of the self, such as me, which consists of the physical, social and spiritual aspects. The social aspect of the me is concerned with the need for self recognition and also the recognition that individuals present themselves differently to different audiences. Within this multifaceted approach, Mead’s earlier writings focused upon distinguishing between the I and the me and extended this consideration by focusing upon reflexivity. This symbolic interactionism approach saw the I as a subjective impulse-oriented part of the self which coexist with the me which was considered an other-oriented objective component of the self (Mead, 2009). This perspective saw the authentic self as both subject-oriented and object-oriented within the context of self–presentation, suggesting that authenticity is both subjective and impulsive, and objective and reflexive. The link between authenticity, reflexivity and impulsivity is an interesting concept and will be empirically examined in Study 3 of the thesis.

Humanistic psychologists continued to adopt the distinctions made by James and Mead in their pursuit of an encompassing theoretical conceptualisation of authenticity which accounted for social desirability. Humanistic psychology considers the self as more than the
sum of its parts, and suggests that individuals live in social contexts that drive self-awareness and choices, and exhibit intentionality (Bugental, 1965). The qualitative methodologies adopted by humanistic psychology may account for the modern day ethnographic approaches to the study of authenticity (Aanstoos, Serlin & Greening, 2000; Clay, 2002) propelling the emergence of authenticity in self-help books today.

Within these humanistic approaches, Goffman (2002) focused upon role variation and proposed that individuals act differently in different settings and likened the different behaviours to ‘acts’ in theoretical performances. He suggests that public performances of the self offer more positive self-concepts and impressions, whereas more private and hidden areas allow an individual to drop their societal self and identities, enhancing their sense of authenticity. Goffman’s approach adopted a social psychology concept termed the Looking-glass self (Cooley, 1902) where a person’s sense of self emerges from societal interpersonal interactions and perceptions. This approach suggests that individuals gain a sense of self through an interaction of high status modifiers, suggesting that authenticity is a social product. However, Yeung & Martin (2003) argue that over time it is possible for these individuals to convince others of their own sense of self through a series of consistent acts, suggesting that role variation can drive the development of false self-behaviour. This humanistic approach raised the problem of conceptualising authenticity; suggesting that performers may not feel that the way they act is authentic and proposing that societal interactions may lead to feelings of inauthenticity. Role variation, although interesting, will not be considered within this thesis, but is identified as an area for future research.

It was the humanistic psychologists such as Maslow and Rogers who introduced a more positive approach to understanding the self which continues to gain force today. Research on the authentic self has continued to progress through the positive psychology field where authenticity is regarded as a personality trait and an indicator of courage and bravery (Peterson & Seligman, 2004).
In summary, the body of literature that examined authenticity first focused upon the existence of authenticity and its consequences. The theoretical stance then moved towards a more multifaceted approach which considered the subjective nature of authenticity, which was then extended to include a subjective impulse-oriented part of the self and other-oriented objective component of the self. A social context was then adopted suggesting that it is the social context that influences the development of authenticity. Finally, authenticity with role variation has also been studied and it was proposed that individuals act differently in different settings. As a result much of this work was concentrated on inauthenticity, leaving the study of the authentic self to be considered within the positive psychology school of thought. Consequently, to date authenticity is a largely understudied area, mainly due to problems in defining and conceptualising authenticity. These multitudes of definitions will be summarised in the next section.

1.4 Problems in Defining and Conceptualising Authenticity

The modern day understanding of authenticity, or knowing oneself and acting in accordance with this knowledge, derived from personality and counselling schools of thought is that authenticity is critical to psychological well-being and freedom from psychopathology (Horney, 1951; May, 1981; Rogers, 1980; Winnicott, 1965; Wood, et al, 2008; Yalom, 1980). This consideration has come about after much disparity in the definition of authenticity which can be seen through the publications of Riesman (1950), Goffman (2002), and Snyder (1987). For instance, the earlier works of Riesman defined authenticity as “inner directed” and argued that authentic people were self-determined and more true to themselves. Riesman also made an attempt to conceptualise inauthenticity by suggesting that inauthentic people were more “outer directed” and believed that inauthentic people adapted to the wants and desires of external factors. Riesman extended his model by stating that inauthenticity could be described as superficial and conforming in order to win approval, suggesting that an inauthentic nature was
categorised as less desirable. In contrast, Goffman’s more contemporary definition adopted a more positive approach, suggesting that inauthenticity was not to be seen as a negative behaviour but as an outcome of monitoring one’s behaviour in an attempt to impress or win acceptance. The focus on self-monitoring incorporates Snyder’s earlier conceptualisations when the term inauthentic was minimised in the 1980’s. Snyder believed that understanding the ‘true to oneself’ concept enabled the individual to monitor their own behaviour. He coined the phrase *self-monitors*. High self-monitors are concerned with how their behaviours are perceived by others and therefore tend to modify their behaviour to win approval. Snyder’s concept laid emphasis upon the belief that rather than acting inauthentically, high self-monitors had a better ability to adjust to different social situations than low self-monitors. Snyder also suggested that low self-monitors were not concerned with how they were perceived, but instead more concerned with being themselves with others. This ability to adopt numerous selves is now seen as a more positive desirable trait. Comparatively, this definition of self-monitoring suggests that high self-monitors, who have an enhanced ability to modify their behaviour to win approval, are more influenced by external forces than low self-monitors who are more concerned with living life according to their own values and beliefs and lack the flexibility of high self-monitors. This approach suggests that inauthenticity is a positive trait and that authenticity is less so, contradicting the modern day understanding of authenticity. These three approaches conceptualise authenticity as a binary concept and one that is difficult to define and conceptualise.

Other considerations operationalize authenticity as a multidimensional concept. In particular, Rogers (1961) who stressed the significance of being one’s true self and wrote that the authentic self derives from the congruence between one’s self and one’s immediate experience. This approach explores authenticity within the person-centred ideology conceptualised by Barrett-Lennard (1998), presenting a multidimensional consideration comprising the “consistency between the three levels of (a) a person’s primary experience, (b) their symbolised awareness and (c) their outward behaviour and communication” (p. 82). This
conceptualisation emphasises individual differences in behaviours and cognitions whereas more contemporary definitions of authenticity such as Kernis and Goldman’s, defines authenticity as “the unobstructed operation of one’s true or core self in one’s daily enterprise” (Kernis & Goldman, 2003, p. 18), focusing on goal-directed behaviours. Kernis and Goldman also present authenticity as a multidimensional concept comprising 4 components: awareness, suggesting a sense of one’s true self; unbiased processing, objectively accepting both negative and positive features about oneself; action, which reflects one’s own desires and beliefs rather than behaving to please; and finally relational orientation, which denotes authenticity, trust and self-disclosure in personal relationships. This 4 component conceptualisation links authenticity to self-determination theory and goal direction; however, the practicality of employing this method of measurement within this thesis will be discussed within section 1.6.1 of this chapter.

A more recent multidimensional conceptualisation by Wood et al. (2008) suggested that the first and core component of authenticity is self-alienation and is experienced when there is a mismatch between actual experience and conscious or symbolic awareness. The authors suggest that most people experience some level of self-alienation; however, if there is a high level of mismatch between the person’s actual experience and conscious awareness, this large disparity would lead to psychopathology. The “subjective feeling of not knowing oneself, or feeling out of touch with our true self” (p. 386) is indicative of self-alienation and also emphasises individual differences in cognitions. The second component, authentic-living, represents the congruence between experience as consciously perceived and actual behaviour. Authentic-living involves behaving and expressing emotions in a way that is consistent with one’s conscious experience, such as psychological states, emotions, beliefs and cognitions. Thus, to live authentically is to express one’s true self in most situations and to live in accordance with one’s own values and beliefs. This facet of authenticity lays emphasis upon individual differences in behaviour and cognitions. The third aspect of authenticity, termed accepting external influences, refers to the extent to which one is open to the influence of others and the belief that one has to conform to the expectations of others, perhaps also indicative of cognitive
differences at the individual level. Thus, within this thesis, authenticity is seen as a multidimensional concept where high levels of authentic-living are components of authenticity. In contrast, high levels of self-alienation and accepting external influences are seen as components of inauthenticity. Wood et al., (2008) also operationalise authenticity as a disposition or personality trait and in doing so avoid the problem of defining the true self, which is “the bane of every theorist who has discussed the operation of the authentic self” (Leary, 2003, p.53).

The study of the authentic self has also been neglected due to problems in defining and distinguishing authenticity from other related variables. For example, the distinction between authenticity and sincerity is often confused due to the point of reference. However, authenticity is distinct from sincerity because it is self-referential as opposed to sincerity which reflects an individual’s behaviour towards another person (Erickson, 1995) and refers to social communication (Marková, 1997). In fact, an individual can behave authentically but feel insincere or behave inauthentically and appear sincere, a self-deception which is an inhibitor of authenticity (Gecas & Burke, 1995). This definition and distinction between authenticity and sincerity suggests that authenticity is self–referential and sincerity is relational.

Authenticity is also defined as distinct from emotional regulation. Previous work describes authenticity as the ability to display one’s true feelings (Hochschild, 1983; Erickson & Wharton, 1997) and this finding is reiterated in a much later qualitative study (Sloan, 2007) conceptualising poor emotional regulation as an antecedent to inauthenticity. Psychological effects are also said to occur if the suppression of both negative and positive emotions was incongruent with feeling authentic. In summary, the distinction between authenticity and emotional regulation is that authenticity is both self-referential and relational, as opposed to emotional regulation defined as a strategy to cope and manage self-referential emotion. Emotional regulation is said to be an antecedent to authenticity where poor emotional regulation can lead to feelings of inauthenticity (Gross & Levenson, 1997).
Authenticity is also defined as unique from other self-related behaviours, such as self-monitoring and self-consciousness. Self-monitoring like impression management is concerned with altering one’s behaviour in an effort to control the way that others perceive the individual. Snyder and Monson (1975) suggest that individuals who engage in low self-monitoring, are less sensitive to external influences than high self-monitors. It is this relationship with accepting external influences that has resulted in a range of studies in which self-monitoring is linked to studies exploring authentic leadership (see Bizzi & Soda, 2011; Randolph-Seng & Gardner, 2013; Tate, 2008). Furthermore, Snyder’s (1987) account of self-monitoring is conceptualised as a construct that refers to how an individual monitors their behaviour to suit socially accepted behaviours and is therefore considered other-referent and behavioural, whereas authenticity is conceptualised as a construct that reflects an individual’s beliefs and behaviours and is therefore considered self-referent.

Authenticity is also considered distinct from impression management. Impression management is a goal-directed conscious or unconscious strategic presentation of the self. For example, intelligence when used to sway others is often regarded as negative behaviour (Murphy, 2007); conversely impression management is also considered a desirable skill as it can lead to enhanced social mobility and useful in negotiating social interactions (Leary & Kowalski, 1990). This view of impression management implies a self that is veiled or inauthentic and is perhaps related to self-alienation and accepting of external influences (Wood et al, 2008). Goldman and Kernis (2004) in agreement suggested that the drive towards authenticity influences both goals and behavioural choices and is distinct from the sole desire to influence the impression of others, which is the main characteristic of impression management.

Both private and public self-consciousness are also considered distinct from authenticity. For instance, Schlenker and Weigold (1990) found that private self-conscious individuals who may at times appear socially unaware, pay more heed to their own identity and autonomy, whereas public self-conscious people conform more and focus more on their social identity. Doherty and Schlenker (1991) found that public self-conscious individuals aspire to
please others as opposed to private self-conscious individuals who are driven by a need to please themselves. This demarcation suggests a relationship between private goals, behaviours and authenticity and public goals, behaviours and inauthenticity. Furthermore, authenticity may be seen as a trait that influences the goals and behaviours that individuals aspire to and, the extent that individuals compare their progress to in attaining those goals.

Self-verification, self-consistency and self-enhancement, although distinct from authenticity may also have important associations for understanding authenticity as they are dependent upon one’s self-concept and feedback from others, i.e., feedback about the self may enhance self-consistency which in turn influences cognitive and affective responses to feedback about the self (Schlenker, 1975). Cognitive responses are also influenced by how congruent to self-consistency the feedback is, whereas affective responses to the feedback are dependent upon how self-enhancing it is (Swann, Griffin, Predmore, & Gaines, 1987). The way in which individuals seek self-enhancing or self-verification feedback depends upon whether the feedback is concerned with their positive or negative attributes (Swann, Pelham, & Krull, 1989). These models of self-enhancement, self-verification and self-consistency suggest that the feedback from others shapes one’s self-conceptions and interactions. It is this feedback from others which makes them distinct from contemporary models of authenticity which are not concerned with the effect linked to self-conceptions, or the way that the others’ perception of one’s self modifies the individual’s own behaviours. Consistent with these beliefs are the findings of Stolorow (2011) from a study of the psychoanalytic self. In this case Stolorow found that authenticity develops when one takes ownership of one’s existence. He reiterates that the drive towards an authentic self is accompanied by a shift from being dominated by shame to one that embraces existential guilt and anxiety. This school of thought also suggests a shift from a preoccupation with how one is seen by others to a pursuit of what really matters to oneself as an individual.

The everyday use of the word authenticity, to reflect genuineness, integrity and sincerity has similarly added to problems in defining and distinguishing authenticity from other
related constructs. The above has highlighted that authenticity is not an objective evaluation of the self, but a subjective sense of being and behaving in a way that is true to one’s self, regardless of what others think or feel. To date, there is no single theory of authenticity mainly due to its many definitions. Earlier perspectives emphasised a binary concept of authenticity whereas more contemporary perspectives appear to emphasise a multifaceted concept. The various theories of authenticity present fundamentals on which they do not agree, for instance: whether a true self exists, whether authenticity is self or other referential, the costs of not being authentic, and authenticity’s potential to drive goals and behaviours. The next section will focus on the multifaceted person centred tripartite model of authenticity as conceptualised by Wood et al. (2008) as it is the more contemporary consideration of authenticity and conceptualised as a personality trait making it suitable for the study of individual goals and behaviours.

1.5 The tripartite concept of authenticity

Earlier humanistic approaches which were embedded in existential psychology, focused upon individual differences in authenticity. These approaches postulated that a more coherent understanding of psychopathology and well-being would occur through an examination of individual differences in authenticity (Yalom, 1980). Furthermore, within the person-centred approach, dispositional authenticity is presented as a tripartite concept, which according to Barrett-Lennard (1998) involves consistency between a person’s primary experience, symbolised awareness and outward behaviour and communication. Dispositional authenticity is the modern day understanding of authenticity and its conceptualisation and boundaries derive from the person-centred ideology initiated by Rogers (1961). This person-centred approach emphasises that for well-being to occur, a perfect congruence between a person’s emotions, schematic beliefs and cognitive awareness must be maintained. If this congruence is not maintained then the discrepancy between conscious awareness and true experience can lead to psychopathology.
This person-centred framework suggested that authenticity involves owning one’s beliefs or personal experiences through emotions, needs and wants in order to know one’s self and to express one’s self in ways that are congruent with one’s feelings and thoughts. The first aspect of the person-centred authentic personality is termed self-alienation and examines the congruence between one’s actual experience (physiological states, emotions and cognitions) and the experience that is represented in the individual’s own cognitive awareness. Inconsistencies between conscious awareness and actual experience can lead to a subjective feeling of not knowing oneself or a feeling of distance with the true self, leading to negative psychological changes. Authentic-living, the second aspect involves behaving and expressing emotions, cognitions and physiological states within a consciously aware manner. Authentic-living involves being true to one’s self by living in such a way that is consistent with one’s values and beliefs (Rogers, 1961). The third aspect, termed accepting external influences, is the belief that one has to conform to others’ influences and expectations, which in doing so can lead to self-alienation, thus affecting the experience of authentic-living. Both self-alienation and authentic-living are affected by external influences or extrinsic forces by introjecting the views of others (Schmid, 2003).

This conceptualisation of dispositional authenticity suggests that authenticity is a personality trait and people differ in their degree of authenticity. In a study of words used by adolescents to describe authenticity, adolescents described dispositional authenticity as “saying what you really think or believe”, “expressing your honest opinion” and “telling someone how you really feel”. The same adolescents suggested that a lack of authenticity was considered as “hiding your true thoughts and feelings”, “saying what you think others want to hear, not what you really think” (Harter, 2005). These descriptions of lack of authenticity translate to phoney or artificial behaviours. This definition of inauthenticity differs from role play theory, which involves explicit and willing changes to behaviour to suit the social context or relationship. Furthermore, to be classified as inauthentic, the person himself must feel that his behaviour is false or inconsistent with his true nature (Johnson & Boyd, 1995; Leary & Kowalski, 1990).
To address the issues concerning the conceptualisation and thus the measurement of dispositional authenticity, Peterson and Seligman (2004) suggested that the measurement of authenticity should be divided into two parts; authenticity and integrity/honesty to reflect the ambiguous nature of studying authenticity. This suggestion was brought about prior to the development of the Authenticity Scale (Wood et al., 2008) at a time when a more valid psychometric measurement of the person-centred tripartite model of authenticity did not exist.

In terms of the context of this thesis, a simple definition of authenticity as described by Wood et al. (2008) is adopted and treated as an individual difference variable. Authenticity, the belief that one is true to one’s self, echoes a self-perception which may influence one’s own goals and behaviours. Wood et al.’s model of authenticity refers to attitudes and behaviours that are stable over time and which the individual feels are genuine, true representations of their own values and beliefs. Wood et al. state that although authenticity is related to the need for social approval, it is distinct from it. Wood et al.’s model is not concerned with whether a true self exists, but is concerned with whether individual differences in authenticity influence an individual’s goals and behaviours. The tripartite model of authenticity comprises three characteristics: (1) a lack of self-alienation, which involves an identity which is consistent with all deep down beliefs, actual feelings, inherent tendencies, and objective realities; (2) authentic-living, a conscientious awareness of living in line with this identity, and (3) not accepting external influences, when they go against personal values and beliefs (Wood et al., 2008). This conceptualisation suggests that authenticity occurs when the three are in alignment. Therefore, an individual is authentic when their identity is in line with reality (low self-alienation), they behave consistently with reality (high authentic-living), and they do not allow external influences to alter either their self-perceptions or prevent authentic behavioural expressions (low acceptance of external influences). Authenticity is mostly seen as the core of psychological well-being, whereas clinical distress is caused when inauthenticity comes into conscious awareness (Joseph & Linley, 2005).
To summarise, authenticity is now conceptualised as a personality variable which influences cognitions, goals and behaviours. The underlying problems in measuring authenticity will be addressed in the next section.

1.6 Various Measurements of Authenticity

Peterson and Seligman (2004) acknowledged that the main difficulties in measuring authenticity lay within the definition and interpretation of the construct. They argued that since inauthentic behaviour was a less than desirable trait, the measurement of authenticity was susceptible to impression management and social desirability. They also recognised that the implicit nature of authenticity made it difficult to measure through direct self-reports; as with all implicit behaviours, the respondent may or may not be aware of their inauthenticity. Peterson and Seligman have also implied that not everyone is capable of understanding the difference between authenticity and inauthenticity and that simply asking a question such as “how authentic are you in your daily life?” may not be correctly answered. Therefore, since authenticity is understood to be an underlying construct, attempts at both overt and covert techniques have been previously applied. This current section will briefly introduce measures of authenticity such as Trait Self and True Self (Sheldon, Ryan, Rawsthorne, & Illard, 1997), True and False Self (Harter, Marold, Whitesell, & Cobbs, 1996), Level of Voice (Harter, Waters, Whitesell, & Kastelic, 1998) and Perceived Locus of Causality (Ryan & Connell, 1989). Other measures such as the Authentic Leadership Questionnaire (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008), and the Authentic Leadership Inventory (Neider & Schriesheim, 2011) developed to assess authenticity within management roles and will be described very briefly as their use may be more suitable within executive coaching contexts. Following on, other measures intended to measure authenticity within Romantic Relationships (Neff & Harter (2002 a, b), Adolescent Femininity (Tolman & Porch, 2000), and Felt Authenticity (Heppner et
al., 2009) will also be included. This section will only focus on describing the scales. A discussion of the empirical work from the employment of these various scales will occur in section 1.7. It is to be noted that since these various scales contrast with the tripartite model of authenticity, they are more appropriately used within other streams of research and will not be employed in this thesis. The next section 1.6.1 will introduce two measurements of dispositional authenticity; the Authenticity Inventory (Goldman & Kernis, 2002, 2004) and the Authenticity Scale (Wood et al, 2008). Comparison of both these scales will be presented to clarify their usefulness throughout this thesis.

In an attempt to investigate what the authors called trait self and true self, Sheldon, et al., (1997) used five items which were selected through factor analysis of 112 participants. These five items were: (1) "I experience this aspect of myself as an authentic part of who I am", (2) "This aspect of myself is meaningful and valuable to me", (3) "I have freely chosen this way of being", (4) "I am only this way because I have to be (R)", and (5) "I feel tense and pressured in this part of my life (R)". Internal consistency for the 5 items ranged from $\alpha = .72$ to .82. Findings although unique, suggest that this measure of authenticity is better suited to measure authenticity across social roles and does not capture the multifaceted Rogerian concept of authenticity.

The effects of perceived parent and peer support upon the adolescent self, conducted by Harter, et al., (1996) employed a True Self, False Self Measure. This true self, false self scale was designed to measure true/false behaviour around parents and classmates. An example for mother-items are “Some kids feel that they can be their true selves around their mothers but other kids feel that they can’t be their true selves around their mothers”. An example of a classmate-item” is “Some kids feel that the way they act around their classmates is not the ‘real me’ but other kids feel that the way they act around their classmates is the ‘real me’”. Scores ranged from "1= maximum false self behaviour", to "4 = maximum true self behaviour". Internal reliability for parent items were $\alpha = .88$ and for class mates $\alpha = .90$. An example of a true self item is; "Some kids often feel like they don't know who the 'real me' is, but other kids
do feel like they know who the 'real me' is.” Scores ranged from "1 = little knowledge of true self" and "4 = high level of knowledge". Internal reliability for this subscale was \( \alpha = .83 \). These items have been designed to measure perceived authentic behaviour across relationships with peers and family members and not to assess trait or dispositional authenticity.

Another study that addressed adolescents’ levels of authenticity conducted by Harter, Waters, Whitesell and Kastelic (1998) employed the Level of Voice scale to measure the freedom that adolescents perceived to express what they really think, believe and feel. Harter et al. created a five-item questionnaire to determine whether adolescents identify lack of voice as false self-behaviour or true self-behaviour. Items were designed to measure a sense of authenticity amongst parents, teachers, male classmates, female classmates, and close friends individually. Examples of false self behaviour items are: “When I don't say what I am thinking around [particular persons], I feel like I am not being the 'real me'”. On the other hand, true self behaviour was measured with items such as: "When I don't say what I am thinking around [particular persons], it feels like I am being the 'real me'”. The scale was measured from 1 to 4 with 1 = false behaviour and 4 = true behaviour. The authors reported internal reliabilities ranging from \( \alpha = .84 \) to \( \alpha = .92 \) for each subscale. Once again an attempt has been made to measure the degree of authenticity through the investigation of perceptions of false and true self, but it is clear that these are bespoke measures constructed for this specific study only.

Ryan and Connell (1989) in their study of perceived locus of causality and internalisation used a more covert study of authenticity. They explored achievement based behaviours to investigate whether behaviours felt internally driven, which they call authentically derived, or whether they were perceived as externally driven, or inauthentic behaviours. Respondents were asked to rate their motivations for certain behaviours. The reasons ranged from internal or autonomous to external causation or controlled. Autonomous or authentically driven motivations are represented by items such as “Because I am really interested in this” and “Because it expresses my values”. More controlled items include “Because the situation is making me” and “To avoid feeling guilty” which are said to represent
external motivation and thus defined as inauthentic behaviours. This covert measurement of behavioural authenticity is better suited to measure self-determined behaviours and not designed to tap into Rogers’ conceptualisation of the tripartite model of authenticity.

Henderson and Hoy’s (1983) observer-based study of leadership authenticity looked at subordinates’ perceptions of their superiors. They employed a 32-item scale, which was once again specially constructed for the purpose of their study, and was based upon concepts which they felt were theoretically related to authenticity such as: spirit, trust and status concern. This scale was designed to measure teachers’ perceptions of leadership and not trait or dispositional authenticity. Two other instruments, the Authentic Leadership Questionnaire (Walumbwa, et al., 2008) and the Authentic Leadership Inventory (Neider & Schriesheim, 2011) have been developed to assess authenticity within a management role; this will not be discussed herein as their use is mostly suitable within executive coaching contexts.

Authenticity within romantic relationships is also an important issue. Neff and Harter (2002a; b) conducted two studies. The first examined how people in close relationships subordinated their needs to avoid confrontation by looking at the concept of accepting external influences, and also how participants’ perceived authenticity of their own behaviour within relationships. The second study looked at the role of power and authenticity using a self-report methodology, applying both open and forced choice items. This was to allow participants to describe their own personal experiences and to note the subjective nature of authenticity. An example of items used to measure authenticity are “When you resolved conflicts this way, did you feel like you were being your true self, the real you, or did it feel false that you were acting that way, but it was not the real you?” These open ended questions were then coded blindly by the first author and reliability coding was conducted by a graduate student trained in the coding system. Inter-rater agreement for the content of conflict resolution scored $\alpha = .85$, for the reasons for conflict resolutions $\alpha = .80$, and for the effects of conflict resolutions $\alpha = .87$. However, the authors have not reported reliability statistics for the authenticity items. Lopez and Rice (2006) also looked at the process of authenticity within romantic relationships,
developing the 24-item Authenticity in Relationship Scale (AIRS) to measure it. They focused upon two main aspects of authenticity: authentic-living and accepting external influences, intentionally by-passing self-alienation and dispositional authenticity. The authors agreed that their scale was constructed from a modest pool of 37 items and thus suggested that this scale be developed further. They reported two subscales: unacceptability of deception, and intimate risk-taking. Internal reliability for each scale was reported at $\alpha = .90$ each and test-retest reliability over a 3 month period was reported at $\alpha = .76$. Although this scale has been developed rigorously to measure authenticity within romantic relationships it does not measure individual differences in dispositional authenticity.

Tolman and Porch (2000) developed a 20-item measure of relationship authenticity designed specifically for racially, ethnically and socio-economically diverse groups of female adolescents, which they called the Adolescent Femininity Ideology Scale (AFIS). This measure was based upon the concept that adolescent girls begin to compromise their authenticity in early adolescence (Brown & Gilligan, 1992). This measure of relationship authenticity incorporates gender specific norms and expectations within specific relational contexts. Items include “I tell my friends what I honestly think even when it’s an unpopular idea” and “I express my opinions only if I can think of a nice way of doing it”. This scale is measured on a scale of 1 to 6, with 1 = strongly disagree and 6 = strongly agree. The authors reported internal consistencies ranging from $\alpha = .67$ to .81 and demonstrated reliability over time. This measure of relationship authenticity is well suited for this area of research and not designed to measure dispositional authenticity.

Heppner et al. (2009), in their investigation on felt authenticity within personal relationships, created two items to measure felt authenticity on a daily basis. Items were as follows: "that I wore a number of social masks" (R) and “that throughout the day I was in touch with my ‘true self.” However, the authors agreed that the items designed to measure authenticity actually tapped into autonomy and concluded that the boundaries between the two authenticity and autonomy items were blurred.
To summarise, the many diverse attempts to conceptualise and measure authenticity have revealed some interesting results. Previous studies have focused upon relationship or leadership authenticity but did not address dispositional or trait authenticity and its antecedents to psychological well-being and freedom from psychopathology.

The next section presents two instruments intended to directly measure dispositional authenticity; the Authenticity Inventory (Goldman & Kernis, 2002, 2004), and the Authenticity Scale (Wood et al, 2008) designed to encapsulate the person-centred tripartite view of authenticity favoured by Rogers (1961) and Barrett-Lennard (1998). The next section will present The Authenticity Inventory and compare it with the Authenticity Scale to illustrate their utility throughout this thesis. Although both scales demonstrate adequate psychometric properties they differ in factor structure, the number of items and subscales operationalised, and they also have different theoretical emphases, as discussed below.

1.6.1 Authenticity Inventory (AI:3)

Kernis and Goldman’s (2002, 2006) multicomponent construct of authenticity is heavily influenced by historical accounts and point to the works of Aristotle, Heidegger, Kierkegaard, Sartre and Socrates. The authors identified authenticity as reflecting self-awareness, behaviours that express one’s internal experiences, experiences in relation to other people and the ability to process and acknowledge one’s positive and negative traits. Kernis and Goldman’s conceptualisation of authenticity is heavily biased towards self-determination theory, and classifies authentic-living as behaviour that represent the individual’s true motivations and values. Their multicomponent construct of authenticity is influenced by Rogers’ (1961) theory of the fully functional individual, underscoring a way of living which is guided by one’s internal experiences.

After their initial development of the Authenticity Inventory, Kernis and Goldman (2006) further refined their multicomponent construct of authenticity comprising four distinct but interrelated elements. However, this first attempt reported a low internal consistency of $\alpha =$
The authors later finalised a third version (AI: 3) presenting a 44-item inventory made up of 4 subscales; awareness, unbiased processing, behaviour, and relational orientation. The awareness component looks at processing ability and motivation to increase knowledge of one’s internal experiences. Items for awareness include “I am aware when I am not being true to myself”. The unbiased component looks at one’s ability to objectively evaluate one’s own characteristics that is not distorted by external feedback. Items for unbiased processing include “I do not exaggerate my strengths to myself”. The behavioural component explores an individual’s ability to behave in accordance with one’s own values and beliefs. Behavioural items include “I do not like to receive credit for things I have not done”; and lastly relational orientation components which measure one’s ability to be open and honest in close relationships with others, items include “People I am close to have seen my darker moments”. All items are rated on a scale ranging from 1 to 5 with 1= strongly disagree to 5 = strongly agree. For their multicomponent authenticity inventory, information on the psychometric properties of this scale is scarce. Although the authors now report high internal consistency of $\alpha = .90$, when examined separately, consistency for relational orientation and unbiased processing facets was weak ($\alpha = .32$ and .52 respectively). However, Grégoire, Baron, Ménard, & Lachance, (2013) argued that authenticity as measured by the AI: 3 has two distinct components rather than four, which are termed cognitive and behavioural authenticity. These findings give credence that more research is needed to better validate the structure of the Authenticity Inventory.

The AI:3 has attempted to consolidate the relationship between authenticity, well-being, and adaptive functioning (Goldman & Kernis 2002; Kernis & Goldman, 2006). The authors reported correlations between self-report measures of psychological and subjective well-being, verbal defensiveness and general conditions of self-worth. Higher levels of authenticity correlated with higher levels of self-esteem, positive affect and satisfaction with life and lower levels of negative affect and contingent self-esteem. Although this scale is used within well-being research, it does not directly measure Rogers’ tripartite facets of authenticity,
it is also a lengthy scale to administer and therefore not suitable to administer within
counselling or research settings, and more work is needed to better validate the structure.

1.6.2 **Measurement of the tripartite model of authenticity: The Authenticity Scale**

Wood, Linley, Maltby, Baliousis, and Joseph (2008), in their study of authenticity and
well-being developed a 12-item scale to measure dispositional authenticity. The scale was
constructed to measure the tripartite person-centred concept of disposition authenticity derived
from counselling psychology perspectives on self-alienation, authentic-living and accepting
external influences. This was decided upon as the person-centred theory which provided the
broadest and most comprehensive explanation of the construct, also emphasised Rogers’ view
of congruence and consistency (Wood et al., 2008). The Authenticity Scale also follows Barrett-
Lennard’s (1998) multifaceted conceptualisation whereby authenticity involves consistency
between a person’s true experiences, cognitive representation of those experiences and outward
behaviour and communication. The scale comprises three subscales of four items each: (1) self-
alienation designed to measure a lack of self-alienation, which involves an identity which is
consistent with all deep down beliefs, actual feelings, inherent tendencies, and objective
realities (e.g. “I don’t know how I feel inside”); (2) authentic-living, involving a conscientious
awareness of living in line with this identity (e.g. “I always stand by what I believe in”); and (3)
accepting external influences; when individuals go against personal values and beliefs (e.g. “I
usually do what other people tell me to do”) (Wood et al., 2008). All items are rated on a scale
of 1 to 7 with "1 = does not describe me at all" and "7 = describes me very well". Lower scores
on the self-alienation and accepting external influences subscales indicate being more in touch
with one’s internal experiences, and having less of a tendency to conform to the expectations of
others, respectively. Higher scores on the authentic-living subscale reflect behaving in a manner
more consistent with one’s own values and beliefs. The authors report stable scale
intercorrelations ranging from α = .70 to .84. The authors also verified the 3 factor structure of
the scale through EFA which was later supported through multigroup CFA. Additionally, the
authors explored factor invariance across diverse samples such as gender and broad ethnic groups suggesting that the Authenticity Scale behaves consistently across different demographic groups. The authors also demonstrated that responses on the scale appear to be stable over short intervals as 2 and 4 week reliability over time ranged from $r = .79$ to $.84$ at two weeks and $.78$ to $.81$ at four weeks. The Authenticity Scale is not susceptible to social desirability involving impression management and positivity bias as correlations with the 40-item Balanced Inventory of Desirable Responding (Paulhus, 1984) were small or not significant.

Good convergent validity was also demonstrated with subjective well-being variables of self-esteem, satisfaction with life, anxiety, stress, and positive and negative affect with $rs$ ranging from $.17$ to $.59$. Likewise, the Authenticity Scale showed good convergent validity with psychological well-being variables of autonomy, environmental mastery, personal growth, purpose in life, self-acceptance, positive relation with others and gratitude with $rs$ ranging from $-.17$ to $-.59$.

The Authenticity Scale shows appropriate but distinct variance from other personality traits. For example, the Big-Five model of personality (John & Srivastava, 1999) accounted for a small but significant 11 to 13% of the variance for the three subscales (Wood et al, 2008). In addition, Gray’s (1982) behavioural inhibition/approach system and Cloninger’s psychobiological model of personality (Cloninger, Svrakic & Przybeck, 1993) accounted for between 5.8 and 18% of the variance in authenticity (see Chapter 2). In addition, the Honesty-Humility factor of personality (Ashton, Lee & Goldberg, 2007) showed the strongest relationship with authenticity, as this factor comprises terms such as truthfulness, positive values, honesty and sincerity (Maltby, Wood, Day & Pinto, 2012). Other studies have demonstrated relationships of the Authenticity Scale with career indecision (White & Tracey, 2011), aggression (see Chapter 6) and inhibition and approach behaviours (see Chapter 2), and authenticity at work, such as job satisfaction, in-role performance, and work engagement (Bosch, & Taris, 2014).
1.6.2.1 Justification for using the Authenticity Scale

The above review has identified that Wood et al.’s (2008) Authenticity Scale is a broader measurement of authenticity encapsulating the person-centred tripartite model of authenticity. This scale has undergone criterion validation and shows good distinction from other extant models of personality (Maltby, Wood, Day & Pinto, 2012; see Chapter 2). Compared to the Authenticity Inventory (Goldman & Kernis, 2002, 2006), it contains fewer items (12 items versus. 45 for the Authenticity Inventory), therefore is more convenient to administer within research, clinical and counselling settings than the Authenticity Inventory. Also, the Authenticity Scale can be used with employees at any level of an organisation as opposed to authentic leadership measures which are more suitable for management level employees. The Authenticity Scale’s factor structure is consistent with Barrett-Lennard’s (1998) model of authenticity which is embedded in grounded theory and is supported by high factor loadings in exploratory and confirmatory factor analyses. However, the four components of authenticity conceptualised by Goldman and Kernis (2004), as measured by the Authenticity Inventory, appear to overlap both conceptually and statistically, thus undermining its construct validity (Grégoire, et al., 2013). For these reasons, the Authenticity Scale developed by Wood et al. (2008) provides a broader conceptualisation of authenticity and is considered more useful to clinicians and researchers. Thus, based upon these findings the Authenticity Scale (Wood et al., 2008) is a promising tool for measuring dispositional authenticity and will be employed throughout this body of work. The next section will provide a concise overview of empirical work that considers authenticity as a central focus.

1.7 Empirical work on authenticity

The following section will review both quantitative and qualitative studies of authenticity that make this concept a central focus. By critically accessing the body of literature
upon authenticity this section aims to clarify the current understanding of this construct and identify a need for future research.

Despite previous efforts to conceptualise authenticity, the empirical study of authenticity has been largely neglected. Harter (2005) attributed this void in empirical research to a definitional confusion regarding the conceptualisation of authenticity within empirical studies. Section 1.4 within this thesis has identified and summarised the most relevant literature to constructs related to authenticity, e.g., impression management, emotional regulation, and self-monitoring. These constructs provide important insights into the antecedents of authentic cognitions, goals and behaviours. This thesis does not allow scope to include all existing literature on authenticity and so will draw upon recent works that directly explore authenticity which lead to authentic goals and behaviours. The following empirical research upon the authentic self presents an important overview on how authenticity is developed or inhibited, its pros and cons and its social dynamics.

Earlier works focused on inauthenticity and the negative consequences of self-alienation and accepting external influences. Wood et al. (2008) claimed that modern day counselling psychological perspectives have identified authenticity as one of the fundamental facets of well-being since it is the very core of healthy functioning. The development of authenticity and well-being through experiencing adversity has been studied. For instance Joseph (2004) and Joseph and Linley (2005) within a trauma based perspective, considered self-alienation to be the crux of psychological distress such as PTSD. In addition, Dunmore, Clark, and Ehlers (2001), and Harter et al. (1996) who again only considered self-alienation, found that it was linked to lower levels of hope in children. Ehlers, Maercker and Boos (2000) in a qualitative approach, which included both self-alienation and accepting external influences found that both these facets of authenticity linked with more severe symptoms of PTSD. They also found that accepting external influences and moving away from autonomy led to more deterioration in psychological well-being over time.
Goldman and Kernis (2002) in a more comprehensive study considered dispositional authenticity as a whole and found strong correlations between authenticity and subjective well-being; although Wood et al. stress that this finding should be considered preliminary due to the poor construct validity of the Authenticity Inventory employed within the study. Nevertheless, recent works are now building upon these earlier works by exploring authenticity and well-being, for instance Hirschorn & Hefferon (2013) applied constructive grounded theory by means of semi-structured interviews and found that authenticity arises through personal growth within individuals who experienced adversity when engaging in cross culture travel.

Authenticity within personal relationships has also been studied, for instance; Neff and Harter (2002b) linked lower authenticity with depression and low levels of self-esteem, and in an attempt to address both authentic and inauthentic behaviours, Lopez and Rice (2006) looked at authentic living and accepting external influences within close relationships and found correlations between anxiety, depression, self-esteem and satisfaction with life. Also addressing authenticity, Brunell et al. (2010) found that dispositional authenticity was related to healthy behaviours within relationships, which in turn predicted positive relationships and greater psychological well-being. They also found that authenticity within male partners predicted relationship behaviours within their female partners; however, dispositional authenticity among females was not associated with their male partner relationship behaviours.

The link between role variation and authenticity has also been found to correlate with well-being and lower levels of anxiety, stress and depression (Bettencourt & Sheldon, 2001; Sheldon et al., 1997). Authenticity across various roles such as student, employee, friend and romantic partner is also positively related to self-esteem (Sheldon et al., 1997), and considers the ability to switch to different roles positively. However, there also seems to be a cost for pretending. Hussain and Langer (2003) found that when individuals are praised for acting inauthentically, the praise had no effect on self-esteem. The authors claim that the pretenders were aware that they were not their genuine selves, and therefore did not accept praise as an evaluation of their genuine selves. A second explanation offered by the authors is that praising
the inauthentic persona only helped to highlight the fact that the authentic persona failed to have these qualities. This implicit comparison could explain the decrease in self-esteem. These findings suggest that self-esteem is enhanced if the role is carried out autonomously with the knowledge and confidence to employ many different self-aspects rather than forced by the situation itself.

A complicated argument surrounding the trajectories of role adjustment and well-being exist. For instance, Kernis (2003), states that authenticity is an adaptive trait and advocates that the ability to switch between multiple roles [which reflects the dynamics of social life and the adaptability to adjust to them (Markus & Wurf, 1987; Snyder, 1987)] may contradict the self. More findings suggested that variability in self-concepts and flexibility are more likely to invoke confusion and a lack of internal consistency (Campbell et al., 1996). These negative outcomes are consistent with Donahue, Robins, Roberts and John (1993) and Sheldon et al. (1997) who all report that the more consistent individuals felt when engaging in traits across social roles, the greater their psychological and physical adjustment.

To help account for these feelings of authenticity and inauthenticity, the functional flexibility and situationality model by Paulhus and Martin (1988) suggests that the differentiation between functional flexibility and situationality must be taken into account in the issue of the adaptability of role variation. Functional flexibility is defined as having the ability and confidence to employ many different self-aspects within different situations. Paulhus and Martin suggest that one who is highly flexible, will experience less anxiety in taking on multiple-selves, as these multiple-selves are well demarcated by the individual and can be enacted with confidence. Paulhus and Martin linked functional flexibility to a high sense of agency and other measures of adaptive functioning. Conversely, situationality (a belief that the individual is not very good at adopting multiple self-aspects and that multiple self-aspects are brought on by the situations themselves) will enhance the discrepancies between self and enactment which will lead to self-doubt and other psychological problems. Other evidence to
suggest the adaptive qualities of role variation can be found from studies that address Theory of Mind (ToM, Bänziger & Scherer, 2007).

The ability to feign emotions is thought of as predominately unique to humans and is relevant in the study of ToM (Bänziger & Scherer, 2007). In a study of authentic emotions within a fMFI paradigm, Drolet, Schubotz, and Fischer (2012) found that authentic emotions indicated potential involvement of the ToM network, as well as areas for working memory and decision-making, suggesting that individuals use recollections of their own experiences for authentic emotions as opposed to those involving play-acting. These findings also suggest the importance of functional flexibility in role enactment, and stress that the ability to employ many different self-aspects within different situations is an adaptive trait. Although this thesis does not explore functional flexibility or role enactment, it is an area for future research.

Within the limited body of research that explores the development of the authentic self, adolescence emerges as a crucial time (Harter, Bresnick, Bouchey, & Whitesell, 1997). Exploration of the true-self, the false-self and the development of multiple self-facets found that adolescence is a time when questions of authenticity arise, whereas the concept of false-self behaviour becomes more relevant around the 11 to 13 years of age mark. Harter, Marold, Whitesell, and Cobbs’ (1996) model of false-self behaviour states that adolescents’ suppress their true selves as a means of impression management to gain social approval, or as a means of role experimentation. The authors also suggest that inauthentic behaviour is motivated by fear of being disliked, especially if they dislike their true-selves. The authors also found that uncertainties or dislike of one’s true-self led to lower levels of well-being, more so than false-self behaviour motivated by a desire to please others or as part of role experimentation. Perceptions of peer pressure among adolescents also seem to be an antecedent to authenticity, for example, Steinberg and Monahan (2007) found that the ability to resist peer pressure, an indication of psychosocial maturity, emerges between the ages of 14 and 18 years, and state that psychosocial maturity is related to authenticity, and postulate that the two may follow very similar developmental stages.
In the study of the development of authenticity, Harter (2005) suggested that parents play a major role in facilitating authentic self-views. Parents help to facilitate their child’s potential for authentic behaviours through allowing and validating their children’s narratives of their own experiences. The review also reiterates the importance of validating the child’s experiences of the world, reflecting the child’s views, values, beliefs and desires. This parental and also peer validation can influence the extent to which authenticity is internalised and becomes a self-standard. However it is not clear whether this type of reinforcement is internalising the child’s desires or is simply a reflection of the parents’ values and beliefs. In addition, it is not clear whether the need for approval promotes the feelings of inauthenticity or whether it is those who suffer from feelings of inauthenticity that seek out approval. However, in a study to explore parental care/maltreatment and authenticity, Robinson, Lopez, Ramos, and Nartova-Bochaver (2013) found that children who suffered from parental antipathy suffered from lower levels of authenticity, suggesting that it is the need for approval from parents that drives the development of inauthentic behaviours.

The few empirical studies on developmental authenticity have focused upon the findings of young adults and adolescents, but even fewer have addressed the trajectory of authenticity among older individuals. The scarce literature on gerontology pertaining to wisdom and transcendence (Ardelt, 1997) and well-being (Ryff, 1989), found greater levels of authenticity among this group compared to the findings of Erickson and Wharton (1997), who reported that younger adults with children still living at home reported lower levels of authenticity. It is differences such as these that have highlighted the importance of exploring the fluidity of authenticity over the life span (Vannini, 2007).

Authenticity and gender have also been explored (Erickson & Wharton, 1997; Harter, Waters, Whitesell, & Kastelic, 1998). Although no gender differences have been reported, gender role orientation may play a part, where women reported significantly higher feelings of authenticity in their roles than men (Harter et al., 1997; Sheldon, et al., 1997).
There has been a large body of empirical work on authenticity within the workplace. The teaching profession can enhance feelings of authenticity. For instance, Hoy and Henderson (1983) found that teaching can induce feelings of authenticity. These researchers looked at *esprit* and *thrust* which they measured via the Organizational Climate Description Questionnaire. Findings revealed that both esprit and thrust are positively correlated with perceived leader authenticity. Findings also revealed that status concern is negatively correlated with perceived leader authenticity. The authors suggested that thrust describes teachers' perceptions of the principal's goal-directed behaviour whilst esprit describes teachers' perceptions of their own ability to enjoy social needs, fulfilment, and task accomplishment. However, Vannini (2006) in a qualitative study, found that feelings of authenticity are not affected by conformity to social forces as previous studies have revealed. This study, which focused on university academics, found that humanity teachers have greater feelings of authenticity in comparison to academics that identify themselves primarily as researchers, suggesting that feelings of inauthenticity are rooted in creativity, self-expression, success and acceptance, all qualities that may enhance an academic career.

Other studies have looked at authenticity within the service sector; Erickson and Wharton (1997) found that in interactive service jobs, where goals are performance related, feelings of inauthenticity were positively correlated with work related distress and depression. Managing behaviours such as managing work related agitation was also related to inauthenticity; however managing negative emotions such as sadness and guilt, and managing positive emotions such as happiness and excitement, were not related to feelings of inauthenticity (Erickson & Ritter, 2001), suggesting that it is perhaps the burden of acting professionally in the workplace which leads to greater feelings of inauthenticity.

Some research has also been conducted upon the relationship between authenticity and positive outcomes but it is not clear if there is a causal relationship. For instance, Wood et al. (2008) reported significant positive relationships between authentic-living and self-esteem, and negative correlations between self-alienation, accepting external influences and self-esteem.
Findings also revealed that authentic-living was positively related to positive affect and life satisfaction which were both negatively correlated to self-alienation and accepting external influences. The authors also found that authenticity predicted stress and negative affect in a multiple diverse community sample. These findings are in line with Goldman and Kernis (2002) who found that authenticity is positively correlated to self-esteem and life satisfaction and negatively correlated to negative affect and self-esteem contingency, amongst female university students. In a later study Kernis and Goldman (2005) also found that lower levels of authenticity were correlated to greater levels of depressive symptoms. Furthermore, within the counselling setting, authenticity is positively correlated to mindfulness and negatively correlated to verbal defensiveness (Lakey, Kernis, Hepper, & Lance, 2008). However acting inauthentically can also be an adaptive response, especially in social environments where concealment is necessary for survival (Robinson, et al., 2013).

To summarise, the research so far suggests that a multifaceted self is linked to agency, self-acceptance, self-beliefs, self-confidence and self-esteem, which all enhance feelings of authenticity. Furthermore, feelings of self-doubt, confusion, and conflict with one’s self-beliefs, which are brought on by situational factors, suggest feelings of inauthenticity. Recent empirical evidence which considers authenticity within the context of cognition, goals and behaviours, suggests that authenticity is related to positive outcomes such as adaptive functioning, life satisfaction, and positive affect, whereas inauthenticity is linked to more negative outcomes such as depression, anxiety, stress, psychological distress and PTSD. In a response to Harter’s (2005) call for a more integrated approach to the study of authenticity this thesis sets out to draw together both counselling and personality theories of authenticity. Both these approaches are considered in the next section since authenticity is believed to be core to psychological well-being and is currently considered a personality variable. By adopting a dispositional approach, this thesis can now explore individual differences in authentic goals, behaviours and cognitions.
Since the main body of existing literature lies heavily within counselling and personality schools of thought, the next section will draw together and summarise both counselling and personality approaches to authenticity.

1.8  Counselling and Personality Approaches to Authenticity

Although most schools of thought agree that authenticity is a basic human strength, the existing literature isolated different approaches and failed to link each perspective. For example, within counselling and personality approaches, some studies have asked people to rate themselves on a false-self to true-self continuum (e.g., Harter, et al., 1996), whilst others have asked the extent to which people’s behaviour varies across social roles (e.g., Sheldon, et al., 1997), these two distinct schools of thought have resulted in different approaches and dissimilar definitions to the same construct. The collection of psychological findings from various approaches such as, psychodynamic, existential and humanistic perspectives, have also resulted in disparate conceptualisations of authenticity, and thus now appear as unconnected islands of knowledge which are summarised below.

Within the psychodynamic perspective (Horney, 1951; May, 1981; Winnicott, 1965; Yalom, 1980), the true-self is influenced by external forces. The psychodynamic approach theorises that during childhood, external influences are internalised. This internalising leads to a feeling of self-alienation, which they believe to be a cause of psychopathology. Both May and Yalom also suggested that since self-alienation is at the core of authenticity, the disparity between the true-self and introjections of the views and behaviour of others can lead to psychopathology and mental distress. However, the Jungian approach (Jung, 1939) moved towards a more growth-oriented stance in which individual strengths provided the foundation for building a more satisfying and meaningful life. This optimistic approach suggested that an authentic self lay beneath a multitude of personas within the individual. Hartmann (1964), in line with this more positive approach adopted an ego-orientated perspective. He stressed upon
free ego energy, which allowed a person to contact one’s true rather than false-self. The onus here was on psychic unity versus a fragmented self.

It was during the 20th century that the study of authenticity began to move away from the Freudian view that the self was embedded in the unconscious mind and reinforced the belief that self-direction, authenticity, trustworthiness and consistency came from within a supportive external environment. It was this step towards the individualist approach which allowed clinicians to investigate inauthentic behaviours in regard to psychopathology through corruption of social-environmental factors (Harter, 2005), an approach much supported by Horney (1951), Rogers (1961) and Fromm (1973).

The existential approach laid emphasis upon the struggle of the self to exist in an authentic state. Existential psychologists focused on integrity and attempted to link authenticity to a sense of freedom (Harter, 2005). May (1981) believed that living one’s destiny brought gratification and achievement through fulfilment of one’s desires, and it is this sense of authenticity that allows a sense of freedom. May also suggested that an individual is constantly under pressure to conform thus denying their destiny. This compliance to conform is born out of fear and insecurity of being ostracised. This lack of courage to be what one desires to be leads to a covering up of the authentic persona, which in turn leads to a feeling of inauthenticity. However, not all existential psychologists were in agreement: Heidegger (1962) also focused upon the influence of society, but suggested that to reach a state of authenticity one has to deal with happenings in the surrounding world. Others such as Sartre (1948) stressed upon integrity and that its existence is only achievable by accepting the reality of personal choice. Furthermore, Laing (1960) emphasised the divided self and theorised that psychopathology is caused by the confusing state of trying to separate the inner self from the self that is projected to the world. Existentialism emphasised inauthenticity and believed that it is caused by either inadequate nurturing or failings in society, whereas the humanistic approach emphasised the importance of integrity and authenticity. Rogers (1961) mainly focused upon congruence with the true self which he termed integrity. He suggested that feelings of integrity are only obtained
when a person is aware of and capable of communicating their feelings. He also explained the feeling of self-alienation as a person projecting a self-image inconsistent with these feelings. This approach therefore implies that it is the person’s own perceptions of their cognitive self that is the cause of inauthenticity, and therefore suggests that feelings of authenticity are subjective.

Although there has been much theorising and model construction upon the construct of authenticity, only a limited number of studies have examined authenticity as a trait dimension. Wood et al. (2008) stated that by reconceptualising authenticity as an individual difference variable or trait, the study of authenticity will progress. They also suggest that little is known about the relationship between trait authenticity and other less desirable personality traits such as deceitfulness, insincerity, pretentiousness and falseness.

In one of the very few studies upon trait dimensions of authenticity, Sheldon, et al., (1997) suggested that authenticity is anchored to the self and internally derived, suggesting that authenticity is an underlying trait and is a good indicator of a fully functioning person (Rogers, 1963). They also suggested that felt authenticity has a dynamic impact, not only on behaviour but also on personality, which is under pressure to change with ever changing roles. However, although previous research and theoretical conceptualisations of authenticity suggest that authenticity is an underlying trait, Wood et al. (2008) showed its distinct variance from the Big-Five personality traits of John and Srivastava (1999).

In a study to explore the veracity of the tripartite model of authenticity conceptualised as a personality trait, the authors found positive relationships between the Authenticity Scale and agreeableness, conscientiousness, extraversion, and openness, and negative relationships between neuroticism. The authors explained that relationships between authenticity and the Big-Five would be expected as authenticity is conceptualised as a variable related to well-being. The authors further suggested that well-being could mediate the relationships between authenticity and extraversion, neuroticism and agreeableness as these traits also include positive and negative affect. On further exploration however, they found that the Big-Five only contributed
11-13% of the variance in the three subscales of authentic-living, self-alienation and accepting external influences, demonstrating that the majority of the variance in the Authenticity Scale could not be predicted by one or more of the Big-Five subscales. This finding is suggestive of discriminant validity of authenticity from the Big-Five model of personality.

The authors also found correlations no larger than $r = .11$ between the three subscales of the tripartite model of authenticity and the honesty/humility factor subscale of the HEXACO personality inventory (Lee & Ashton, 2004). This finding was surprising since honesty/humility is conceptualised as encompassing authenticity. The authors explained this lack of relationship to the fact that the finding was based upon one single correlation and upon one sample. In a later study, Maltby, Wood, Day and Pinto (2011) demonstrated across Exploratory and Confirmatory Factor Analysis, and with multigroup CFA that the three subscales of authenticity loaded on the honesty-humility subscale of personality. This finding is consistent with wider theoretical overlaps between healthy psychological functioning and the honesty - humility factor of personality, as highlighted by the humanistic tradition of psychology.

This thesis will extend Wood et al.’s (2008) work by addressing the positioning of authenticity within extant biological models of personality in exploring the discriminate validity of the tripartite model of authenticity from Gray’s (1982, 1985) behavioural inhibition/approach systems and Cloninger’s psychobiological model of personality (Cloninger, Svrakic, & Przybeck, 1993). This study will also add to the body of work conducted by Maltby, Wood, Day, and Pinto (2011) who found a strong relationship between the Honesty-Humility factor of personality (Ashton, & Lee, 2005) and in doing so, it will address Theme 1 of this thesis by revealing dynamic relationships between authenticity and goal-directed behaviours of inhibition and reward-seeking.

Although the arena of the tripartite model of authenticity is greatly understudied, it has recently addressed changes in well-being and social functioning over time. In a study to investigate the role of authenticity on social functioning and well-being, Wood et al. (under revision) found that self-alienation led to lower levels of vitality. Self-alienation was also
related to low unconditional self-regard and impaired relationships; in other words individuals who felt more alienated from themselves also reported developing less positive relationships, had fewer social support systems, and were less able to cope with their emotions. In contrast, living more authentically led to higher levels of personal growth and autonomy. The inauthentic facet of accepting external influences was linked to bigger and more supportive social networks, but this perceived benefit of adaptive emotional support appeared to be a costly behaviour where individuals with larger social networks showed lower levels of autonomy. Although this is the first longitudinal study that addresses all three facets of authenticity, the methodology relied heavily upon self-report measures. However, the paper demonstrated that authenticity can be increased through purposeful behaviour.

Very few studies exist that consider the tripartite model of authenticity within a personality approach, thus there is still a lack of sufficient body of research applying authenticity as a trait dimension.

After presenting a brief historical account of authenticity and outlining the problems in defining and distinguishing authenticity from other similar psychological constructs, reviewing recent empirical research of authenticity and outlining both counselling and personality perspectives of authenticity, the next section considers the theoretical literature pertinent to this thesis. The theories that are discussed link authenticity with goals, behaviours and cognitions such as behavioural inhibition and approach, goal-directed executive functioning, decision-making, anger and aggression, and adaptability to trauma.

1.9 Linking authenticity to goals, behaviours and cognitions

There is a common understanding among well-being theorist that progressing towards meaningful goals is a prerequisite for subjective well-being suggesting that fulfilment of needs, goals and desires is an antecedent to happiness (Diener, 1984; Emmons, 1996). According to Peterson and Seligman (2004), earlier cognitive and goal directive perspectives failed to address
the self-concept and in doing so neglected to include authenticity and integrity in their empirical works. Since no substantial body of evidence had evolved, the self and integrity faded from social cognitive psychology (Peterson & Seligman, 2004). The self-concept is however now undergoing a revival in contemporary social cognitive psychology with much emphasis upon the multifaceted self and authenticity. The concept of authenticity and knowing one’s self has especially invoked interest within the domains of self-awareness, self-esteem, self-image and self-evaluation and is now considered within social cognitive frameworks, such as self-attribution, social learning theory (Bandura, 1977), self-efficacy within cognitive dissonance theory (Aronson, 1969) and self-enhancement bias (Harré, Foster, & O’Neil, 2005). However the main body of research on authenticity still lies within personality and counselling domains of authenticity.

Such research, that is mostly focused within personality and counselling perspectives, reported correlates between the tripartite model of authenticity and self-esteem, subjective and psychological well-being, the Big-Five personality traits, life satisfaction, and positive and negative affect (Wood et al., 2008). Although authenticity is theoretically defined to reflect an adaptive, fully functioning individual, these propositions within the tripartite model of authenticity have not been thoroughly explored. For instance, there is a lack of research that explores authentic goals, cognitions and behaviours. Since theoretical propositions suggest that the authentic individual seeks to live life in accordance with their own values and beliefs, it is necessary to explore authenticity and its role within implicit and explicit cognitions and behaviours.

1.9.1 Linking authenticity to the Behavioural inhibition/approach

Individuals most often pursue goals with different strategies. For instance, a PhD student with a goal of obtaining her PhD can implement many strategies whilst working towards her goal; the student could direct her energies on obtaining novel results and spend her time writing them up and submitting them for publications, or could pursue the same goal by
adopting a different strategy, of spending less time in the pursuit of publications and more on focusing on her thesis document, in the aim of avoiding an extensive list of revisions. Both of these approach and avoidance strategies have their pros and cons. For example, the first strategy could perhaps make her more employable within the field of academia, but may also subject her to: feelings of rejection which often accompanies the high rejection rate of journals; the agonising waiting period for a publication decision; and the stress that can accompany the process. The latter strategy of avoiding rejection and stress that accompanies the publication process may result in her passing her Viva Voce without major revisions to her thesis document but may also leave her appearing to need more publications in order to gain employment within the academic sector.

The point in question is which strategy would give her greater enjoyment and satisfaction in pursuing her goal. This thesis will consider the approach and avoidance strategies of goal pursuit and behaviour regulation within the authenticity personality by exploring the inhibition and approach models of behaviour.

Gray’s (1982, 1985) behavioural inhibition/approach model suggests that two regulatory systems underpin personality and predict well-being. The approach system regulates positive affect and goal pursuits. In contrast, the inhibitory system regulates negative affect and withdrawal to avoid harm. The relationships between authenticity and inhibitory systems are predicted by counselling perspectives, which suggest that authenticity relates to less inhibitory behaviour thus leading to better well-being. Previous research found that those individuals, who engaged in inhibitory behaviours to avoid confrontations, reported lower levels of authenticity and self-esteem and greater levels of depression (Lopez & Rice, 2006; Neff & Harter, 2002a). However the relationship between authenticity, inhibition and approach behaviours has not yet been addressed and will be explored in Study 1 which is embedded in Chapter 2 of this thesis.

Cloninger’s psychobiological model (Cloninger, et al., 1993) predicts vulnerability to neuroticism and other mental and personality disorders. Cloninger’s model measures the ability to self-govern mental states, comprising inhibitory and novelty seeking behaviours that promote
well-being. The relationship between authenticity and Cloninger’s model of well-being is again suggested by perspectives on authenticity. For instance, Maslow (1954) emphasised authenticity as reflecting physiological and social drives to attain needs, requiring goal determination to maintain those needs. This is evidenced by Deci and Ryan (2000) and Sheldon (2002), who found significant correlations between authenticity, autonomy and goal-directed behaviours. However, the relationship between the tripartite model of authenticity and inhibitory and novelty seeking goal-directed behaviours has not yet been explored and thus will be addressed within Study 1 of this thesis.

1.9.2 **Linking authenticity and cognitive flexibility**

A number of personality variables have been linked to individual differences in cognitive functions (Edwards & Collins, 2008; Lieberman, 2000). Thus research into individual differences in authenticity is one approach that may provide insight into cognitive flexibility. DeYoung, Shamosh, Green, Braver, and Gray (2009) found a relationship between a personality trait termed *intellect* and executive functioning which was mediated by specific regions of the prefrontal cortex, an area of the brain considered to be associated with personality. Executive functions are cognitive processes that are associated with activation of the prefrontal cortex, and are core to everyday functioning, such as the ability to maintain goals, shift from one goal to another, and identify and update relevant from irrelevant information (Miyake et al., 2000). Personality and executive functioning are said to share neurotransmitter processes. For example, the personality domain of extraversion is associated with dopamine reward (Depue & Collins, 1999) and executive functions with dopamine facilitation (Luciana, Depue, Arbisi, & Leon, 1992). Eysenck was one of the first to argue for a neurological base for personality traits and suggested that extraversion and introversion are a result of individual differences in arousal to stimuli as a result of activation of the reticular activating system.

Another biological approach such as Gray’s reward sensitivity theory, suggests that the degree of extraversion is modified by an individual’s motivation to approach rewards or to
inhibit or avoid a punishment or negative stimuli (Passingham, 1970). In considering Wood et al.’s (2008) findings that authenticity is positively related to extraversion and therefore may share some of its biological mechanisms and considering DeYoung et al.’s (2009) findings that personality is related to executive functions, this thesis will explore the tripartite model of authenticity and an executive functioning set termed cognitive flexibility as measured by the task-switch paradigm in Study 2 Chapter 3 of this thesis.

1.9.3 **Linking authenticity and reflective decision-making**

Research on individual differences in decision-making reveals two fundamental human motives, the desire to reduce or avoid pain and uncertainty and the desire to obtain pleasure (Franken & Muris, 2005). Previous research viewed decision-making as a rational choice; however recent findings agree that decision-making is based more on hedonic motives than on rational motives (Cabanac, 1992). Although much research has been conducted on maladaptive decision-making in clinical samples, the relationship between higher order personalities and decision-making should be addressed. For example, although previous theorists suggested a link between authenticity and goals and behaviours, it is not known whether behavioural decision-making is influenced by authenticity. Baron (1994) demonstrated that many decisions which individuals engage in appear to be irrational, highlighting the fact that individuals may not care about the consequences of their actions. This finding contradicts earlier works by Grossberg and Levine (1987), whose theory of drives and emotions postulates that humans have cognitive mechanisms which reflect the satisfaction or dissatisfaction of goal obtainment. The authors theorise that emotional and hedonic drives are deeply rooted in decision-making and state that using heuristics for fast decision-making can be pleasurable.

One decision-making model that accounts for hedonic, goal-directed, decision-making is reflective impulsivity; the ability to gather information and evaluate options and hypotheses. The ability to carefully consider decision-making is termed reflexivity. In contrast, the term impulsivity is given to decision-making strategies that are quick and intuitive (Evenden, 1999;
Kagan, 1966). Reflective impulsivity can occur at several stages of information processing, including perceptual analysis, goal representation and response execution (Aron, Robbins, & Poldrack, 2004). Previous studies have found links between personality and reflective impulsivity. Specifically, Ault, Crawford, and Jeffrey (1972) found that higher reflective scores of children rated by teachers as slow and accurate were linked to higher levels of attention. On the other hand, Block, Block and Harrington (1974) found that higher impulsivity scores were related to ego resiliency and anxiety. Weijers, Wiesbeck, and Böning (2001) found that novelty seeking individuals scored higher on impulsivity and lower on reflective behaviour.

Furthermore, individuals characterised by normative identity styles conform to standards and expectations held by significant others and authority figures, implying that these non-autonomous decision-makers are inauthentic in that they accept external influences; a more dependent and non-reflective decision-making style. Likewise, individuals characterised by an avoidant identity style are unwilling to confront directly in order to deal with problems and identity issues, implying that these individuals, who avoid making decisions, suffer from feelings of self-alienation. Although previous research has found a link between personality and hedonic goal-directed decision-making, the relationship between authenticity and reflective impulsivity is still not clear. This thesis will aim to address this void in the literature in Study 3, Chapter 4 of the thesis.

1.9.4 Linking authenticity and everyday decision-making strategies

Within the decision-making literature, knowing one’s self entails incorporating experiences into an identity, brought about through engaging with demands and challenges (Erickson, 1995). Berzonsky (1988) theorised that individuals make decisions by negotiating identity relevant issues. They do this by employing cognitive processing orientations or identity styles comprised of informational, normative, and avoidant orientations. Individuals, who adopt an informational identity style, actively seek and evaluate self-relevant information before making a decision. These individuals are flexible about their own self-constructs and in doing
so are open to new evidence and options. This theoretical conceptualisation implies that those individuals, who actively engage in identity relevant decision-making, are more self-aware and have a consistent sense of identity and objective reality known as authenticity (Maltby, Wood, Day, & Pinto, 2012).

Within the humanistic literature of decision-making, the use of intuition when making a decision is defined as a distinct pattern of thought from the rational mode. Jung (1939) believed that intuitive decision-making strategies are beneath the conscious realm and made without the limitations and constraints of rationalism and logic. He argued that intuition is a perception and understanding of the whole at the cost of minutiae which he attributed to unconscious processes. This view suggests that intuition is viewed as a cognitive function outside of conscious reasoning and occurs whenever rational or other cognitive perceptions do not work. Jung characterised intuition as hunches, inspiration and insights into problem solving methods, all of which suggest little rationalising. Jung believed that intuition is a core aspect of human experience, although people, who base their decisions on intuitions, are rare. The Jungian theory defines human experience as composed of two functions: rational (thinking and feeling), whereby individuals evaluate experiences before coming to a decision, and non-rational functions (intuition and sensation) whereby individuals consider experiences and gather information prior to decision-making. Jung stated that intuition is a function of personality rather than knowledge and one that balances perceptions of reality without involving inference. This balancing of inferences is a reactive process which responds to given facts. Non-rational or intuitive functions mediate perceptions of ideas and are stimulated by an act of will or intent. Jung proposed that intuition is the core of human experience which manifests itself through various personality types. However, this proposition has not been explored; therefore Study 4 within Chapter 5 will conduct the first empirical investigation into exploring the relationship between intuition when making a decision and the tripartite model of authenticity (Wood et al., 2008).
Maslow’s (1970) account of human decision-making also focused upon intuition. He defined intuition as an innate component which contributes to the existence of the self and self-actualization. His theory of denial proposed that individuals tend to suppress their intuition out of fear of knowing themselves or to avoid identifying areas in need of development. This proposition is consistent with Jung’s (1971) account of rational versus non-rational thought processes which account for lack of intuition in decision-making. Maslow proposed that when one has self-knowledge, action follows and choices can be made without internal conflict, suggesting an element of authentic behaviour. However, Maslow stated that self-discovery propagates a need for action which may or may not go against the norm. He argued that most people take the path of least resistance by conforming to these norms, whereby they adopt behaviours and thought processes that are more acceptable to the majority. This siding with the status quo is seen within decision-making literature as a common and dominant response and overlaps with Wood et al.’s (2008) account of accepting external influences. Maslow argued that intuition affords personal freedom which is expressed in personal choices and decisive action. Both Jung and Maslow’s accounts of decision-making imply that the self and self-knowledge is instrumental in making choices, but has not been tested empirically within the tripartite model of authenticity (Wood et al., 2008).

Thus far, the relationship between authenticity and decision-making has not been fully explored within the existing literature. Since Jung (1971) suggested that individual differences exist between both rational and non-rational decision makers and that these differences are based on self-knowledge, the thesis will explore the relationship between the tripartite model of authenticity and adaptive rational decision-making strategies within Study 4, Chapter 5 of this thesis.

1.9.5 **Linking authenticity and aggressive purposeful behaviour**

Horney’s (1951, 1977) theoretical accounts suggest that authenticity is achieved by evaluating oneself against others. Horney argued that healthy personality development occurs
when individuals accept their own personal short comings, feelings, and thoughts; failing
which, they create idealised selves developing compulsions to meet these idealised selves such
as neurotic needs to be successful, independent and to always experience fair treatment. These
ideal images lead to alienation from the self and sufferings of self-hate or contempt. These
negative feelings call for self-preserving behaviour, often seen as manifestations of angry,
aggressive attitudes and behaviours towards others. Horney suggested that individuals, who
have low levels of authenticity, are sensitive to threats or “cannot afford to consider even
remotely anything that might engender a doubt in his rightness” (Horney, 1951, p.208). Threats
or perceived unfairness are interpreted as hostile attacks and individuals low in authenticity
respond to these challenges with counter-attacks. Previous work regarding authenticity and self-
preserving aggressive behaviour has existed at a theoretical level and has not been empirically
tested. Thus, the proposed links between anger, aggression and authenticity will be addressed
by employing an experimental approach within Study 5, Chapter 6, of this thesis.

From a theoretical point of view, anger is related to personal and social goals (Averill,
to correct wrong-doing and reasserts standards of conduct which facilitate goal attainment.
Anger is also associated with approach rather than avoidance motivation (Harmon-Jones &
Harmon-Jones, 2007), and helps to gain momentum when the current behaviour does not reach
the desired outcome (Carver & Harmon-Jones, 2009). Kubiak, et al. (2011) have identified
seven anger-directed goals comprising four approach and three avoidance related behaviours.
The four anger approach-oriented goals are as follows: (1) the goal of enforcing social norms to
get the other person to conform to these social norms and (2) the goal of enforcing personal
standards in order to get the other person to act in accordance with one’s own expectations, both
of which are derived from Averill’s (1983) seminal work on anger. Then there is (3) the goal of
taking revenge in order to get back at the instigator which is derived from Frijda’s (1987)
antagonistic-aggressive action tendency. Furthermore (4), there is the goal of protecting one’s
reputation in order to prevent the loss of respect, and to protect one’s self-esteem (Lazarus,
The three avoidance-oriented goals of anger are: (1) the down regulation effect of anger and distress, which is the basic goal of emotional regulation (Gross, 1998); (2) the goal of avoiding conflicts which takes into account the social nature of anger and the negative interpersonal consequences of anger; and finally (3) the goal of weighing costs which considers whether becoming involved is worth the effort.

Anger is viewed as a negative emotion which is more likely to result in negative social consequences and a negative effect of psychological well-being. However anger can also serve as a functional emotion if a person can effectively regulate anger to achieve their desired outcomes.

This thesis will address authenticity and goal-directed anger and aggression within Study 5 of this body of work. Furthermore, the study of anger and aggression adopted here will be consistent with research on goals and behaviours adopted by Bargh and Williams (2007) and Mauss, Cook, and Gross, (2007) who suggested that individuals are not regularly aware of their goals or the strategies that they use to pursue these goals. The authors assert that goals are activated automatically rather than deliberately and thus claim that anger as defined and measured here is a non-conscious regulatory goal-directed behaviour.

1.9.6 **Linking authenticity and adaptability to trauma**

Experiencing traumatic events, such as physical and sexual violence, may often lead to serious changes in motivations, cognitions and emotions (Simmen-Janevska, Brandstätter, & Maercker, 2012). The pursuit of goals which are personally meaningful to the individual play a major role in psychological well-being and life adjustments after a potentially traumatic event (Brunstein, Schultheiss, & Maier, 1999) and generally, studies have reported a beneficial relationship between motivation after a traumatic event and psychological well-being (Forstmeier & Maercker, 2008; McAuley et al., 2007). In the context of possible processes related to trauma, victims will have experienced adversities and might respond with behaviours that are akin to learned helplessness.
Learned helplessness is said to have a negative impact on goal oriented behaviours such as goal setting and goal implementation (Maier & Seligman, 1976), which are both necessary for psychological well-being. So far research has found that these goal-directed behaviours influence PTSD and that PTSD in turn influences goal-directed behaviours. However, very few studies have looked at whether the antithesis of PTSD termed posttraumatic growth, which is also linked to goal setting and implementation, is linked to goal-directed behaviours such as authentic-living. The aim of Study 6 is to explore these dynamics.

The dynamical systems theory (Thelen & Smith, 1995) presents a cognitive framework which suggests that being in touch with one’s authentic self is a crucial factor in coping with disturbances, such as traumatic events. By making sense of the trauma experienced, the individual is able to maintain order in their own environment. This perspective suggests that individual differences exist in the way people process and utilise emotional information and is consistent with Rogers (1961), in that the more an individual is able to recognise the underlying condition or the true self, the better the ability to expand and grow through recognition of needs. The dynamical systems framework, although largely theoretical, may explain why some people are able to cope with traumatic events and rebuild their lives, in comparison, those that cannot do so may suffer from post-traumatic stress. Vallacher and Nowak (1999) argued that the self is the largest structure in the cognitive system and state that it is critical to understand the way specific cognitive and affective elements are integrated into self-understanding. The authors claimed that an individual, who attempts to maintain a rigid persona or sacrifice authenticity, loses the potential for personal and positive growth. This theoretical proposition between growth and authenticity in the aftermath of trauma will be addressed within Study 6, Chapter 7, of this thesis.
Since the concept of the authentic self has evolved over time a variety of definitions, conceptualisations and approaches exist. However, this thesis will adopt a contemporary conceptualisation of the tripartite disposition of authenticity which is derived from person centred perspectives. This tripartite conceptualisation consists of self-alienation, authentic-living and accepting external influences (Barrett-Lennard, 1998; Rogers, 1961; Wood et al., 2008) and reflects both self and other-referential dimensions. Similar to Goffman and Erickson, this thesis considers that authenticity is a product of symbolic-interactionism which takes the self and other into account. Authenticity is a subjective notion, and whether others agree upon one’s sense of authenticity is irrelevant. However feelings of authenticity may influence how an individual relates to others as it negotiates the individual’s behaviour when self-views are challenged.

By reviewing the literature it has become clear that authenticity is considered the core of psychological well-being within extant theories of personality and counselling. In a response to Harter’s (2005) call for a more integrated approach this thesis will extend findings from personality and counselling models of authenticity by incorporating a more experimental perspective to explore purposeful goals, behaviours and cognitions. The research will continue in the tradition of previous personality psychologists by applying the tripartite model of authenticity to address well-being but with the main focus upon goal-directed behaviours and cognitions. Chapter 1 revealed that research which considered authenticity as a central focus was largely focused on well-being variables such as self-esteem, positive affect, and life satisfaction, and psychopathology categories such as anxiety, depression, stress, negative affect, and PTSD. Role variation has also been considered within the authenticity literature along with authenticity within personal relationships. Developmental studies have explored the trajectory of authenticity across the lifespan and also included parental influences to that effect. Gender studies have also been conducted along with authenticity within the workplace and authentic
leadership. However, the existing literature still lacks sufficient literature that can inform us about the relationship between the various facets of the authentic personality and goal-directed behaviours and cognitions. Therefore the aim of this thesis is to consider this void. For instance, one is aware that individuals pursue goals with different strategies; however, little is known about the role of authenticity, inhibitory behaviours, novelty seeking and goal-directed strategies.

Although much research has been conducted on maladaptive decision-making in clinical samples the relationship between higher order personality traits and decision-making is still largely unknown. For example, although previous theorist suggested a link between authenticity and goals and behaviours, it is not known whether behavioural decision-making is influenced by authenticity.

The literature on anger suggests that its primary motive is to reassert standards of conduct to facilitate goal attainment and is associated with approach rather than avoidance behaviours. Yet, little is known about anger and aggression in goal attainment and authenticity.

The pursuit of goals, which are personally meaningful to the individual, play a major role in psychological well-being and life adjustments and generally, studies have reported a beneficial relationship between motivation after a traumatic event and psychological well-being, but as yet, little is known about living authentically in the aftermath of trauma.

This thesis will now address the four themes of: Physiological Goal Direction; Decision-Making; Anger and Well-being; and Posttraumatic Growth, and in doing so, will attempt to inform and extend the existing literature, not only upon the positive development of authenticity and well-being but also upon the breakdown of the authentic self-construct and the psychological consequences of such happenings.
1.11 Methodological Approaches and Considerations

There are a number of methodological considerations that will be taken into account to guide the general approach adopted within this thesis. The first consideration will be to adopt the conceptualisation of the tripartite model of personality presented by Wood et al. (2008) and continue to treat it as an individual difference variable. In doing so, the measure of authenticity will be conducted with the use of the recently developed 12-item Authenticity Scale (Wood et al.). The second consideration will be to acknowledge that the study of authenticity has previously been dominated by theoretical stances adopting qualitative methodologies. These approaches have provided us with strong conceptualisations at the individual level; however in order to build upon and extend previous work, the methodology applied in this thesis will differ by introducing distinct quantitative approaches to test specific hypotheses and examine specific relationships. The third consideration is that measures of objective behaviour are important in understanding individual differences in authenticity.

To summarise, the methodological approaches adopted throughout this thesis will not only continue to emulate previous work with the use of self-report measures but most importantly, they will provide empirical evidence through experimental approaches extending what has largely existed through theoretical frameworks aimed at the study of authenticity and well-being.

1.12 Overview of research design

A combination of cross sectional survey design and experimental methodologies was employed in this thesis. Participants include undergraduate, mature and postgraduate students. Community members from religious and church groups, job-seeking and unemployment groups, and housing association and tenant committees within the UK were also used. This thesis also employed survivors of domestic violence to whom gratitude is extended for coming forward to take part in the final study of this thesis.
Pearson Product-Moment correlations to explore the strength of linear associations were used throughout this thesis. Hierarchical Multiple Regression analyses are employed in Studies 3 to 6 whereby the literature and theoretical stances of these chapters determine which predictors are selected within each block of variables to test the hypotheses of interest.

Hierarchical regression analyses are used for evaluating contributions of each predictor above and beyond previously entered predictors, as a means of examining incremental validity and also for statistical control (Kerlinger, 1986). Statistical control of each block of variables is achieved by calculating the change in the adjusted $R^2$ at each step of the multiple regression, thereby accounting for the increment in variance after each group of variables are entered into the regression equation (Pedhazur, 1997).

The primary aim of Study 1 was to explore to what extent authenticity was distinct from extant biological models of personality. Therefore, it was important to select from a group of predictors the one subscale from each biological model of personality (at each stage of the analysis) which made the largest contribution to authenticity. In doing so it was necessary to delete predictors which did not contribute uniquely to the predictive power of the regression (Thompson 1989). Study 1 was interested in the order of importance of each subscale, therefore, the decision to run a Stepwise Regression, as opposed to the Hierarchical Regression analysis as used in the latter chapters, was based upon the hypothesis of this study. The hypothesis linked to this study was to explore to what extent two biological models of personality predicted authenticity. It is acknowledged that Stepwise Regression techniques can inflate Type 1 error, however, this study employed a large sample size (N= 554) and according to Thompson (1995) the application of a stepwise regression analysis in large sample sizes are justified. Similarly, the use of Stepwise Regression in Study 6 was undertaken to explore which unique variable made the largest contribution to either positive or negative changes in the aftermath of trauma.
1.13 Thesis themes

There are four themes to this thesis. The first theme adopts a biological and physiological behavioural approach to authenticity and goal-directed behaviours. The second theme addresses authenticity and decision-making by exploring both impulsive reflexivity and conscious everyday decision-making. The third theme looks at authenticity and anger and its barrier to well-being and the fourth theme looks at authenticity and posttraumatic growth, more specifically, positive changes in the aftermath of trauma (see Fig. 1).

The first biological/physiological approach is embedded in Chapter 2 and presents Study 1. Study 1, which is published in Personality and Individual Differences (Pinto, Maltby, & Wood, 2011) will explore the positioning of authenticity within Gray’s (1982, 1985) behavioural inhibition/approach systems and Cloninger’s psychobiological model (Cloninger, et al., 1993).

The second biological/physiological approach is embedded in Chapter 3 and presents Study 2. This approach adopts a more traditional cognitive model of goal-directed behaviour termed task-switching, adapted from Rodgers and Monsell (1995), an experimental methodology to investigate cognitive adaptability to a changing environment. The task-switching paradigm is employed to measure the extent to which authenticity predicts the ability to change goal-directed behaviour in response to the environment.

Chapter 4 follows the theme in that it explores the dynamics between authenticity and lack of inhibition or impulsive and reward-seeking behaviours that were identified in Chapter 2. Study 3 will be presented here and will apply an experimental methodology to administer the Information Sampling Task (IST, Clark et al., 2003). The IST is used to explore authenticity within a decision-making model termed reflexive impulsivity (Evenden, 1999; Kagan, 1966).

Chapter 5 will present Study 4 which will address gender and sample bias as identified in Study 3. This study will apply a survey methodology to further explore the relationships between authenticity and decision-making strategies identified in Study 3.
Chapter 6 presents Study 5 and will address authenticity within an applied setting by using an experimental methodology. This study explores the links between Horney’s (1951, 1977) account of human growth and neurosis to authenticity by examining aggressive responses on the Point Subtraction Aggressive Paradigm (PSAP, Carré & McCormick, 2009; Cherek, 1981), providing the first empirical test of whether the tripartite model of authenticity can predict objective behaviour. It is published in Personality and Individual Differences (Pinto, Maltby, Wood & Day, 2012).

Chapter 7 presents Study 6 which also addresses authenticity within an applied setting. Here authenticity is investigated and its role within positive and negative changes in the aftermath of domestic violence is considered.
Chapter 8 will present the main discussion of this thesis and will summarise and interpret the findings of the previous chapters. The chapter will highlight the contribution to knowledge that this thesis has provided and its wider implications in real world settings. This chapter will also discuss the possible limitations of this body of research and makes recommendations towards better psychological well-being. Chapter 8 will also reveal possible next steps to expand and widen the body of research on authenticity and its antecedents to psychological well-being.

1.14 Thesis Outline and Main Research Questions

The literature surrounding authenticity is diverse thus the aim of this thesis is to bring together the literature of both personality and counselling approaches of authenticity by addressing goal-directed behaviours and cognitions and explore their roles within authenticity. By applying an individual differences approach this thesis will administer a range of self-report measures and experimental measures to explore a number of hypotheses relating to authenticity and goal-directed behaviours. These hypotheses are as follows:

1. Authenticity is related to inhibitory and approach dimensions of goal-directed behaviour (Deci & Ryan, 2000; Maslow, 1954; Sheldon, 2002).
2. Authenticity is distinct from extant biological models of personality (Wood et al. 2008)
4. Authenticity predicts goal-directed decision-making (Maltby et al., 2011) as measured by the Information Sampling Task.
5. Authenticity predicts aggressive responses in unfair situations (Horney, 1951) as measured by the Point Subtraction Aggression Paradigm.

6. The tripartite model of authenticity which comprises living life according to own values and beliefs can predict purposeful behaviour (Horney, 1951; Peterson & Seligman; 2004).

7. Authenticity can predict posttraumatic growth in the aftermath of trauma (Thelen & Smith, 1995).

1.14.1 Going forward

Since each chapter is a distinct consideration of authenticity, a series of prefaces have been included to introduce and integrate them into the wider aims of this thesis.

The next section, Chapter 2 will explore authenticity and inhibitory and approach behaviours and will employ a task-switching paradigm to measure cognitive flexibility in shifting attention and action within a dynamic environment, and will be presented as Study 1.
Preface to Chapter 2

Chapter 2 explores to what extent authenticity is related to biological and physiological goal-directed behaviours and considers Theme 1 of this thesis. This chapter applies a survey methodology in Study 1 to explore authenticity and its relationship with goal-directed behaviours within a general personality approach.

This chapter has two aims. The first general approach is to explore the positioning of the tripartite model of authenticity within extant models of personality. Although Wood et al. (2008) as seen in Chapter 1, found good discriminant validity between authenticity and the Big-Five (John & Srivastava, 1999) very little research has explored the relationship between authenticity and other extant models of personality. The second aim is to reveal relationships between authenticity and goal-directed behaviours of inhibition and reward seeking. The relationships between authenticity and inhibitory systems are predicted by counselling perspectives; whereby individuals, who engage in inhibitory behaviours, report lower levels of authenticity, self-esteem and more depression (Lopez & Rice, 2006; Neff & Harter, 2002a), however very little experimental evidence exists to accredit these findings. Therefore, Study 1 will employ self-report measures to explore the relationship between authenticity and goal-directed behaviours.
Chapter 2

Authenticity is related but distinct from Gray's and Cloninger's personality dimensions.

Overview to Chapter 2

This first study considers to what extent authenticity is related but distinct from Gray's (1982, 1985) behavioural inhibition/approach systems and Cloninger’s psychobiological model (Cloninger, et al., 1993). Five hundred and fifty four adults (250 males, 304 females) completed measures of authenticity (Wood, Linley, Maltby, Baliousis, & Joseph, 2008), behavioural inhibition/activation (BIS/BAS, Carver & White, 1994) and Cloninger's Temperament and Character Inventory (TCI-IPIP, Goldberg et al., 2006). Significant, small to moderate correlations are reported between authenticity and inhibitory and approach dimensions of Gray’s and Cloninger’s models. The directions of these relationships are consistent with Horney’s (1945, 1951) and Maslow’s (1954) descriptions of authenticity. However, dimensions of both Gray's and Cloninger's domains account for only a small 5.7% to 18% of the shared variance in authenticity, suggesting that authenticity is related but distinct from Gray's and Cloninger's personality dimensions.
2 Introduction

Authenticity has traditionally been considered important to well-being and social life (Bettencourt & Sheldon, 2001; Harter, Marold, Whitesell, & Cobbs, 1996; Horney, 1951; Rogers, 1959; Wood, Linley, Maltby, Baliousis, & Joseph, 2008; Yalom, 1980) but has been traditionally neglected by empirical research (Sheldon, 2004; Wood et al., 2008). Wood et al. present a tripartite model of authenticity which comprises authentic-living (living in accordance with one’s own values and beliefs), accepting external influences (the belief that one has to conform to the expectations of others) and self-alienation (feeling out of touch with the true self). High levels of authentic-living are indicative of authenticity and high levels of self-alienation and accepting external influences indicative of low authenticity. Whilst Wood et al. (2008) found good discriminant validity between authenticity and the Big-Five (John & Srivastava, 1999), and Maltby, Wood, Day, and Pinto (2011) found a strong relationship between the Honesty-Humility factor of personality (Ashton & Lee, 2005) and authenticity, there is still a void in the literature about the veracity of the tripartite model of authenticity and other extant models of personality, such as Gray’s (1982, 1985) behavioural approach/inhibition systems and Cloninger’s psychobiological model (Cloninger, et al., 1993). Correlations between authenticity and these extant personality models are expected as authenticity is conceptualised as a variable relating to well-being. However, authenticity should not be completely predicted by these models as this would suggest that there is nothing unique about authenticity and it is simply a combination of several previously studied traits. Study 1 tests the convergence and divergence of authenticity from the aspects of personality represented within Gray’s and Cloninger’s models of personality.

Gray’s (1982, 1985) behavioural inhibition/approach model suggests that two regulatory systems underpin personality and predict well-being. The approach system regulates positive effect and goal pursuit, whereas the inhibitory system regulates negative affect and withdrawal to avoid harm. The relationships between authenticity and inhibitory systems are
predicted by counselling perspectives, which suggests that authenticity relates to well-being. For instance; Horney’s (1945, 1951) descriptions of authenticity suggests that low authenticity is indicative of neurosis. Neurotic individuals respond to anxiety by engaging in submissive behaviours or withdraw to avoid harm. These behaviours are reminiscent of Gray’s inhibitory system emphasising motivations for avoidance and sensitivity to danger. Previous research found that individuals who engaged in inhibitory behaviours to avoid confrontations reported lower levels of authenticity, self-esteem and more depression (Lopez & Rice, 2006; Neff & Harter, 2002a). The relationship between Gray’s approach system is also predicted by Horney. Horney suggests a positive relationship between low authenticity and dependence on rewards; such as affection/approval from others. Empirical evidence found that individuals who attempt to maintain an intimate relationship by agreeing to all their partner’s needs, suffer from lower levels of well-being (Neff & Harter, 2002b; Tolman & Porche, 2000). Therefore when considering Horney’s descriptions of authenticity, higher levels of authenticity may reflect lower levels of reward dependence.

Cloninger’s psychobiological model (Cloninger, et al., 1993) predicts vulnerability to neuroticism and other mental and personality disorders. Cloninger’s model measures the ability to self-govern mental states, comprising inhibitory and novelty seeking behaviours that promote well-being. The relationship between authenticity and Cloninger’s model of well-being is again suggested by counselling perspectives on authenticity. For instance; Maslow (1954) emphasises authenticity as reflecting physiological and social drives to attain needs, requiring determination to maintain those needs. This is evidenced by Deci and Ryan (2000) and Sheldon (2002), who found correlations between authenticity, autonomy, and goal-directed behaviour.

This study explores the uniqueness and discriminant validity of the tripartite model of authenticity (Wood et al., 2008) from extant biological models of personality. According to Horney’s (1945, 1951) and Maslow’s (1954) accounts, authenticity is expected to correlate with the inhibitory domains such as BIS-anxiety, BIS-fear and harm avoidance and with the approach domains of reward dependence, persistence and self-direction. However authenticity
should not be largely predicted by these variables as this would undermine the uniqueness and
discriminant validity of this new personality measure.

2.1 Method

2.1.1 Participants and procedure

Participants were 554 individuals (250 males, 304 females) from religious and church
groups, job-seeking and unemployment groups, housing association and tenant committees
within the East Midlands, UK, and aged between 17 to 65 years ($M = 31.4$ years, $SD = 11.5$).
Over 57% of the sample was white, with Asian being the next highest represented ethnicity
(17.7%).

*Authenticity* was measured via the Authenticity Scale (Wood et al., 2008). Respondents
completed the 12-item scale to measure self-alienation (4 items, e.g., “I don’t know how I feel
inside”), accepting external influences (4 items, e.g., “I usually do what other people tell me to
do”), and authentic-living (4 items, e.g., “I always stand by what I believe in”). Items were rated
from 1 (*does not describe me at all*) to 7 (*describes me very well*). Correlations with social
desirability were all small and not significant. The scale showed distinct variance from the Big
Five traits, with a linear combination of the Big Five only explaining 13% of the variance in the
three subscales of authenticity. The Authenticity Scale also showed some convergence validity
with self-esteem, and subjective and psychological well-being. For instance self-alienation was
strongly correlated with self-esteem ranging from $r = -.45$ to -.59. Authentic-living and
accepting external influences were moderately correlated, with $r = .23$ to .36 for authentic
living and $r = -.20$ to -.27 for self-alienation. The scale also has 2 and 4 week test-retest
reliabilities from $r =.78$ to .91.

*Behavioural inhibition and approach* was measured via the Behavioural
Inhibition/Activation Scales (BIS/BAS, Carver & White, 1994). The BIS scale was split into
two subscales of anxiety (4 items, e.g., “Criticism or scolding hurts me quite a bit”) and fear (3
items e.g., “I have very few fears compared to my friends”) to reflect different motivational
tendencies (Heym, Ferguson, & Lawrence, 2008). Respondents also completed BAS subscales
of fun-seeking (4 items, e.g., “I like to behave spontaneously”), drive (5 items, e.g., “Want to be
in charge”) and reward Responsiveness (4 items, e.g., “get excited or happy for no apparent
reason”). Items were rated from 1 (very inaccurate) to 5 (very accurate).

Cloninger’s temperament and character domains were measured via the international
personality item pool (TCI-IPIP, Goldberg et al., 2006) consisting of 4 temperament domains:
novelty-seeking (34 items, measuring variety-seeking, recklessness, extravagance and
rebelliousness), harm-avoidance (39 items, measuring neuroticism, harm-avoidance, social
discomfort and low self-efficacy), reward-dependence (40 items, measuring sentimentality,
friendliness, self-disclosure and dependence), and persistence (39 items, measuring initiative,
competence, achievement striving and hard-working). The three character domains are self-
directedness (48 items, measuring satisfaction, optimism, resourcefulness, self-accepting and
impulse control), cooperativeness (52 items, measuring tolerance, empathy, trust, compassion
and morality), and self-transcendence (37 items, measuring imagination, romanticism,
conservatism and femininity). Items were rated from 1 (very inaccurate) to 5 (very accurate).
Internal consistencies are presented in Table 1.0

2.2 Results

Descriptive statistics for scoring on the authenticity scale, BIS/BAS and TCI-IPIP
scales are shown in Table 1.0. The sample means for the three subscales of authenticity ranged
from $M = 19.57$ for authentic-living, $M = 13.52$ for external influences and $M = 12.72$ for self-
alienation, suggesting that on the whole this sample showed relatively high levels of
authenticity, low levels of self-alienation and accepting of external influences which is not
indicative of a clinical sample. Internal reliabilities for all three subscales of authenticity can be
seen in Table 1.0. Most subscales show good internal reliability ($\alpha = .71$ to .96) except for self-
transcendence ($\alpha = .65$) from the TCI-IPIP, and BIS-anxiety ($\alpha = .67$), BIS-fear ($\alpha = .65$) and BAS-reward responsiveness ($\alpha = .63$) from the BIS/BAS scale which present acceptable alpha levels (Kline, 1999).

Table 1.1 shows Pearson’s correlations between all measures. Generally, correlations between the BIS/BAS and TCI-IPIP reflect proximity between the models; for example novelty-seeking, a temperament domain from the TCI-IPIP shares significant strong correlations with BAS fun-seeking, drive and reward. Additionally, harm-avoidance from the TCI-IPIP demonstrates significant strong correlations with BIS-anxiety and BIS-fear, consistent with Mardaga and Hansenne (2007).

In terms of relationships between authenticity, Gray’s (1982, 1985) and Cloninger’s (1993) models, a number of significant correlations occur. For instance all three facets of authenticity correlated with TCI-IPIP domains of harm-avoidance, reward-dependence, self-direct, and self-transcendence, with the exception of persistence, which correlated with authentic-living, and self-alienation. Of the BIS/BAS domains, only BIS-anxiety and BIS-fear showed significant correlations with all three facets of authenticity.

Finally, a Stepwise multiple regression was conducted to examine to what extent Gray’s (1982, 1985) and Cloninger’s (1993) models predicted authenticity. In the first step BIS/BAS dimensions were entered into the model. Results indicate that Gray’s dimensions weakly predict authenticity ($F(1, 552) = 33.26$, Adj.$R^2 = .06$, $r = .24$, $p < .001$) with only BIS-anxiety accounting for a small 5.7% of the variance in authenticity. Cloninger’s dimensions were entered into the second step. Results indicate that harm-avoidance, reward-dependence, self-direct, persistence and self-transcendence weakly predict authenticity ($F(8, 545) = 14.94$, Adj. $R^2 = .18$, $r = .42$, $p < .001$) accounting for only 18% of the variance in authenticity. The above findings support the discriminant validity of the authenticity scale from both Gary’s and Cloninger’s biological models of personality. Table 1.2 shows individual predictors.
### Table 2.0

**Descriptive Statistics for Authenticity, TCI-IPIP and BIS/BAS**

<table>
<thead>
<tr>
<th>Measures</th>
<th>α</th>
<th>M</th>
<th>SD</th>
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<tbody>
<tr>
<td>Authenticity</td>
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<tr>
<td>Authentic- living</td>
<td>.71</td>
<td>19.57</td>
<td>4.84</td>
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<tr>
<td>External influences</td>
<td>.73</td>
<td>13.52</td>
<td>5.14</td>
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<tr>
<td>Self-alienation</td>
<td>.71</td>
<td>12.72</td>
<td>4.98</td>
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<tr>
<td>TCI-IPIP</td>
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<tr>
<td>Novelty-seeking</td>
<td>.88</td>
<td>106.49</td>
<td>18.87</td>
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<tr>
<td>Harm-avoidance</td>
<td>.93</td>
<td>114.42</td>
<td>20.84</td>
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<tr>
<td>Reward-dependence</td>
<td>.89</td>
<td>114.50</td>
<td>20.84</td>
</tr>
<tr>
<td>Persistence</td>
<td>.86</td>
<td>109.68</td>
<td>18.00</td>
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<tr>
<td>Self-direct</td>
<td>.96</td>
<td>166.74</td>
<td>33.28</td>
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<tr>
<td>Cooperativeness</td>
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<td>38.11</td>
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<tr>
<td>Self-transcendence</td>
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<td>110.09</td>
<td>29.39</td>
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<tr>
<td>BIS/BAS</td>
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<tr>
<td>BIS-anxiety</td>
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<td>9.96</td>
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<td>BIS-fear</td>
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<td>BAS-fun-seeking</td>
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<td>10.48</td>
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<td>BAS-drive</td>
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<td>10.48</td>
<td>2.49</td>
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<tr>
<td>BAS-reward-Responsiveness</td>
<td>.63</td>
<td>13.05</td>
<td>1.92</td>
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</table>

*Note.*: Scores on authentic–living, self-alienation and external influences can range from 4-28; TCI-IPIP = international personality item pool measuring Cloninger’s temperament and character Items, scores range from 34-170 for novelty seeking, 39-195 for harm avoidance, 40-200 for reward dependence, 39-195 for persistence, 48-240 for self-directedness, 52-260 for cooperativeness and finally 37-185 for self-transcendence; scores on the BIS = behavioural inhibition subscale from 4-20 for anxiety and 4-15 for fear; BAS = behavioural activation subscale from 4-20 for fun-seeking, drive and fear responsiveness.
Table 1.1
Correlations between Authenticity, Behavioural Inhibition/Activation and TCI-IPIP Measuring Cloninger’s Temperament and Character Inventory.

<table>
<thead>
<tr>
<th>Measures</th>
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<td>Authenticity</td>
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<td>1. Authenticity</td>
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<td>2. Authentic living</td>
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<td>3. External Influences</td>
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<td>-.65**</td>
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* denotes significance at the .05 level; ** denotes significance at the .01 level.
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<td>.23**</td>
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<td>.02</td>
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*Note. BIS = behavioural inhibition subscale; BAS = behavioural activation subscale; TCI-IPIP = international personality item pool measuring Cloninger’s temperament and character items
*p < .05 **p < .001
### Table 1.2

**Stepwise Multiple Regression Predicting Authenticity.**

<table>
<thead>
<tr>
<th>Step 1</th>
<th>BIS/BAS</th>
<th>Dimensions</th>
<th>B</th>
<th>β</th>
<th>t</th>
<th>sig</th>
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<th>Dimensions</th>
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<th>β</th>
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<td>1.35</td>
<td>3.29</td>
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</table>

**Note.** BIS = behavioural inhibition subscale; BAS = behavioural activation subscale; TCI-IPIP = international personality item pool measuring Cloninger’s temperament and character Items. *p < .05  **p < .001
2.3 Discussion

Study 1 presents two sources of evidence to suggest that authenticity is a unique measure of personality and distinct from both Gray’s (1982, 1985) and Cloninger’s (1993) biological models. Firstly judging by the effect sizes (small, $r = .10$ to .23, medium, $r = .24 – .36$, large, $r > .37$, Cohen, 1988) any significant relationship between authenticity and the biological models range from small to medium with no correlation above $r = .29$. Secondly, the results from the multiple regression suggest that authenticity cannot be reduced to a linear combination of either Gray’s or Cloninger’s models, with Cloninger’s model accounting for only 18% and Gray’s model accounting for an even smaller 5.7% of the variance in authenticity. Both findings indicate that authenticity has distinct variance from Gray’s (1982, 1985) and Cloninger’s (1993) models since the shared variance is no more than 5.7% -18%.

These findings report similar results to Wood et al. (2008) who demonstrate that authenticity shares 11%-13% of the variance from the Big-Five (John & Srivastava, 1999) and honesty/humility subscale of the HEXACO personality inventory (Lee & Ashton, 2004).

Study 1 reveals an overlap between authenticity and Gray’s (1982, 1985) and Cloninger’s (1993) models consistent with theoretical speculations from Horney’s (1945, 1951) and Maslow’s (1954) theory of motivation. Authenticity shares moderate correlations with BIS-anxiety, signifying BIS-anxiety as measuring worry about social comparison through criticism, scolding and failure. This measure of anxiety is associated with conflict, uncertainty and fear of negative evaluation. Findings are consistent with Heym et al. (2008) and reflect Horney’s speculations that neurotic individuals who are low in authenticity, engage in self-protective behaviours of submissiveness or withdraw to avoid confrontations. Furthermore, higher levels of authentic-living share a medium sized correlation with reward-dependence. This finding is consistent with Maslow’s (1954) view that self-actualised individuals are driven to attain rewards such as safety, security, love, belonging, and self-esteem.

Current findings suggest that although relationships exist between authenticity (Wood et al., 2008) and models presented by Gray (1982, 1985) and Cloninger et al. (1993), the
tripartite model of authenticity is distinct and unique from both extant models of personality. Future exploration between the tripartite model of authenticity, approach and inhibitory behaviours may reveal value in unearthing these aspects.

Study 1 found that authenticity is a unique measure of personality as it cannot be reduced to a linear combination of either Gray’s or Cloninger’s models. Study 1 also found correlations between authenticity and inhibitory and approach dimensions of both Gray’s and Cloninger’s models. With these relationships in mind, a more traditional model of goal-directed behaviour termed the Task-switching Paradigm adapted from Rodgers and Monsell (1995) will be employed in Study 2 to explore individual difference in executive functioning. The next study will explore individual differences in goal-directed cognitive processes between the three facets of authenticity by applying an experimental approach.
Preface to Chapter 3.

To recap, Study 1 found that authenticity is a unique measure of personality as it cannot be reduced to a linear combination of either Gray’s or Cloninger’s models of personality. Findings from Study 1 also revealed a relationship between authenticity and inhibitory and impulsive goal seeking behaviours.

Chapter 3 will extend the findings of Study 1 by considering to what extent authenticity is related to biological and physiological goal-directed behaviours by applying an experimental approach; it will also consider Theme 1 of this thesis. This chapter will adopt a different approach to Study 1; Study 1 applies a survey methodology to explore authenticity and its relationship with goal-directed behaviours within a general personality approach. Study 2 however adopts a more specific approach by administering an experimental paradigm to extend the findings of Study 1. In doing so Study 2 explored the relationship between authenticity and cognitive flexibility to drive goal-directed behaviours.

Chapter 3 aims to explore authenticity within a more specific cognitive flexibility model termed the Task-switching Paradigm, adapted from Rodgers and Monsell (1995) and will be addressed in Study 2 of this thesis.
Chapter 3

A Behavioural Test of Authenticity and Cognitive Functioning: Authenticity does not Predict Cognitive Flexibility as Measured by the Task-Switch Paradigm.
Overview to Chapter 3

Study 2 is conducted to explore the tripartite model of authenticity and its relationship to cognitive flexibility in driving goal-directed behaviours. This Chapter employs the Task-switching Paradigm to explore executive functioning which is a measure of cognitive flexibility and control processes that reconfigure mental resources. Fifty-six undergraduate students took part in this study. Current findings suggest that although a task-switch cost was observed when switching from a relatively easy task to a more difficult one, this cost was not due to individual differences in authenticity. The only significant relationship to occur in Study 2 suggested that self-alienated individuals took longer to make a response and therefore perhaps took longer to reconfigure their mental resources. However this delay in making a response did not lead to enhanced correct responses in the Task-switching Paradigm. Future directions are discussed.
3 Introduction

Study 2 applies a well-known Task-switching Paradigm adapted from Rodgers and Monsell (1995) to measure control processes that reconfigure mental resources within a changing environment. The study was conducted to firstly further our understanding of existing theoretical literature suggesting that differences in the three facets of authenticity lie within actual behaviour (Rogers, 1959, 1961; Wood et al., 2008), and secondly to add to what is known of the role that authenticity plays within individual differences in cognition (Rogers, 1959, 1961; Wood et al., 2008), such as cognitive flexibility to drive goal-directed behaviours.

Executive functioning is a term used for the regulation and control of cognitive processes (Elliott, 2003) which includes working memory, reasoning, task flexibility, problem solving, and planning and execution (Chan et al., 2008; Monsell, 2003). The executive system is a hypothetical construct of the cognitive system that manages and controls all other executive processes. Individuals differ greatly in their ability to control their own thoughts and actions. Some individuals are impulsive whilst others manage to control and regulate their behaviours, reflecting individual differences in executive functions (Friedman et al., 2008). Although there is no clear consensus as how best to conceptualise executive functioning, they are considered important mechanisms in cognitive abilities ranging from age-related decline in cognitive abilities (Hasher, Zacks, & May, 1999) to substance abuse (Garavan & Stout, 2005) and autism (Russell, 1997).

Assessment of executive functions range from self-report measures e.g., The Dysexecutive Questionnaire (DEX, Wilson et al., 1996) to two of the most widely used performance based tasks such as the Stroop test (Stroop, 1935) this measures cognitive inhibition of an overlearned response and the Wisconsin Card sorting Test (WCST, Gant & Berg, 1948), a task that measures cognitive flexibility when faced with varying schedules of reinforcement. Executive functioning has long been considered a unitary ability which can be measured with a single complex frontal lobe task, such as the WCST; however, recent behavioural evidence suggests that executive functioning is more accurately conceptualised as a
collection of related but separable abilities (Friedman et al., 2008). Miyake et al.’s (2000) model which adopts an individual differences approach, proposes that executive functioning is heritable and stable. This model presents three related but distinct components of executive functioning; *shifting* between mental sets or tasks, *updating* which involves constant monitoring and updating of working memory, and *inhibition* which is the suppressing of dominant and proponent responses. This study will consider the shifting behaviour proposed by Miyake et al. (2000) and Monsell (2003) as shifting implies flexibility, a common theme in the authenticity literature.

Behaviour that is flexible in response to varying demands within the environment is adaptive. Flexibility in behaviour, demands cognitive control processes, which allow individuals to respond appropriately, and in a more proactive way to achieve their goals (Kiesel et al., 2010). Thus, the study of flexibility in task performance is of great importance in the study of human cognition, and task switching has developed as an experimental paradigm to explore human cognitive flexibility and control (Jersild, 1927; Rogers & Monsell, 1995).

In task-switching experiments, participants perform a task on each trial. The term *switch trials* is given where the tasks change, similarly, the term *repeat trials* is given when the task remains the same. This switching paradigm is designed to produce a switch cost in both reaction time (RT) and error rates by measuring the difference in RT and errors between repeat trials and switch trials.

Wood et al. (2008) suggested that the tripartite construct of authenticity begins by contrasting an actual experience with aspects of experiences that are represented in one’s cognitive awareness. Actual experiences include physiological states, emotions, and schematic beliefs; correspondingly, cognitive awareness represents cognitions of these experiences. Wood et al. suggested that if a mismatch or malfunction between cognitive awareness and actual experiences occurs, the individual will then experience self-alienation which in turn can lead to abnormal behaviour. Theoretical accounts of the tripartite model of authenticity stress that the link between authenticity, well-being and freedom from psychopathology lie within underlying cognitive processes, however, very few direct measurements of these processes have been
conducted. Once again, due to the paucity of literature upon cognitive processes within the three facets of authenticity, the aim of the study is to establish whether there is a relationship between authenticity and executive functioning by applying an objective measure of cognitive flexibility to a changing environment.

This second study employs a simple Task switching Paradigm adapted from Jersild, (1927) and Rodgers and Monsell (1995) to measure the execution of goal-orientated behaviour in response to a changing environment. Within this task, if an individual shows a weakness in the ability to initiate, plan, organise, switch to alternate strategies and pay attention in relation to this task, then they are less likely to achieve their goals. Monsell (2003) argues that task-switching experiments present a subtle test of executive functioning by measuring the reconfiguration of goal-directed behaviours. Measurement of reconfiguration was done by asking participants to first switch between two relatively simple tasks and then switch to a more complicated task (commonly known as switch-cost). Most typically, task-switch experiments are a direct measure of failure to execute top–down executive control processes, the ability to flexibly shift from one mind-set to another, and is a measurement of working memory (the ability to actively retain information needed to do complex tasks) (Davidson, Amso, Anderson, & Diamond, 2006; Monsell, 2003; Rodgers & Monsell, 1995). Furthermore, previous studies confirm that task-switching activates the neural system including the lateral prefrontal cortex, dorsolateral prefrontal cortex, anterior cingulate cortex, and premotor cortex (Dreher & Grafman, 2003; Sylvester et al., 2003; Wager, Reading, & Jonides, 2004), reflecting some level of physiological functioning. Since previous theoretical work suggested that the three facets of authenticity represent differential levels of cognitions (Rogers 1959; 1961; Wood et al., 2008), the study aims to provide empirical evidence that the physiological underpinning in goal-directed behaviour can be predicted by individual differences in authenticity.

Study 2 expects to find that authentic-living, the more cognitive congruent of the three facets of authenticity (Wood et al., 2008) would reflect more superior cognitive functioning. In doing so, this facet would demonstrate a better ability to initiate, plan, organise, switch to alternate strategies and pay better attention in this task as predicted by theories of executive
functioning. Furthermore, this superior ability would predict better performance on the Task-switching Paradigm. On this premise, findings expect to reveal that individuals, who score high on self-alienation and subsequently have less conscious awareness of physiological states and cognitions (Wood et al. 2008), will demonstrate inferior top-down executive control processes and have a poorer ability to flexibly shift from one mind-set to another, reflecting a poorer ability to initiate, plan, organise, switch to alternative strategies and pay attention in the task in hand.

3.1 Method

3.1.1 Participants and procedure

Fifty-six undergraduate psychology students took part in this experiment (9 males and 47 females) aged 18 to 39 years ($M = 20.50$, $SD = 3.80$), in exchange for course credit. Ethnicity ranged from white 89%, Asian 11.7%, Chinese 5% to Black Caribbean 1.7%. All had a good command of English.

Authenticity was measured via the 12 item Authenticity Scale (Wood et al., 2008) to measure the tripartite concept of authenticity. The scale consists of 3 facets, self-alienation (e.g., “I don’t know how I feel inside”), accepting external influences (e.g., “I usually do what other people tell me to do”) and authentic living (e.g., “I always stand by what I believe in”). Items were rated on a 1 (“does not describe me at all”) to 7 (“describes me very well”) scale. The scale has 2 and 4 week test-retest reliabilities ranging from $r = .78$ to $.91$ and internal consistencies around $\alpha = .80$.

Task-switch was measured via an experimental paradigm suggested by Rodgers and Monsell (1995). This computer based task presented participants with three conditions: the first two conditions offered relatively simple tasks, the third condition involved switching to a more complicated task. The first condition presented 30 trials and each trial involved the presentation of a target stimulus which consists of a pair of characters presented side by side. In this trial only one of the two characters presented was a letter from the Roman alphabet, with the other character being a symbol (e.g., %, &, *). The letter was presented randomly either left or right...
of the pair of characters with the characters being closely adjacent. The participants were asked to classify the letter presented as a consonant or vowel with the aid of a button press. Participants were then presented with a second condition, comprising 30 trials in which each pair of characters were presented side by side, but in this condition the target character was a digit and the other character a symbol. As with the first condition the letter was presented to either the left or right of the pair and the characters were closely adjacent. Respondents had to classify the number as odd or even via a button press. The third condition presented the task-switch; here participants engaged with the more complicated task. This task-switch condition presented 30 trials and the stimulus was made up of both letter and digit pairs with the order of the presentation of the letter and digit being randomised. Here participants were asked to focus on both the letter and the digit and to select, via a button press, in order from left to right, whether the character pair contained a vowel or consonant, and then if the character digit was odd or even. The length of each presentation was 5,000 milliseconds, the stimulus remained on the screen until the participant pressed a key or until 5,000 milliseconds had elapsed, with a 150 millisecond interval before the next stimulus was presented. The accuracy and reaction time of responses were recorded via Eprime.

### 3.2 Results

Table 2.0 shows descriptive statistics for results on the Task-switch Paradigm and internal consistency within the three subscales of authenticity. All subscales of authenticity show good scale reliability (Kline, 1999), with the sample means for authenticity subscales showing that on the whole this sample showed relatively high levels of authenticity and low levels of self-alienation and accepting external influences which is not indicative of a clinical sample. An analysis for correct answers for the Task-switching Paradigm was conducted to give an overview of the main effects of the switch cost within this experiment. A one way repeated measures analysis of variance found a significant difference in the number of correct answers between the three conditions $F(2, 61.54) = 468.4, p = .001, \eta^2_p = .899$. Pairwise comparisons
demonstrate that there was no significant difference in number of correct answers between simple task 1 and simple task 2 ($p > .05$). However, there was a significant difference in the number of correct answers between simple task 1 and the more complicated task switch ($p < .001$) and between simple task 2 and task switch ($p < .001$) suggesting that participants found both simple tasks easier than the more complicated task switch.
Table 3.0

Descriptive statistics for results on the Task-switch Paradigm and authenticity scale. Reaction time in ms.

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<th>Scores on Task-switching Paradigm</th>
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<td>1.1</td>
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<td>Correct answers to second simple task</td>
<td>29.0</td>
<td>1.0</td>
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<tr>
<td>Correct answers to task-switch</td>
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<td>Reaction time for first simple task (ms)</td>
<td>2000.2</td>
<td>386.8</td>
</tr>
<tr>
<td>Reaction time for second simple task (ms)</td>
<td>1684.4</td>
<td>255.5</td>
</tr>
<tr>
<td>Reaction time for task-switch (ms)</td>
<td>2167.5</td>
<td>615.2</td>
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</table>

<table>
<thead>
<tr>
<th>Authenticity</th>
<th>α</th>
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<tbody>
<tr>
<td>Authentic-living</td>
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<tr>
<td>Self-alienation</td>
<td>.823</td>
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<tr>
<td>Accepting external influences</td>
<td>.865</td>
<td>13.7</td>
<td>4.3</td>
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</tbody>
</table>

3.2.1 Task-switch cost

A one way repeated measures analysis of variance was conducted to examine differences in reaction time between the three conditions. A significant difference was found between mean reaction time in milliseconds across the three conditions $F(2, 79.01) = 28.43, p < .001, \eta^2_p = .341$. Pairwise comparisons demonstrate that there was a significant difference in reaction time between the simple task 1 and simple task 2 ($p < .001$). Results also show that there was a significant difference in mean reaction time between simple task 2 and the more complicated task switch ($p < .001$). Findings suggest that as participants progressed from task 1 to task 2 their task performance improved, indicating that cognitive demands did not increase when switching from simple task 1 to simple task 2. However the significant increase in reaction time from task 2 to the more complex task-switching indicated that participants found this condition more cognitively taxing, signifying a task-switch cost effect.
The decline in correct answers in the more complicated task and the increase in RT between the second simple tasks to the more difficult task revealed a switch-cost in the current sample.

3.2.2 **Authenticity and task-switch cost**

In terms of the relationship between authenticity and performance on the Task-switch Paradigm, self-alienation is positively correlated with mean reaction time on both simple tasks and task-switch trials. No other relationships occur between authenticity measures and performance on the Task-switch Paradigm (See Table 2.1).

In terms of whether authenticity can predict cognitive processes as assessed through task-switch cost, a 3 step Hierarchical multiple regression analysis was performed to control for a number of task performances. Here the mean reaction time for the task-switching condition was entered as the dependent variable with correct answers for each condition entered in step 1. Mean reaction time for correct answers were entered in step 2 to control for these factors. Authenticity variables were entered last.

Table 2.2 shows the unstandardised regression coefficient (B), standardised regression coefficient ($\beta$), t-test scores and probability variables for each predictor variable. Results show that the number of correct answers for each of the conditions was able to predict mean reaction time for correct answers for the task-switch condition ($F(3,52) = 3.130, p = .033, r = .391, r^2 = 153, \text{adjusted } r^2 = .104$). The second model which included mean reaction time for correct answers as control variables indicated that both correct answers for each condition and mean reaction times for correct answers were significant predictors to task-switch cost ($F(5,55) = 5.613, p = .001, r = .60, r^2 = 36 \text{ adjusted } r^2 = .30$). Finally the three authenticity facets were entered into the equation and were found to provide an $R^2$ change of 0.9% which reached statistical significance ($F(8,47) = 3.432, p = .003, r = .607, r^2 = .370, \text{adjusted } r^2 = .261$). On closer inspection of standardised coefficients only correct answers and reaction time to simple task 1 made unique contributions to task-switch. Authentic variables did not make unique contributions to switch cost and therefore were not significant predictors to cognitive flexibility.
**Table 2.1**

*Correlations between authenticity and mean reaction time and correct responses on the Task-switch Paradigm.*

<table>
<thead>
<tr>
<th>Measures</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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</thead>
<tbody>
<tr>
<td>1. Authentic-living</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Self-alienation</td>
<td>-.417**</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. External-influences</td>
<td>-.639**</td>
<td>.421**</td>
<td></td>
<td></td>
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<tr>
<td>4. Correct responses</td>
<td>.122</td>
<td>.162</td>
<td>-.023</td>
<td>-</td>
<td></td>
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<tr>
<td>Simple trial 1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Correct responses</td>
<td>.017</td>
<td>.041</td>
<td>.053</td>
<td>.494**</td>
<td>-</td>
<td></td>
<td></td>
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<tr>
<td>Simple trial 2</td>
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<td></td>
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<tr>
<td>6. Correct responses</td>
<td>.115</td>
<td>.005</td>
<td>-.033</td>
<td>.197</td>
<td>.427**</td>
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<td>Task-switch trial</td>
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<td>7. Reaction time</td>
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<td>.416**</td>
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<td>.086</td>
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<td>-.046</td>
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<td>Simple task 1</td>
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<td></td>
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<tr>
<td>8. Reaction time</td>
<td>-.034</td>
<td>.309*</td>
<td>.137</td>
<td>.046</td>
<td>.034</td>
<td>.047</td>
<td>.795**</td>
<td>-</td>
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<tr>
<td>Simple task 2</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>9. Reaction time</td>
<td>-.045</td>
<td>.269*</td>
<td>.054</td>
<td>.030</td>
<td>-.006</td>
<td>-.097</td>
<td>.768**</td>
<td>.867**</td>
<td>-</td>
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<td>Task switch</td>
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</tbody>
</table>

*p < .05, **p < .001
Table 2.2

*Regression analysis with reaction time to task-switch as dependent variable and correct answers to each condition, reaction time to the simple conditions and authenticity facets as predictor variables.*

<table>
<thead>
<tr>
<th>Step</th>
<th>B</th>
<th>β</th>
<th>t</th>
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<td><strong>Step 1</strong></td>
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<tr>
<td>Correct answers to first simple task</td>
<td>146.53</td>
<td>.260</td>
<td>-.867</td>
<td>.039*</td>
</tr>
<tr>
<td>Correct answers to second simple task</td>
<td>-35.91</td>
<td>-.061</td>
<td>2.12</td>
<td>.630</td>
</tr>
<tr>
<td>Correct answers to task-switch</td>
<td>-34.44</td>
<td>-.238</td>
<td>-.484</td>
<td>.052</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Correct answers to first simple task</td>
<td>146.53</td>
<td>.260</td>
<td>-.867</td>
<td>.039*</td>
</tr>
<tr>
<td>Correct answers to second simple task</td>
<td>-35.92</td>
<td>-.061</td>
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<td>Correct answers to task-switch</td>
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<tr>
<td>Reaction time to first simple task</td>
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<td>.390</td>
<td>-1.99</td>
<td>.022*</td>
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<tr>
<td>Reaction time to second simple task</td>
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<td>.080</td>
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<td><strong>Step 3</strong></td>
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<tr>
<td>Correct answers to task-switch</td>
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<tr>
<td>Reaction time to first simple task</td>
<td>.62</td>
<td>.390</td>
<td>-1.99</td>
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<tr>
<td>Reaction time to second simple task</td>
<td>.19</td>
<td>.080</td>
<td>2.37</td>
<td>.642</td>
</tr>
<tr>
<td>Self-alienation</td>
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<td>.073</td>
<td>.47</td>
<td>.622</td>
</tr>
<tr>
<td>Authentic living</td>
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<td>.080</td>
<td>.50</td>
<td>.660</td>
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<tr>
<td>Accepting external influences</td>
<td>-67.47</td>
<td>-.048</td>
<td>.28</td>
<td>.782</td>
</tr>
</tbody>
</table>

*p < .05
3.3 Discussion

Study 2 presents an experimental task to measure executive functioning between the three measures of authenticity. The analysis of variance shows that although there is an effect of task-switch there is no effect for authenticity; in other words, cognitive processes as measured in the Task-switch Paradigm were due to the effect of the complexity of the task and not authenticity. Findings indicate that there were no differences in executive functioning between the three facets of authenticity.

Correlational analyses however revealed that the facet self-alienation is the only authenticity variable to correlate with reaction times on both simple tasks and the task-switch measure. The significant positive correlations between self-alienation and reaction times on the three trials demonstrate that self-alienated individuals took longer to make their responses and therefore longer to reconfigure their mental resources. More interestingly, the longer response times did not relate to enhanced correct responses on the three trials. On further investigation, hierarchical multiple regression analysis demonstrates that although self-alienation correlated with performance on the task-switch, authenticity was not a unique predictor to these performances. In reference to previous theoretical work that states that authentic-living is the more cognitive congruent of the three facets of authenticity (Wood et al., 2008) and therefore would reflect more superior cognitive functioning, the findings here do not reveal this difference. The only finding relating to executive functioning was that self-alienated individuals took longer to reconfigure their mental resources across the three trials and therefore delayed their decision making more often than those who lived authentically. This finding may have implications upon cognitive flexibility; self-alienated individuals take longer to reconfigure their mental resources. This slower cognitive style will be explored within the framework of reflective decision making in Study 3 of this thesis.

Davidson, Amso, Anderson, and Diamond (2006), Monsell (2003), and Rogers and Monsell (1995), all argue that task-switch experiments indicate a direct measure of top-down executive control processes, reflect the ability to flexibly shift from one mind-set to another, and measure working memory.
Therefore, future work should look at different sets of executive functioning, perhaps through MRI studies to explore theoretical work and unearth which domain of executive functioning pertains to differences in goal-directed behaviour within the tripartite model of authenticity. Future work would also benefit from exploring cognitive flexibility and individual differences in decision making within the arena of authenticity.

### 3.4 Summary of findings from Chapter 2 and 3.

To summarise the findings from Chapters 2 and 3: Findings from Chapter 2, Study 1 demonstrate that authenticity is a unique measure of personality as it cannot be reduced to a linear combination of either Gray’s or Cloninger’s models, with Cloninger’s model accounting for only 18% and Gray’s model accounting for an even smaller 5.7% of the variance in authenticity. These findings indicate that authenticity has distinct variance from both biological models of personality since the shared variance is no more than 5.7% -18%. Findings are consistent with Wood et al. (2008), who demonstrate that authenticity is distinct from the Big-Five (John & Srivastava, 1999) and the honesty/humility subscale of the HEXACO personality inventory (Lee & Ashton, 2004) and is therefore a unique measure of personality. Findings from Study 1 also revealed that authenticity is related to inhibitory and reward seeking goal-directed behaviours. These relationships are interesting and will be followed up in Study 3.

The regression analysis in Study 2, indicates that authenticity does not predict individual differences in cognitive flexibility to a changing environment as measured by the Task-switch Paradigm. The only finding in Study 2, that relates to executive functioning and therefore goal-directed behaviour, is that self-alienated individuals took longer to reconfigure their mental resources than those who lived authentically as measured by the correlational analysis.

This difference in time taken to reconfigure mental resources is worth examining because one main aspects of this thesis is to explore possible cognitive processing correlates between the three facets
of authenticity. The findings from Study 2 may be indicative of some aspect of goal-directed cognitions; therefore within the next two chapters (Chapters 4 and 5), this thesis will begin to explore authenticity and decision-making models.
The findings from Study 2 indicate that authenticity does not predict individual differences in cognitive adaptability to a changing environment as there are no executive functioning differences between the three facets of authenticity as measured by the Task-Switch Paradigm. The only finding relating to goal-directed behaviour is that self-alienated individuals took longer to make decisions than those who live authentically. This difference in decision making is interesting; therefore the aim of Chapters 4 and 5 is to extend this finding by exploring authenticity within decision-making strategies.

Studies 3 and 4 follow on from Studies 1 and 2 in that they explore the dynamics between authenticity and lack of inhibition or impulsive and reward-seeking behaviours that were identified in these two studies. Study 3 within Chapter 4 examines the role of authenticity within reflective and impulsive decision-making strategies and will apply an experimental methodology to administer the Information Sampling Task (IST, Clark, et al., 2003). The IST is used to explore authenticity within a decision-making model termed reflection impulsivity (Evenden, 1999; Kagan, 1966). Study 4 within Chapter 5 explores the tripartite model of authenticity and looks to see if it can predict decision-making strategies above the Five-Factor personality domains. Study 4 will also address gender and sample bias that is identified in Study 3. Study 4 will apply a survey methodology to further explore the relationships between authenticity and decision-making strategies identified in Study 3.
Chapter 4

The Role of Authenticity in Reflective Impulsive Decision-Making Strategies: Authenticity is not Related to Information Sampling when there is an Element of Risk.
Overview to Chapter 4

Study 3 examines the relationship between the tripartite model of authenticity and a reward based decision-making strategy termed reflection impulsivity. Eighty undergraduate students were administered a behavioural measure of information sampling. Findings revealed that authentic-living is significantly correlated with rational decision making ($r = .39$), an adaptive decision-making strategy. Accepting external influences is significantly correlated with dependent decision making ($r = .39$), similarly self-alienation is significantly correlated with both dependent ($r = .30$) and avoidant ($r = .23$) decision-making styles. No significant correlations were found between authenticity and decision-making behaviour on the information sampling task. Results suggest that authenticity is not related to reflection impulsivity on the information sampling task. Recommendations are made to address decision-making strategies within therapeutic settings to enhance feelings of authenticity.
4 Introduction

Behavioural decision making is concerned with how people make choices (Franken & Muris, 2005). Furthermore, adaptive decision making is said to be undertaken by an individual who has consistent preferences, which are free of cognitive distortions and emotional distractions. Adaptive decision-makers can obtain and use accurate information about the self whilst taking into account the many alternatives available. The adaptive decision maker is methodical and systematic, independent and not impulsive, and is one who maintains focus on personal goals. This definition of adaptive decision making is indicative of a rational decision maker (Philips, 2011). However, Baron (1994) postulates that many decisions are not made through rational choices as some individuals appear not to weigh up the consequences of their decisions. Cabanac (1992) proposed that this may be because the whole process of human decision making is based mainly upon hedonic and non-rational motives as was previously suggested and proposed that non-rational experiences, such as pleasure and displeasure are the currencies for satisfying conflicting motivations (Cabanac, Guillaume, Balasko, & Fleury, 2002). For instance, risky sexual behaviours are said to be carried out as a result of short-term reward rather than based upon long-term risk assessment (Franken & Muris, 2005), implying that risky behaviours are impulsive and maladaptive, on the contrary long-term assessments are more rational, reflective and adaptive.

One decision-making model that offers an account for a reward-based motivation is the reflective impulsivity model (Kagan, 1966), which specifically refers to the tendency to gather information and evaluate options and hypotheses. The ability to carefully consider decision making is termed reflective, whereas the term impulsivity is given to decision-making strategies that are quick and intuitive (Evenden, 1999; Kagan, 1966). Reflective impulsivity can occur at a number of stages of information processing, including goal representation, response execution, and perceptual analysis (Aron, et al., 2004). Previous studies have found links between personality and reflective impulsivity; for instance, Ault, et al., (1972) found that higher reflective scores of children rated by teachers as slow and accurate were linked to higher levels
of attention. Furthermore, Block, Block, and Harrington (1974) found that higher impulsivity scores were related to ego resiliency and anxiety. Weijers, Wiesbeck, and Böning (2001) found that novelty seeking individuals scored higher on impulsivity and lower on reflective behaviour. Suggesting that although individual differences in decision making exist, it is not apparent whether rational or impulsive decision making is adaptive or maladaptive. The interest in the relationship between reward based decision-making strategies stem from Study 1 in Chapter 2 which found that individuals who live authentically, as opposed to living in accordance to others’ values and beliefs, are more reward dependent \( (r = .29) \), compared to inauthentic individuals who suffer from self-alienation \( (r = -.21) \) and live by accepting external influences \( (r = -.17) \). Based upon the supposition that decision-making strategies are hedonic (Cabanac, 1992) and that authenticity is linked to reward-seeking behaviour, it is interesting to explore to what extent reflective impulsivity as a reward-based model is influenced by a higher-order personality trait such as authenticity. Based upon Cabanac’s assumptions that human decision-making strategies are driven more by spontaneous than rational motives, and the findings from Study 1 of this thesis whereby authenticity is related to reward-seeking behaviour, Study 4 is expected to show that authentic individuals who are more reward-seeking generally make more impulsive and less reflective decisions.

The Matching Familiar Figures test (MFFT; Kagan 1966) was the primary index to measure individuals thinking style along the reflection-impulsivity continuum and had been used as a measure of reflection-impulsivity in a wide range of studies. However, a recent investigation found that the MFFT produced low correlations between latency scores and errors and is recommended to be used cautiously (Carretero-Dios, De los Santos-Roig, & Buela-Casal, 2008) and will thus not be employed in this study. The decision to not employ the MFFT in this thesis was also undertaken due to its familiarity among the student sample used here, as the MFFT often figures as a measure of individual differences in cognition in core psychology modules.

The relationship between personality and impulsive decision making has also been typically examined by employing the IOWA gambling task (IGT, Bechara, Damasio, Damasio,
& Anderson, 1994). The IGT requires that participants select cards from four decks that range in probability and magnitude of rewards and punishments. The decks that provided large gains immediately also provide net losses in the long run. Crone, Vendel, and van der Molen (2003) found that decision making is moderated by individual differences in inhibition, a key feature of impulsivity. Based upon the findings of authenticity being related to inhibition and reward seeking behaviours from Study 1, the IGT would be an effective task to employ in exploring impulsive and reflective decision-making strategies. However, due to the effectiveness of the IGT its function has become very familiar in the field of psychology and also figures greatly in the core modules of cognitive psychology at undergraduate level. Since this study employed 80 psychology students the use of the IGT would perhaps induce responder bias amongst the sample. Therefore, a decision was made to introduce a more implicit measure of information sampling termed The Information Sampling Task (IST, Clark et al., 2003).

Within humanistic, counselling and personality approaches to authenticity, the subjective awareness of living according to one’s own values and beliefs are a key characteristic of adaptive functioning and well-being (Horney, 1951; Maslow, 1968; Rogers, 1961; Winnicot, 1965). The authentic individual is conceptualised as a fully functioning individual who is open to new experiences, has the ability to perceive events accurately, is adaptive and flexible and has trust in their own inner experiences which they use for goal-directed behaviours (Cloninger, 1993; Kernis & Goldman, 2006; Maslow, 1968). These perspectives stress that one’s thoughts, feelings and behaviours reflect one’s true or authentic self and may, therefore underlie goal-directed decision-making strategies. Based upon these findings, results expect to demonstrate that inauthentic individuals engage in more impulsivity and reflect less when making decisions.

This Study employs a computer based neuropsychological index of reflection impulsivity known as The Information Sampling Task (IST, Clark et al., 2003). The IST measures the tendency to both gather and evaluate information prior to making a decision. The IST was selected above all other measures of reflective impulsivity (e.g. The Matching Familiar Figures Test (MFFT; Kagan 1966)) as this study was designed to explore individual differences
in the ability to gather and evaluate information without placing neither time constraints nor demands on both working memory and visual processing.

During the administration of the IST, participants are presented with twenty-five boxes in a $5 \times 5$ matrix which conceal underlying boxes made up of two colours (red and blue). The participant is required to uncover these boxes one at a time before deciding which of the two colours are in the majority beneath the matrix. The uncovered boxes remained open for the duration of each trial to reduce visual search and working memory overload, thus providing a direct measure of information sampling rather than speed accuracy (Clark et al.). The IST is designed so that the amount of information sampling is directly correlated to a number of incorrect responses meeting the main gauge for a measure of reflective impulsivity (Evenden, 1999). Clark, Robbins, Ersch, and Sahakian (2006) and Clark, Roiser, Robbin, and Sahakian (2009) found an association between substance users and reduced reflection and increased impulsivity as measured by the IST, suggesting a common maladaptive cognitive style across substance users.

Study 3 employs the IST (Clark et al., 2003); a behavioural measure to explore reward based reflective impulsivity when there is an element of risk in losing points. In doing so this methodology will help to explore the role of authenticity in goal-directed decision-making strategies that consider the significance of the immediate environment. Based upon the previous propositions, it is predicted that inauthentic individuals who exhibit maladaptive decision-making styles will demonstrate reduced reflection and more impulsivity when making decisions where there is an element of risk.

4.1 Method

4.1.1 Participants

A total of 80 (11 males and 69 females) undergraduate psychology students from the East Midlands, UK, voluntarily took part in this study. Participants ages ranged from 18-30
years ($M = 21.60$, $SD = 5.87$). Of the sample 58.8% were white, 25% were Asian, 10% black, 5% Chinese and 1.3% dual heritage.

4.1.2 Measures and procedures

*Authenticity* was measured via the 12-item Authenticity Scale (Wood et al., 2008) in order to measure the three facets of authenticity. The three subscales consist of: self-alienation (4 items, e.g. “I don’t know how I feel inside”), accepting external influences (4 items, e.g. “I usually do what other people tell me to do”) and authentic-living (4 items, e.g. “I always stand by what I believe in”). Items were rated on a 1 (*does not describe me at all*) to 7 (*describes me very well*) scale. The scale has 2 and 4 week test-retest reliabilities ranging from $r = .78$ to .91 and a strong factor structure that is invariant across sample, gender, ethnicity and age.

*Decision making* was measured via the General Decision-Making Style scale (Scott & Bruce, 1995) measuring the five dimensions of decision making. The first dimension is termed *rational* and defined by a thorough search for and logical appraisal of alternative options (4 items e.g. “My decision making requires careful thought”). The second dimension is termed *intuitive* and is characterised by a reliance on hunches and feelings (6 items, e.g. “When making decisions I rely upon my instincts”); the third dimension is termed *dependent* and characterised by a search for advice and direction from others (5 items e.g. “I rarely make important decisions without consulting other people”) the forth is termed *avoidant* and characterised by attempts to avoid making decisions (4 items, e.g., “I postpone decision making whenever possible”) and lastly a *spontaneous* domain (5 items e.g., “I make quick decisions”). Items were rated on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale. The authors reported acceptable internal consistency ($\alpha$ ranging from .68 to .94) and stable factor structure for all five subscales.

Participants also completed the Information Sampling Task (IST, Clark, et al., 2003) which is designed to measure reflection impulsivity providing an index of information sampling before making a decision. The IST was programmed in HTML, CSS, JavaScript and VbScript. This web application was run from the hard-disc of the host machine in browser Internet Explorer 7 and data was saved to the same hard-disk using ActiveX called from VbScript.
IST was then administered through a touch screen monitor. The IST was programmed to record information sampling under two different conditions; a fixed condition which is a non-risk condition and a decreasing-win condition programmed as a condition with an element of risk. Task instructions (see Appendix A) were read out to each participant prior to the single practice trial, after which the participant was encouraged to ask questions. In each trial participants saw a 5x5 matrix of greyed-out boxes, with two large coloured response panels at the bottom of the screen. Touching a greyed-out box caused the box to immediately open revealing one of two colours. The participants were required to make a decision as to which box colour was in the majority in the 5x5 matrix. Participants were able to work at their own pace and open as many boxes as they wished before making a decision. Participants were also informed that there was no limit in obtaining suggestions from the research assistant who was specially designated to ‘help’ or ‘advise’ participants before making their decisions. To make a decision, the participants would touch one of the two coloured response panels at the bottom of the screen, which would cause the remaining boxes to be opened, and a feedback message appeared as either “Correct! You have won [x] points” or “Wrong! You have lost 100 points”. This message remained on the screen for the duration of 2 seconds. A variable delay of at least 1 second before the onset of the next trial was programmed in to ensure an intertrial interval of at least 30 seconds to counteract delay-adverse responding. During this interval, the points total for that current trial was presented centrally. Participants were presented with 10 trials in each of the two conditions which were counterbalanced across participants.

In the fixed condition (no risk) the participant either won or lost 100 points on each trial, regardless of the number of boxes that were opened. In the decreasing win condition (risk) each participant began the task with 250 points; however, the number of points available to win decreased by 10 points for each box opened (e.g., responding correctly after opening 10 boxes would yield 150 points). In this risky condition, an incorrect decision lost 100 points regardless of the number of boxes opened and in doing so introduced a choice between reinforcement and certainty to measure individual differences in reward seeking decision-making strategies. Therefore, to maximise the number of points earned, the participant had to tolerate a high level
of uncertainty. Performance on the IST was referenced by the average number of boxes opened and the number of incorrect decisions made in each of the two conditions. Individual motivation was calculated by dividing the number of boxes opened by the time it took to make the decision.

### 4.2 Results

#### 4.2.1 IST performance.

A number of paired-sample *t*-tests were conducted to explore differences in performance between each of the two conditions on the IST. A statistical difference between the number of boxes opened in both risk (*M* = 59.82, *SD* = 29.47) and no-risk condition (*M* = 114.31, *SD* = 54.36), *t*(75) = -.963, *p* < .001 was found, suggesting that participants opened fewer boxes in the risk condition compared to the no-risk condition. There was a significant difference between the number of errors made in risk (*M* = 16.39, *SD* = 1.39) and no-risk condition (*M* = 15.59, *SD* = .80), *t*(75) = .488, *p* < .001, suggesting that participants made more errors in the risk than in the no-risk condition. There was a significant difference in the number of points earned in risk (*M* = 1483.81, *SD* = 421.811) and no-risk (*M* = 881.58, *SD* = 160.59) condition, demonstrating that participants earned more points in the risk condition than in the no-risk condition *t*(75) = 12.09, *p* < .001. However, no differences in motivation between risk and no-risk conditions were found *p* = .762 demonstrating that performance on the IST is a function of reflection impulsivity.

Table 3.0 shows descriptive statistics for behaviours as measured by the information sampling task and self-report measures of authenticity and general decision making. All subscales demonstrate a good level of internal reliability criteria of *α* = .70, with the exception of spontaneous decision making (*α*= .675) which reflects an acceptable alpha level (Kline, 1999).
Table 3.0

*Descriptives for the Behavioural Responses on the IST, Authenticity, and Decision making.*

<table>
<thead>
<tr>
<th>IST scores</th>
<th>No risk condition</th>
<th>Risk condition</th>
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<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Correct responses</td>
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</tr>
<tr>
<td>Latency opening (ms)</td>
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<tr>
<td>No. of boxes opened</td>
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<tr>
<td>No. of points earned</td>
<td>200.00</td>
<td>1000.00</td>
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<td>No of Errors</td>
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<tr>
<td><strong>Risk condition</strong></td>
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<td></td>
</tr>
<tr>
<td>Correct responses</td>
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</tr>
<tr>
<td>Latency opening (ms)</td>
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<td>460.68</td>
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<tr>
<td>No. of boxes opened</td>
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<td>189</td>
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<tr>
<td>No. of points earned</td>
<td>170</td>
<td>2260</td>
</tr>
<tr>
<td>No of Errors</td>
<td>15.00</td>
<td>21.00</td>
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<tr>
<td>Behavioural dependency</td>
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<td>9.00</td>
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</table>

**Self-report measures**

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<tr>
<th>$\alpha$</th>
<th>$M$</th>
<th>SD</th>
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<td><strong>Authenticity</strong></td>
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<td>Authentic-living</td>
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<tr>
<td>External influences</td>
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<td>Self-alienation</td>
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<td><strong>Decision making</strong></td>
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<td>Rational</td>
<td>.801</td>
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<tr>
<td>Intuitive</td>
<td>.716</td>
<td>17.81</td>
</tr>
<tr>
<td>Dependent</td>
<td>.829</td>
<td>19.51</td>
</tr>
<tr>
<td>Avoidant</td>
<td>.906</td>
<td>12.07</td>
</tr>
<tr>
<td>Spontaneous</td>
<td>.675</td>
<td>13.65</td>
</tr>
</tbody>
</table>

Note: Scores on authentic-living, self-alienation and external influences from the Authenticity Scale range from 4-28; Scores on the General Decision Making scale range from 7-28 for rational, 7-42 for intuitive, 7-35 for dependent, 7-28 for avoidant and finally 7-35 for spontaneous.
Table 3.1 demonstrates relationships between authenticity, general decision making and behavioural measures on the IST. A number of significant relationships occur, for instance; in terms of the relationship between authenticity and decision-making models, authentic-living shows a positive correlation with rational decision making \((r = .388)\); accepting external influences shows a positive correlation with dependent decision making \((r = .386)\); whereas self-alienation shows positive correlations between dependent \((r = .298)\) and avoidant decision-making styles \((r = .234)\). In terms of the relationships between decision-making styles; rational decision making is negatively correlated with intuitive \((r = -.148)\) and spontaneous decision-making styles \((r = -.381)\); furthermore intuitive decision making is positively correlated with spontaneous decision making \((r = .375)\). Dependent decision making is positively correlated with avoidant decision making \((r = .223)\) and spontaneous decision making is negatively correlated with behavioural dependency on the IST \((r = -.235)\). No other self-reported decision-making strategies correlated with the IST.

In terms of the relationships between behavioural measures on the IST, time latency in the risk condition is positively correlated with time latency in the no-risk condition \((r = .745)\), also with the number of boxes opened in both risk and no-risk condition and also with points earned in the no-risk condition. Time latency in the risk condition was also negatively correlated with errors accrued in the no-risk condition. Similarly time latency in the no-risk condition is positively correlated with the number of boxes opened in both no-risk \((r = .569)\) and risk conditions \((r = .321)\), but negatively correlated with number of errors accrued in the no-risk condition \((r = -.224)\). The number of points earned in both risk and no-risk conditions negatively correlated with errors accrued in both conditions and the number of boxes opened in the no-risk condition is positively correlated with points earned in the no-risk condition, meeting the criterion that response accuracy is a function of the amount of information sampling that each participant engaged in, which is a principle component of reflective impulsivity (Evenden, 1999). There were no significant correlations between authenticity and behavioural responses on the IST.
### Table 4.1

**Bivariate Correlations between Authenticity, Decision Making and Behavioural Responses on the IST.**

<table>
<thead>
<tr>
<th>Measures</th>
<th>1</th>
<th>2</th>
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<td>1. Authentic-living</td>
<td>-</td>
<td>-.339**</td>
<td>- .303**</td>
<td>.388**</td>
<td>.110</td>
<td>-.182</td>
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<td>-.019</td>
<td>-.043</td>
<td>.386**</td>
<td>.099</td>
<td>-.159</td>
<td>-.044</td>
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<td>.298**</td>
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<td>-.032</td>
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<td>-.025</td>
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<td>-.076</td>
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<td>5. Intuitive</td>
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<td>-.025</td>
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<td>7. Avoidant</td>
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<td>.745**</td>
<td>.569**</td>
<td>.321**</td>
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<td>.259*</td>
<td>-.224</td>
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<td>10. Time latency-Fixed</td>
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<td>.758**</td>
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<td></td>
<td>-.230*</td>
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<td>15. Errors-risk</td>
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<td>17. Dependancy</td>
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</table>
4.3 Discussion

Study 3 presents a novel experimental task to explore the relationship between authenticity and a reward based decision-making strategy termed reflective impulsivity. Correlational analyses reveal that authentic-living is positively correlated to rational decision making from the general decision-making scale. Correlational analysis also found that the facet of accepting external influences is positively correlated with dependent decision making, in addition self-alienation is positively correlated to both avoidant and dependent decision-making styles. Authenticity is not related to reflective impulsivity as measured by the IST. These findings, in light of the reward based model by Cabana (1992) and Franken and Muris (2005) suggest that authenticity is not related to reflective impulsivity as measured by the IST. These findings gained through an experimental task are not consistent with findings from Study 1 which argues that individuals who report employing more dependent decision-making strategies rely on the advice of others and, in doing so, reflect less and engage in more reward seeking decision-making strategies. This study failed to replicate this finding as no correlation between authenticity and reward-seeking reflective impulsive behaviour was found.

Current findings from the self-report measures suggest that deficits in cognitive processes, such as avoidant and highly dependent and non-autonomous decision-making strategies, can be addressed by increasing feelings of authenticity and also feelings of autonomy in decision-making- an antecedent to psychological well-being (Deci & Ryan, 2000). Findings also demonstrate that improvements in authenticity can be achieved by teaching individuals to be more rational and autonomous when making-decisions. To summarise, this study has failed to find a relationship between self-alienation and accepting external influences and impulsivity. Findings also failed to find a relationship between authenticity and reflexivity.

It is acknowledged here that the findings for the relationship between authenticity and general decision-making styles are purely based on self-report measures and are founded on a
small gender bias sample; however these findings are consistent with the correlational study presented in Study 1. In an attempt to address the limitations of the use of self-report measures by employing an experimental measure of individual differences in reflective impulsivity, this study has failed to find any relationship between authenticity and reward based reflective impulsivity. This study also failed to provide experimental evidence for Study 1 where it was postulated that authenticity is related to reward-seeking behaviour.

Study 3 found no significant correlations between the IST and self-report decision-making styles which are consistent with Crean, de Wit and Richards (2000), Reynolds, Richards, Horn and Karraker (2004), and White et al., (1994) who also failed to observe relationships between self-report and behavioural measures of impulsivity. Findings suggest that self-reported decision-making styles differ from those detected with the IST. For instance, with the self-report measures, participants may not recognise or report their behaviours accurately. However, although performance on the IST is objective and therefore less sensitive to subjective perceptions, the IST typically measures specific dimensions of behaviour; either the significance of delayed rewards or the ability to inhibit impulsive responses (Reynolds, Ortengren, Richards & de Wit, 2006). Reynolds et al. suggested that correlations between self-report measures and behavioural tasks will improve if the tasks measure more general impulsive behaviours or if questionnaires assessed the specific processes identified by the IST. Results suggest that further experimental work be considered to explore the dynamics between the tripartite model of authenticity and impulsive and rational decision-making strategies.
Chapter 5

Authenticity Predicts Decision Making Above the Five-Factor Personality Domains.
Overview to Chapter 5

This chapter presents Study 4 which considers the extent to which the new tripartite model of authenticity derived from the humanistic approach can predict variance in decision making above and beyond the variance predicted by the existing Big-Five personality domains. Responses of two hundred and seventy seven participants (106 males and 171 females) revealed that living authentically is negatively correlated with dependent (r = -.13) and avoidant decision-making styles (r = -.13). Accepting external influences is positively correlated with both dependent (r = .31) and avoidant (r = .18) decision-making styles, additionally, feelings of self-alienation are positively correlated with avoidant decision-making strategies (r = .22). Hierarchical regression analysis demonstrated that in the first step when the Big-Five was entered 10.8 % of the shared variance in avoidant decision-making strategy is predicted by self-alienation and openness to experience. In the second step 15.7% of the variance in dependent decision making is predicted by accepting external influences above and beyond the Big-Five. Findings suggest that living authentically and being open to new experiences leads to healthier decision-making strategies. These findings are discussed in terms of the theoretical overlaps between Jung and Maslow’s account of human decision making as underlined by the humanistic psychology.
5 Introduction

An individual’s ability to solve problems and make decisions is recognised as an important skill in life. This study explores the concept of the authentic personality and its relationship with conscious decision-making strategies and examines whether the tripartite model of authenticity (Wood, et al., 2008) predicts the variance in general decision-making strategies over and above the variance in the Five-Factor model of personality (Gosling, Rentfrow, & Swann, 2003).

Within the personality literature authenticity entails living life according to one’s own values and beliefs and is a key characteristic of adaptive functioning and well-being in several major theories of personality and human development (Bettencourt & Sheldon, 2001; Harter, Marold, Whitesell, & Cobbs, 1996; Horney, 1951; Rogers, 1959; Wood et al., 2008; Yalom, 1980), but has been traditionally neglected by empirical research (Sheldon, 2004; Wood et al., 2008). Grounded within Carl Rogers’ person-centred ideology, Barrett-Lennard (1998) conceptualised authenticity as the congruence between the three levels of a person’s primary experience, their symbolised awareness and their outward behaviour and communication. The first component of authenticity, termed self-alienation, is experienced when there is an incongruence between actual experience and conscious or symbolic awareness. The “subjective feeling of not knowing oneself, or feeling out of touch with our true self” (Wood et al., 2008, p. 386) is indicative of self-alienation. Although some level of self-alienation is inevitable, when present to a greater extent this disparity would lead to psychopathology. The second component, authentic-living, represents the congruence between consciously perceived experience and behaviour. Authentic-living comprises expressing emotions and behaving in a way that is congruent with an individual’s conscious experience, for example their psychological states, emotions, beliefs and cognitions. In other words, to live authentically is to express one’s true self in most situations and to live in accordance with one’s values and beliefs. The third component of authenticity, termed accepting external influences, refers to the
extent to which one is open to the influence of others and the belief that one has to conform to the expectations of others.

The authentic individual is seen as a fully functioning person who is open to new experiences, has the ability to perceive events accurately, is adaptive and flexible and trusts their inner experiences to guide behaviours (Cloninger, Svrakic, & Przybeck, 1993; Kernis & Goldman, 2006; Maslow, 1968; Rogers, 1961). These perspectives stress that one’s thoughts, feelings and behaviours reflect one’s true-personality or authenticity. For instance, Winnicott (1965), Horney (1951), Yalom (1980), and May (1981) all proposed that internalising external influences, such as parental wants and desires during childhood, leads to feelings of self-alienation. Self-alienation occurs when the individual is out of contact with their own needs, feelings, and emotions, which will eventually lead to psychopathology and mental illness. Feelings of inauthenticity through a shattered sense of self has also been linked to posttraumatic stress disorder (Dunmore, Clark & Ehlers, 2001; Ehlers, Maercker & Boos 2000; Joseph & Linley, 2005), lower levels of hope amongst children (Harter, Marold, Whitesell, & Cobbs, 1996), and inhibitory and reward seeking behaviours (Chapter 2). Authenticity has also been linked to decisions within career choice making (White & Tracey, 2011). However, very few studies have explored the relationship between the tripartite model of authenticity and general everyday decision-making strategies.

Within the humanistic literature, the use of one’s own intuition when making a decision is defined as a distinct pattern of thought from the rational mode. This deviation from rationality is present in all people to varying degrees and is manifest through various personality types (Jung, 1971). Jung’s theory of personality and decision making includes other aspects, such as introverted intuition with thinking, or extroverted intuition with feeling. Jung believed that authentic and intuitive decision-making strategies are beneath the conscious realm and are made without the limitations and constraints of rationalism and logic. He argued that intuition is a perception and understanding of the whole at the cost of minutiae, which he attributed to unconscious processes. This view suggests that intuition is viewed as a cognitive function
outside of conscious reasoning and occurs whenever rational or other cognitive perceptions do not work. Jung characterised intuition into practices of hunches, inspiration, and insights into problem solving methods, all of which suggest little rationalising and a belief that intuition is a core aspect of human experience. The Jungian theory also defines human experience as composed of two functions: rational functions (thinking and feeling) whereby individuals evaluate experiences before coming to a decision and non-rational functions (intuition and sensation) whereby individuals consider experiences and gather information prior to decision making. Jung stated that intuition is a function of personality rather than knowledge, one which balances perceptions of actuality without involving inferences. This balancing of inferences is a reactive process which responds to given facts. Non-rational or intuitive functions mediate perceptions of ideas and are stimulated by an act of will or intent. Taking into account Jung’s proposition that intuition within decision making is the core of human experience and is manifest through various personality types, this Study will conduct an empirical investigation to explore the relationship between intuition when making a decision and this new measure of personality, termed the tripartite model of authenticity (Wood, et al., 2008).

Maslow’s (1970) account of human decision making focuses upon intuition and defines intuition as an innate component which contributes to the existence of the self and self-actualization. His theory of denial proposes that individuals tend to suppress their intuition out of fear of knowing themselves or to avoid identifying areas in need of development. This proposition is similar to Jung’s (1971) rational verses non-rational thought processes and accounts for lack of intuition in decision making. Maslow suggested that when one has self-knowledge, action follows and choices can be made without internal conflict, suggesting an element of authentic behaviour. However, Maslow stated that self-discovery propagates a need for action which may or may not go against the norm; as most people take the path of least resistance by conforming to these norms, and in doing so adopt behaviours and thought processes that are more acceptable to the majority. This siding with the status quo is seen within decision-making literature as a common and dominant response and overlaps with Wood et al.’s
account of accepting external influences. Maslow stated that intuition affords personal freedom, which is expressed through personal choices and decisive action. Both Jung and Maslow’s accounts of decision making imply that the self and self-knowledge is instrumental in making choices, but has not been tested empirically within the tripartite model of authenticity (Wood et al., 2008). Since Jung suggested that individual differences exist between both rational and non-rational decision makers and that these differences are based on self-knowledge this study will explore the relationships between the tripartite model of authenticity and rational decision-making strategies. In considering Maslow’s account which focuses upon decision making and self-denial, the relationship between self-alienation, a facet of the tripartite model of authenticity and dependent and avoidant decision-making strategies will be explored.

Within the decision-making literature, Harren (1979) proposed that dependent decision makers project responsibility for decisions onto others, whereas both rational and intuitive decision makers assume personal responsibility for their decisions. The rational decision-maker adopts a deliberate and logical approach; on the contrary the intuitive decision-maker adopts a relatively quick impulsive approach based upon internal hunches. Phillips, Pazienza and Ferrin (1984) found that both rational and intuitive decision-makers approach rather than avoid problems; in contrast, dependent decision-makers, although approached problems by addressing them, did so with a diminished sense of control and experienced little confidence in their own problem solving abilities. They also found that both intuitive and rational decision-makers report greater confidence in their own problem solving style, but with a more diminished sense of personal control. Previous studies have shown that the Big-Five personality traits such as neuroticism (Hilbig, 2008; Maner et al., 2007) and extroversion (Pilárik & Sarmány-Schuller, 2011) are related to decision-making strategies; however, although personality and identity relevant issues are dominant within the decision-making literature (Erickson, 1995; Berzonsky 1988) little is known about the role of the authentic personality within conscious decision-making strategies and whether it can predict variance in decision making over and above the Big-Five model of personality (Gosling, Rentfrow, & Swann, 2003).
Thus, Study 4 will consider the role of the authentic personality (living according to one’s values and beliefs) within decision-making strategies when controlling for the Big-Five model of personality (Gosling, et al., 2003). Based upon earlier theoretical and empirical evidence that suggests a role of self-relevant elements within decision-making strategies, predictions are that authentic-living would relate to more independent and intuitive decisions, which both bypass the suppression of self-relevant information as suggested by Jung (1971). Finding also expect to reveal that higher levels of self-alienation and accepting external influences are related to more avoidant and dependent decision-making styles, which occur through denial, where an individual suppresses their intuition out of fear of knowing themselves or to avoid identifying areas in need of development (Maslow, 1970). If these hypotheses are correct, findings will demonstrate that strategies, such as avoidant and high levels of dependent decision-making styles, are employed in response to higher levels of self-alienation and accepting external influences. On the other hand more strategies, such as rational and independent decision-making styles, will be employed within those who experience greater feelings of authentic-living. This study will also explore the predictive value of authenticity and test whether it can predict decision-making strategies above the Five-Factor model of personality (Gosling, et al, 2003).

There were three aims to this study. The first was to extend the findings from the self-report measures from Study 3 by addressing sample size and gender bias. The second aim was to inspect the replication of the self-report findings and whether they translate from a student sample used in Study 3 to an older general population sample. The third aim was to explore whether authenticity can predict the variance in self-report decision-making strategies above and beyond the Five-Factor model of personality.
5.1 Method

5.1.1 Participants

An opportunity sample consisting of 277 participants (106 males and 171 females) from the East Midlands, UK took part in this study. Participant’s ages ranged from 18-69 years ($M = 27.94, SD = 9.90$). Of the sample 69.3% were white, 17.7% Asian, 3.6% black, 4.8% mixed race and 4.3% responded as other. Participants responded voluntarily and did not receive any payment for their involvement.

5.1.2 Measures and procedures

Questionnaires included the Authenticity Scale (Wood et al. 2008), assessing the three facets of authenticity, The General Decision-Making Style (Scott & Bruce, 1995), measuring the five dimensions of decision making and the Big-Five Measure of Personality (Gosling, et al., 2003). The Big-Five measure was included as a control variable to explore to what extent authenticity accounted for variance in decision-making styles after controlling for broadband personality traits.

Authenticity was measured via the 12-item authenticity scale (Wood et al., 2008) to measure the three facets of authenticity. The three subscales consist of: self-alienation (4 items, e.g. “I don’t know how I feel inside”), accepting external influences (4 items, e.g. “I usually do what other people tell me to do”) and authentic-living (4 items, e.g. “I always stand by what I believe in”). Items were rated on 1 (does not describe me at all) to 7 (describes me very well) scale. The scale has 2 and 4 week test-retest reliabilities ranging from $r = .78$ to .91 and a consistent factor structure that is invariant across sample, gender, ethnicity and age.

Decision making was measured via the General Decision-Making Style scale (Scott & Bruce 1995) measuring the five dimensions of decision making. The first is termed rational and defined by a thorough search for and logical evaluation of alternatives (4 items e.g. “My decision making requires careful thought”).The second is termed intuitive and is characterised
by a reliance on hunches and feelings (6 items, e.g. “When making decisions I rely upon my instincts”); the third is termed dependent and characterised by a search for advice and direction from others (5 items e.g. “I rarely make important decisions without consulting other people”); the fourth is termed avoidant and characterised by attempts to avoid making decisions (4 items, e.g. “I postpone decision making whenever possible”) and fifth, spontaneous domain (5 items e.g. “I make quick decisions”). Items were rated on a 1 (strongly disagree) to 7 (strongly agree) scale. The authors reported acceptable internal consistency (alpha ranging from .68 to .94) and stable factor structure for all five subscales.

The Big-Five personality traits were measured via the Ten Item Personality Inventory (Gosling, et al., 2003). This measure includes two items assessing each of five traits: extroversion, emotional stability, openness to experience, conscientiousness and agreeableness and is rated on a 1 (strongly disagree) to 7 (strongly agree) scale. The authors reported adequate levels of convergent and discriminant validity ($r = .48 - .80$), as well as test–retest reliability for these scales ranging from $r = .73 - .81$ (their internal consistency is relatively low because of their brevity). The inventory begins with the stem “I see myself as” followed by 10 pairs of trait descriptors (e.g., “extroverted, enthusiastic”; “critical, quarrelsome”). Respondents were asked to rate to what extent the pair of descriptors applied to them.

After giving informed consent participants either completed a questionnaire pack or an online version of this study. The many advantages of online questionnaires include the ability to check for missing answers and consistency, automatic branching, cost advantages and the ability to give instant feedback upon health and related variables. Furthermore this method of data collection can affect the answers for sensitive questions (Tourangeau & Smith 1996; Bowling 2005). This study employed both paper/pencil and internet versions of the questionnaires; using a multi-method approach such as this ensured a degree of flexibility in collecting data. A decision to adopt this multi-method approach was taken in light of previous research, which when comparing these two methods, found small or no differences in response rates (Fouladi, McCarthy, & Moller, 2002; Mangunkusumo et al. 2005).
5.2 Results

Table 4.0 shows descriptive statistics and zero order correlations between authenticity, decision making and the Big-Five subscales. All scales demonstrate good internal reliability criteria above $\alpha = .70$, with the exception of intuitive decision making from the General Decision Making Scale which according to Kline (1999) is a satisfactory alpha level. In terms of the relationship between authenticity and decision making, authentic-living shows significant negative correlations with both dependent and avoidant styles. Accepting external influences is positively correlated with avoidant decision making and dependent decision making styles. Correlational analysis also demonstrates that both self-alienation and accepting external influences are negatively correlated with emotional stability from the Big-Five personality inventory. Accepting external influences is also negatively correlated with openness to new experiences.

In terms of the relationships between decision making styles and the Big-Five a number of significant correlations occur; a rational decision-making style is positively correlated to being open to new experiences and emotional stability. Dependent decision-making style is positively correlated to conscientiousness, whereas avoidant decision making is negatively correlated with both emotional stability and being open to new experiences. Neither intuitive nor spontaneous decision-making styles correlated with any of the Big-Five personality subscales.
<table>
<thead>
<tr>
<th>Measures</th>
<th>M</th>
<th>SD</th>
<th>α</th>
<th>1</th>
<th>2</th>
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<th>4</th>
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<tr>
<td>1. Rational</td>
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<td>2.8</td>
<td>.744</td>
<td>-</td>
<td>-.21**</td>
<td>.03</td>
<td>-.24**</td>
<td>.47**</td>
<td>.08</td>
<td>-.02</td>
<td>-.07</td>
<td>-.01</td>
<td>.02</td>
<td>.16**</td>
<td>.09</td>
<td>.15*</td>
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<td>2. Intuitive</td>
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<td>5.7</td>
<td>.612</td>
<td>-</td>
<td>.06</td>
<td>.12</td>
<td>.38**</td>
<td>-.01</td>
<td>-.12</td>
<td>-.04</td>
<td>-.06</td>
<td>-.01</td>
<td>-.09</td>
<td>-.10</td>
<td>-.00</td>
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<td>3. Dependent</td>
<td>17.15</td>
<td>4.4</td>
<td>.866</td>
<td>-</td>
<td>.25**</td>
<td>-.08</td>
<td>-.13*</td>
<td>.11</td>
<td>.31**</td>
<td>.01</td>
<td>.08</td>
<td>.12*</td>
<td>-.09</td>
<td>-.07</td>
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<td>4. Avoidant</td>
<td>11.32</td>
<td>4.1</td>
<td>.887</td>
<td>-</td>
<td>.28**</td>
<td>-.13*</td>
<td>.22**</td>
<td>.18**</td>
<td>-.10</td>
<td>-.02</td>
<td>-.08</td>
<td>-.17**</td>
<td>-.22**</td>
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<td>5. Spontaneous</td>
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<td>3.7</td>
<td>.825</td>
<td>-</td>
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<td>.07</td>
<td>.04</td>
<td>.00</td>
<td>-.02</td>
<td>-.09</td>
<td>-.07</td>
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<tr>
<td><strong>Authenticity</strong></td>
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<tr>
<td>6. Authentic living</td>
<td>21.94</td>
<td>3.5</td>
<td>.720</td>
<td>-</td>
<td>-.34**</td>
<td>-.41**</td>
<td>.04</td>
<td>.05</td>
<td>.03</td>
<td>.11</td>
<td>.08</td>
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<tr>
<td>7. Self-alienation</td>
<td>10.91</td>
<td>6.0</td>
<td>.797</td>
<td>-</td>
<td>.37**</td>
<td>-.08</td>
<td>-.06</td>
<td>.03</td>
<td>-.28**</td>
<td>-.11</td>
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<tr>
<td>8. External-influences</td>
<td>14.42</td>
<td>4.6</td>
<td>.914</td>
<td>-</td>
<td>-.11</td>
<td>.02</td>
<td>.02</td>
<td>-.21**</td>
<td>-.25**</td>
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Table 5.0
Mean scores, alpha coefficients, and Zero order correlations between decision making, authenticity and the Big-five measures.
<table>
<thead>
<tr>
<th>Measures</th>
<th>M</th>
<th>SD</th>
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<tbody>
<tr>
<td>9. Extraversion</td>
<td>8.19</td>
<td>3.2</td>
<td>.633</td>
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<tr>
<td>10. Agreeableness</td>
<td>8.11</td>
<td>3.3</td>
<td>.374</td>
<td></td>
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<tr>
<td>11. Conscientiousness</td>
<td>9.99</td>
<td>2.3</td>
<td>.137</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>12. Emotional Stability</td>
<td>9.54</td>
<td>4.3</td>
<td>.630</td>
<td></td>
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<tr>
<td>13. Openness</td>
<td>8.99</td>
<td>2.8</td>
<td>.276</td>
<td></td>
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</table>

Note: Scores on the General Decision-Making scale can range from 7-28 for rational, 7-42 for intuitive, 7-35 for dependent, 7-28 for avoidant and finally 7-35 for spontaneous decision making. Scores on authentic–living, self-alienation and external influences from the Authenticity Scale can range from 4-28. Scores on the Big-Five range from 2-14.

*p < .01, **p < .05
Two 2-step hierarchical multiple regressions were conducted to test whether the three subscales of authenticity predicted decision-making styles of rational, intuitive, dependent and avoidant strategies whilst controlling for the Big-Five measures of extroversion, emotional stability, openness to new experiences, conscientiousness, agreeableness age, and gender.

To predict dependent decision making, the control variables of the Big-Five, age and gender were entered in step 1, which explained 11.6% of the variance in dependent decision making, \( F (7, 267) = 5.02, p = .001, r = .341, r^2 = .116, \text{adj } r^2 = .093 \), with agreeableness (\( \beta = .14 \)) and contentiousness (\( \beta = .12 \)) from the Big-Five and age (\( \beta = -.20 \)) as significant predictors. When the three authenticity measures were entered into the second step 15.7% of the variance in dependent decision-making styles was predicted, a significant 4.1% improvement in prediction occurred \( F (10, 264) = 4.918, p = .001, r = .396, r^2 = .157, \text{adj } r^2 = .125 \), with age (\( \beta = -.15 \)) and accepting external influences (\( \beta = .23 \)) as significant predictors to dependent decision-making styles. See Table 4.1 for full regression results.

To predict avoidant decision making, the control variables of the Big-Five, age and gender were entered in step 1, which explained 7.0% of the variance in avoidant decision making, \( F (7, 267) = 3.19, p = .003, r = .278, r^2 = .077, \text{adj } r^2 = .053 \), with emotional stability (\( \beta = -.15 \)) and openness to new experiences from the Big-Five as significant predictors. When the three authenticity measures were entered into the second step 10.8% of the variance in avoidant decision-making styles was predicted, a significant 3.8% improvement in prediction \( F (10, 264) = 3.197, p = .001, r = .329, r^2 = .108, \text{adj } r^2 = .074 \), with both openness (\( \beta = -.18 \)) from the Big-Five and self-alienation (\( \beta = .16 \)) from the authenticity scale as significant predictors to avoidant decision-making styles. See Table 4.2 for full regression results.
Table 4.1

Regression analysis predicting dependent decision-making styles with the Big-Five, age and gender measures as control variables and authenticity measures as predictors.

<table>
<thead>
<tr>
<th>Measures</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1. Big-Five, age, gender.</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Extroversion</td>
<td>.00</td>
<td>.00</td>
<td>.01</td>
<td>.995</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.22</td>
<td>.14</td>
<td>2.11</td>
<td>.036*</td>
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<td>Openness</td>
<td>-.13</td>
<td>-.07</td>
<td>-1.11</td>
<td>.267</td>
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<tr>
<td>Emotional stability</td>
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<td>-.05</td>
<td>-.80</td>
<td>.423</td>
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<td>Conscientiousness</td>
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<td>.12</td>
<td>1.98</td>
<td>.049*</td>
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<tr>
<td>Age</td>
<td>-.09</td>
<td>-.20</td>
<td>-2.76</td>
<td>.006*</td>
</tr>
<tr>
<td>Gender</td>
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<td>.13</td>
<td>1.78</td>
<td>.077</td>
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<td><strong>Step 2. Big-Five, age, gender, authenticity.</strong></td>
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<tr>
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<td>.01</td>
<td>.17</td>
<td>.865</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>.16</td>
<td>.10</td>
<td>1.54</td>
<td>.125</td>
</tr>
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<td>.757</td>
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<td>Conscientiousness</td>
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<tr>
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<td>-2.10</td>
<td>.037</td>
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<tr>
<td>Gender</td>
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<td>.173</td>
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<td>Authentic-living</td>
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<td>-.01</td>
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<td>Self-alienation</td>
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<td>-.02</td>
<td>-.24</td>
<td>.808</td>
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<tr>
<td>Accepting external influences</td>
<td>.22</td>
<td>.23</td>
<td>3.25</td>
<td>.001**</td>
</tr>
</tbody>
</table>

Note. Δ = Change; Step 1, F (7, 267) = 5.02, p = .001, r = .341, r² = .116 adj r² = .093; Step 2, ΔF (10, 264) = 4.92, p = .001, Δr = .396, Δr² = .157, Δadj r² = .125
* p < .05; ** p < .01
Table 4.2

Regression analysis predicting avoidant decision-making styles with the BIG-Five, age and gender measures as control variables and authenticity measures as predictors.

<table>
<thead>
<tr>
<th>Measures</th>
<th>B</th>
<th>Beta</th>
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<th>Sig</th>
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<tr>
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<td>.636</td>
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</table>

*Note. Δ = Change; Step 1, F (7, 267) = 3.19, p = .003, r = .278, r² = .077 adj r² = .053; Step 2, ΔF (10, 264) = 3.20, p = .001, Δr = .329, Δr² = .108, Δadj r² = .074
* p < .05; ** p < .01
5.3 Discussion.

Study 4 presents evidence to show that the tripartite model of authenticity predicts variance in general decision-making strategies above the Big-Five personality domains. Findings also demonstrate that authentic-living is related to adaptive decision-making strategies, in contrast, higher levels of self-alienation and accepting external influences are related to more maladaptive decision-making strategies.

To expand, when exploring the relationships between the tripartite model of authenticity and decision-making strategies, correlational analysis reveal that both self-alienation and accepting external influences are related to maladaptive avoidant decision-making strategies. Results also show that people who live by accepting external influences make decisions that are highly dependent on the advice of others. Conversely, results also show that authenticity is related to adaptive decision-making styles. Correlational analyses reveal that those who live authentically do so by adopting a more independent autonomous decision-making style and adopt a healthy practice of engaging with choices as opposed to avoiding making decisions.

In exploring the predictive value of the three authenticity domains of authentic-living, self-alienation and accepting external influences, hierarchical multiple regression analysis revealed that accepting external influences was the only unique predictor to dependent decision-making style over and above the Big-Five domains of personality. Findings also suggest that when predicting avoidant decision-making styles, both being open to new experiences from the Big-Five and self-alienation from the authenticity scale emerged as unique predictors.

Findings are partially consistent with Jung (1971) who suggested that personality consists of either rational or intuitive decision-making strategies. Although results failed to find relationships between the tripartite model of authenticity with either rational or intuitive decision-making strategies, findings revealed relationships between the inauthentic measure of self-alienation and maladapted decision-making styles. Results suggest that Jung’s proposition
of suppression of one’s intuition accounts for an inauthentic personality via feelings of self-alienation and a need to accept advice from others. This need is manifest through non-autonomous dependent or maladaptive avoidant decision-making strategies.

Findings are consistent with Maslow (1970) who advocated that self-knowledge brings actions and choices which are made without internal conflict. Results demonstrate that authentic-living, the facet most related to living in accordance with one’s own values and beliefs is correlated with independent decision-making strategies. Maslow also stated that most people take the path of least resistance by conforming and adopting behaviours and thought processes that are more acceptable to the majority. The findings presented here are consistent with Maslow, in that they demonstrate a relationship between people who live by accepting external influences and dependent decision-making strategies. These findings extend those of Maslow’s propositions of denial, in that individuals tend to suppress their intuition from fear of knowing themselves or to avoid identifying areas in need of development. This proposition takes into account the lack of intuition in decision making. In extending Maslow’s account findings propose that self-alienated individuals not only suppress their intuition, but in doing so avoid making decisions, as seen by the positive relationship between self-alienation and the measure of avoidance style.

Findings also partially support Erickson (1995) who suggested that authentic individuals are more intuitive in their decision making as no correlation was found between intuition and authentic-living. Although findings are consistent with Erickson (1995), Maslow (1970), and Jung (1971), in that authentic individuals use self-relevant information when making decisions. However, results suggest that individuals who live authentically also make their own decisions, not solely based upon intuition or hunches, but make decisions that are more conducive to living according to their own values and beliefs.

Taken together these findings lend support to previous theoretical propositions that the authentic individual is open to new experiences, has the ability to perceive events accurately, is adaptive and flexible and has trust in their inner experiences to guide their behaviours.
(Cloninger et al., 1993; Kernis & Goldman, 2006; Maslow, 1968; Rogers, 1961). Although authenticity did not play a part in predicting rational or intuitive decision-making styles, self-alienation together with lower levels of being open to new experiences did predict an avoidance decision making style. This tactic reflects an unhealthy and counterproductive strategy, lending support to Erickson (1959) who suggested that individuals with avoidant identity styles also suffer from identity issues and are unwilling to directly deal with problems. Regression analysis also revealed a person who lives by introjecting values and beliefs of others adopts a more dependent decision-making strategy. These findings extend those of Harren (1979) in that higher levels of dependent decision making [where responsibility for all decisions is projected onto others as the individual is unable to decide for themselves] is a product of higher levels of inauthenticity. Findings also extend those of Phillips, Pazienza and Ferrin (1984) in that having little confidence in personal problem solving abilities suggests a diminished sense of control, which in turn leads to a life of accepting external influences where a more dependent decision-making strategy is adopted.

Together, findings lend support to the belief that authenticity is core in the study and treatment of maladapted cognitive outcomes leading to better psychological well-being. Current findings suggest that a diminished sense of control in decision making and avoidant decision-making strategies can be addressed by increasing feelings of authenticity and, in doing so, increase feelings of autonomy in decision making, an antecedent in psychological well-being (Deci & Ryan, 2000). The findings presented may also have important applications where self-knowledge may be found to influence decisions and decision making, such as with opportunities for entrepreneurship in business. Opportunities in education or work may also be missed because of an individual’s decision-making style. Findings also demonstrate that within therapeutic settings authenticity can be improved by encouraging individuals to be more autonomous and less dependent on others when making decisions. It is acknowledged that these findings are purely based on self-reports and do not indicate cause and effect; thus suggest that
a behavioural or experimental method is adopted to explore the dynamics between the tripartite model of authenticity and maladaptive decision making strategies.
5.4 Summary of Finding from Chapters 4 and 5

Study 3 employed the IST to measure reflective impulsivity within decision making. Results failed to show any relationship between authenticity and reflection impulsivity. However, correlational analysis demonstrated relationships between self-reported decision-making styles and authenticity; nevertheless, in acknowledging that the sample size was low (n = 80) and that there was a strong gender bias (n = 69 females) a decision was made to conduct a larger correlational study that addressed these biases to better explore the relationship between authenticity and self-report decision-making strategies. A decision was made to control for the Big-Five measure of personality (Gosling, Rentfrow, & Swann, 2003) in Study 4, rather than the BIS/BAS [as was administered in Study 1], as there is evidence that the Five-Factor model identifies a broader spread of personality and may encompass, at least at a self-report level, those factors in the BIS/BAS (Maltby, Wood, Day, & Pinto, 2012). It is acknowledged here that this step may appear as a weakness; however this decision was based upon the fact that the Big-Five is a more parsimonious measure as opposed to the BIS/BAS and therefore better suited to data collection within a larger general sample. An interest in whether authenticity which is derived from humanistic approaches could predict decision-making strategies, above and beyond the Five-Factor measure of personality, also emerged. This step was taken in light of Jung (1970) and Maslow’s (1970) humanistic accounts of decision making.

Thus, Study 4 employed a questionnaire design within a much larger general sample as opposed to student population (N = 277) and a more even spread of gender than that of the first study (n = 106 males and n = 171 females). This study specifically investigated the role of authenticity within self-reported decision-making strategies whilst controlling for the Five-factor, age and gender.

Although Study 3 failed to find a relationship between authenticity and the IST, findings showed that self-alienation and accepting external influences were related to self-reported maladaptive decision-making strategies. More specifically, accepting external
influences was related to the high dependency decision-making strategy; in addition, self-alienation was related to both high dependency and avoidant decision-making strategies. This smaller study also found that living authentically was related to more healthy rational decision-making strategies. In terms of Study 4, findings are consistent with those in Study 3, in that results revealed a relationship between avoidant and high dependant decision-making styles and self-alienation and accepting external influences; however, correlational analysis in Study 4 did not reveal a relationship between authenticity and the rational decision-making style. Study 4 did however, find significant negative correlations between living authentically and avoidant and highly dependent decision-making styles. The disparity in the correlational results for rational decision making between Study 3 and Study 4 could be due to the difference in sampling methods; the sample for Study 3 was a convenience sample with mean age of $M = 21.60, SD= 5.87$ and obtained from an undergraduate psychology course, whereas the sample for Study 4 was an opportunity sample obtained from a wider general population with a higher mean age and greater variance of $M = 27.94, SD = 9.90$. The difference in samples could reflect a difference in decision making styles or could imply that the psychology student sample displayed demand characteristics to appear more rational in their thinking.

Study 4 further explored the role of authenticity whilst controlling for the Big-Five in predicting decision-making strategies. Findings revealed that accepting external influences was the only unique predictor of high dependency decision-making styles; the Big-Five did not emerge as a predictor. Findings also revealed that an avoidant decision-making style was predicted by self-alienation and being open to new experiences from the Big-Five personality measure, suggesting that authenticity predicted the variance in avoidance and high dependency decision-making styles above and beyond the Big-Five measures of personality.

In summary, Study 4 replicates and extends the relationships between authenticity and decision-making styles found in Study 3 and addresses gender and sample bias. Findings suggest that self-alienation and accepting external influences predicts avoidant and high dependency decision-making strategies above and beyond the Big-Five measure of personality.
Future work would entail conducting a longitudinal study to explore the effect of increasing feelings of authenticity within a clinical sample that employs an avoidant or a decision-making strategy which is underlined by a diminished sense of control.

To summarise what is now known about authenticity and goal-directed behaviour and cognitions: Study 1 demonstrated that authenticity is a unique measure of personality. Study 1 also revealed that authenticity is related to inhibitory and reward seeking goal-directed behaviours. Study 2 demonstrated that there are no executive functioning differences between the three facets of authenticity as measured by the task-switch paradigm. However, Study 2 did reveal that self-alienated individuals took longer to make decisions than those who lived authentically. This difference in time taken to make a decision was worth exploring in Studies 3 and 4.

Study 3 found no relationships between the three facets of authenticity and the reflective impulsive decision-making strategy. However, findings showed that self-alienation and accepting external influences were related to avoidant and dependant decision-making strategies. Perhaps suggesting that the time delay in making a decision in Study 2 could be due to self-alienated individuals either taking longer to reconfigure their mental resources or that they were indecisive which led to greater latency times. This finding could suggest that self-alienated individuals engaged in the task switching with a diminished sense of control and experienced little confidence in their own problem solving abilities resulting in a more hesitant strategy. The aim of Study 4 was to extend the findings in Study 3 and also to address gender and sample biases. Study 4 reveals that authenticity is a better predictor to human decision making than the Big-Five measure of personality.

Moving forward, the next Study in Chapter 6 explores the link between Horney’s (1951, 1977) account of human growth and neurosis to the tripartite model of authenticity by examining aggressive responses within the Point Subtraction Aggressive Paradigm (PSAP, Carré & McCormick, 2008; Cherek, 1981). This fifth study provides the first empirical test of whether the tripartite model of authenticity can predict objective behaviour.
Preface to Chapter 6

The previous two Studies looked at authenticity and decision-making strategies and found that inauthentic measures of self-alienation and accepting external influences were related to maladaptive goal-directed strategies. Chapter 6 presents Study 5 which addresses authenticity within an applied university setting using an experimental methodology. This Chapter is entitled A behavioural test of Horney’s linkage between authenticity and aggression: People living authentically are less likely to respond aggressively in unfair situations.

Horney’s theoretical account of human growth and neurosis encompasses the significance of authenticity in well-being and psychopathology. Horney suggests that authenticity is achieved by evaluating one’s self against others, and argues that humans have a natural drive towards growth leading to full potentiality. This growth process involves being truthful to one’s self, being active and productive, and relating to others with mutuality, also known as being authentic. Horney argues that healthy personality development only arises if an individual can accept his or her own short-comings, feelings, emotions, and thoughts. If this acceptance does not occur the individual will then begin to create an idealised self. To maintain this faultless self the individual will then begin to develop compulsions to meet this idealised self, such as a neurotic need to be successful, independent and to always experience fair treatment. Circumstances can create basic anxieties which lead to implementing various coping mechanisms. These can be in the form of moving toward, against or away from the idealised image of ourselves, leading to feelings of self-alienation. These feelings can be manifest as destructive forces of self-hate or contempt. Horney claims that it is one’s moral privilege to outgrow these destructive forces, however the neurotic individual is compulsive and spontaneous, unappeasable and indiscriminating; the neurotic individual disregards the self which leads to elevated reactions of anxiety, rage, frustration, inertia, and misery. This self-alienated individual also develops an unrealistic, egocentric sense of entitlements which are, vindictive, egocentric, and expected without any due effort. Internally this inauthentic
individual is ‘tyrannised by shrouds’, which then lead to efforts to quickly mask feelings of anxiety rather than to learn from them. This neurotic pride stems from not measuring up to the idealised images created leading to anxiety, fear, rage and subsequent humiliation; driving a need to save face. This inner conflict derives from a struggle between healthy or neurotic, and constructive or destructive forces. These negative feelings then call for self-preserving behaviour, often seen as manifestations of angry, aggressive attitudes and behaviours towards others. Horney suggests that individuals low in authenticity are sensitive to threats or “cannot afford to consider even remotely anything that might engender a doubt in his rightness” (Horney, 1951, p.208). Threats or perceived unfairness are interpreted as hostile attacks and individuals low in authenticity respond to these challenges with counter-attacks. Therefore, aggression toward others is understood as self-serving punitive behaviour which manifests within individuals who suffer from low levels of authenticity.

This theoretical account of human growth and neurosis (Horney, 1951, 1977) has not been tested empirically within the tripartite model of authenticity (Wood et al, 2008); therefore, Chapter 6 will address Horney’s propositions of growth and neurosis by exploring anger and aggression within a more applied setting. Since Horney proposes that circumstances can create basic anxieties within the inauthentic individual, leading to coping mechanisms of aggression towards others, Study 5 explores the link between Horney’s (1951, 1977) account of human growth and neurosis to the tripartite model of authenticity by examining aggressive responses on the Point Subtraction Aggressive Paradigm (PSAP, Carré & McCormick, 2009; Cherek, 1981) whilst controlling for trait anger, agreeableness, and coping mechanisms.
Chapter 6

A Behavioural Test of Horney’s Linkage Between Authenticity and Aggression: People Living Authentically are less Likely to Respond Aggressively in Unfair Situations

Overview to Chapter 6

This study links Horney’s account of human growth and neurosis to authenticity by examining aggressive responses on the Point Subtraction Aggressive Paradigm, providing the first empirical test of whether authenticity can predict objective behaviour. Data from undergraduate, postgraduate, and mature students demonstrates that when controlling for age, gender, trait-anger, agreeableness, and functional dimensions of coping, individuals who measure high on authentic-living respond less aggressively to attacks and counter-attacks in unfair situations. Authentic-living uniquely accounted for 14.2% of variance in aggressive responses ($\beta = -.37$). The findings suggest that lower levels of authentic-living is a strong predictor of aggressive behaviour and therefore increasing levels of authenticity in counselling practice may reduce maladaptive levels of anger. Findings also have important implications for authenticity and the extent to which an individual can regulate their emotions may unearth the cause and effects of aggression within individuals who suffer from low levels of authenticity.
6 Introduction

Authenticity is a key focus of counselling perspectives (Lopez & Rice, 2006), including clinical (Ehlers, et al., 2000; Joseph & Linley, 2005), humanistic/psychodynamic (Horney, 1951; Rogers, 1959), and existential approaches (Yalom, 1980). Recently, Wood, et al. (2008) developed the Authenticity Scale to operationalise a three factor conceptualisation of authenticity to encompass varying definitions accepted by several perspectives of authenticity. The first factor, self-alienation, describes lacking a sense of identity through the subjective feeling of not knowing oneself. The second factor, accepting external influences, involves the beliefs that one must conform to the expectations of others. The final factor, authentic-living, involves behaving in ways that are consistent with one’s own values and beliefs. Higher levels of authentic-living reflect authentic feelings and behaviours; in contrast, higher levels of self-alienation and accepting external influences reflect inauthentic feelings. Although authentic-living theoretically reflects behaviours that are congruent with the individual’s own values and beliefs in the real world, very few studies have shown that authentic-living relates to objective behavioural outcomes. One area in which authentic-living may be particularly important regards the prediction of aggressive behaviour.

Horney’s (1951, 1977) theoretical accounts suggest that authenticity is achieved by evaluating one’s self against others. Horney argues that healthy personality development occurs if individuals can accept their own short-comings, feelings, and thoughts, failing which they create idealised selves and develop compulsions to meet these idealised selves, such as neurotic needs to be successful, independent and to always experience fair treatment. These ideal images lead to alienation from the self and sufferings of self-hate or contempt. These negative feelings call for self-preserving behaviour, often seen as manifestations of angry, aggressive attitudes and behaviours towards others. Horney suggests that individuals low in authenticity are sensitive to threats or “cannot afford to consider even remotely anything that might engender a doubt in his rightness” (Horney, 1951, p.208). Threats or perceived unfairness are interpreted as
hostile attacks and individuals low in authenticity respond to these challenges with counter-attacks. Therefore, aggression towards others is understood as self-serving punitive behaviour which manifests within individuals who suffer from low levels of authenticity. Consistently, previous research suggests that inauthentic individuals self-reported subordinating their needs within romantic relationships to avoid aggression (Neff & Harter, 2002a). Authenticity in close relationships is also correlated with beliefs about the acceptability of deception (Lopez & Rice, 2006). However, no previous research has tested whether authenticity is related to actual aggressive behaviour as predicted by Horney’s perspective. This study presents the first investigation to test the relationship between authenticity and a behavioural measure of aggression.

This study also considers anger, defined as a basic emotion experienced by most people with the propensity to experience anger differings between individuals (Deffenbacher et al., 1996). The interpersonal nature of anger is composed of negative attitudes towards another individual, often leading to blame and aggression (Anderson & Bushman, 2002; Smith & Lazarus, 1993). Typically, an individual’s anger arises as a result of perceiving some inflicted harm or injustice by a wrongdoer (Averill, 1983; Miller, 2001). To measure aggression within authenticity this study employed an experimental measure of aggressive responses known as the Point Subtraction Aggression Paradigm (PSAP, Cherek, 1981). The PSAP is a laboratory task which provides objective measures of aggressive behaviour whilst striving for monetary rewards. Aggression is indicated when participants steal points from opponents. This behaviour is considered aggressive as there is no financial gain in stealing. In fact participants lost the opportunity to earn money each time they stole. Participants played for real money provided by the experimenters which they could keep and aggressive and reward responses were measured by pressing specific response keys. The PSAP was developed as a measure of aggressive responding in unfair situations and is consistent with self-report measures of aggression (Golomb, Cortez-Perez, Jaworski, Mednick, & Dimsdale, 2007) and can discriminate between
perpetrators of violent crimes and those convicted of non-violent offences (Cherek, Schnapp, Moeller & Dougherty, 1996; Cherek, Moeller Schanpp & Dougherty, 1997).

The role of personality and its antecedents to well-being has been well established (Costa & McCrae, 1980; Eysenck & Eysenck, 1985). Findings suggest that neuroticism is associated with poorer mental health such as; negative affect (Hull, Tedlie, & Lehn, 1995; Levitan, Bagby & Rector, 1998), anxiety (Cox, Borger, Taylor, Fuentes, & Ross, 1999; Maltby, Lewis, & Hill, 1998), a dispositional cause for depression (Saklofske, Kelly, & Janzen, 1995), and severity of depression (Peterson, Bottonario, Alpert, Fava, & Nierenberg, 2001). Given that evidence suggests that well-being is significantly related to neuroticism and anxiety, an exploration of authenticity, anxiety, and negative outcomes such as aggression might provide a useful context for understanding the relationship between authenticity and adaptive goal-directed behaviours.

To test Horney’s model of human growth and neurosis, which suggests that the neurotic’s self-enhancing aggressive behaviours are directed to those who threaten the individual’s sense of rightness often resulting in disproportionate reactions of frustration and aggression, a behavioural paradigm will be employed. To consider Horney’s claims that individuals outgrow these destructive forces this study will include covariates of age and gender to test whether age or sex has a dynamic relationship with authenticity and maladapted goal-directed behaviour. Self-report measures of trait-anger and agreeableness are also included. Agreeableness is related to aggression (Sharpe & Desai, 2001) since agreeable individuals avoid aggression and interpersonal conflict (Graziano & Tobin, 2002). This study also includes measures of coping (Ferguson & Cox, 1997) since defensive aggression also represents coping behaviour (Ursin & Olff, 1995) and will explore Horney’s propositions that basic anxieties lead to implementing various coping mechanisms. To summarise; the model that is proposed in this study considers Horney’s (1951, 1977) accounts of aggression and authenticity whereby inauthentic individuals engage in more aggressive behaviour. Since Wood et al. (2008) state that the facet authentic-living from the tripartite model of authenticity predicts purposeful
behaviour it is expected that aggressive-responses on the PSAP will be predicted by low levels of authentic-living when a sense of unfairness is induced within the paradigm.

6.1 Method

6.1.1 Participants

Sixty-two undergraduate, postgraduate, and mature students (15 male and 47 female) from the University of Leicester took part in this study. Participants’ ages ranged from 18-60 years (Median = 20 years, SD = 9.87). Of the sample 71% were white, 22.5% Asian, 3.2% black, and 3.2% responded as other. This study employed a student sample, as in addition to being a convenience sample, they were expected to show a full range of responses on the aggressive behaviour continuum (instead of a range-restricted clinical sample). Also dealing with people with aggressive issues constitutes a common focus of university counselling practices.

6.1.2 Measures and Procedures

Aggressive behaviour was measured via the PSAP used by Carré and McCormick (2008) to measure aggressive responses. Participants were instructed to play against an “opponent” in the adjoining lab. In actuality they were administered with a computerised version of the PSAP using an E-Prime programme. Participants were told that the object of the game was to earn as many points as possible by applying a strategy that enabled them to select from 3 response-options. Each point earned would be exchanged for £0.05. The response-options were as follows; pressing option-1 one-hundred consecutive times would increase the counter by 1 point. Participants were also told that the point-counter could decrease by 1 point, this indicated that their ‘opponent’ had stolen a point from them which their opponent could keep. Pressing option-2 ten-consecutive times allowed the participant to steal points from their ‘opponent’, however although they had stolen a point, unlike their opponent they could not keep these points. This condition invoked feelings of unfairness within the individual. Finally,
pressing option-3 ten-consecutive times would protect the points earned by the participant from ‘steals’ for a variable amount of time. The PSAP was programmed to provoke by “stealing” points from participants every 6-60 seconds in the absence of any option-2 or option-3 responses. These parameters were designed by Carré and McCormick to provide a provocation-free interval (PFI) if participants responded with ten-button presses on option-2 (aggressive response) or option-3 (protective-response). Participants were informed that hitting option-3 ten-consecutive times would initiate a PFI, but not told hitting option-2 (aggressive response) would also invoke a PFI. When a PFI was invoked, the programme did not steal or provoke participants for a variable amount of time ranging from 60-120 seconds, after which the programme continued to subtract points every 6-60 seconds. The PSAP allowed us to look at rewards earned (option-1), aggressive responses (option-2), and protective responses (option-3). Option-2 was considered aggressive counter-attack behaviour as participants did not increase their monetary prize, but in fact lost the opportunity to increase points earned each time option-2 was selected. Participants played for real money provided by the experimenters which they were allowed to keep.

Authenticity was measured via the 12-item authenticity scale (Wood et al., 2008) to measure the three facets of authenticity. The three subscales consist of: self-alienation (4 items, e.g. “I don’t know how I feel inside”), accepting external influences (4 items, e.g. “I usually do what other people tell me to do”), and authentic-living (4 items, e.g. “I always stand by what I believe in”). Items were rated on 1 (does not describe me at all) to 7 (describes me very well) scale. The scale has 2 and 4 week test-retest reliabilities ranging from \( r = .78 \) to .91 and a strong factor structure that is invariant across sample, gender, ethnicity, and age.

Agreeableness was measured via the International Personality Item Pool (IPIP, Goldberg, et al. 2006). This 10-item scale measures individual differences within concern for social harmony. Positive-items reflect getting along with others, empathy, consideration, friendliness, generosity, and helpfulness. Conversely negative-items reflect low empathy and
concern for others, and a tendency of self-interest above getting along with others. All items are measured on a 1 (very-inaccurate) to 5 (very-accurate) scales.

Anger was measured by the 10-item facet of the IPIP NEO-PI R version (Goldberg, et al. 2006) which measures individual differences in anger. Positive-items reflect the propensity to get angry in comparison low levels of trait-anger reflect the propensity to keep calm. All items are measured on a 1 (very-inaccurate) to 5 (very-accurate) scale.

Coping was measured via Functional Dimensions of Coping scale (FDC; Ferguson & Cox, 1997). The FDC is a 16-item scale to measure 4 dimensions of coping: approach, avoidance, reappraisal, and emotional regulation. Items were measured on a 0 (not at all) to 6 (very much so) scale.

After taking part in the study each participant was debriefed individually by the researcher who is a trained trauma support worker. (See Appendix B for full details of debriefing). During this time participants were asked about their feelings and whether they had any concerns about the level of anger that they may have experienced. After debriefing the majority of individuals found the whole experience amusing and admitted that they were convinced of the presence of a true opponent. Furthermore during the debriefing stage participants had an opportunity to ask questions pertaining to the research and its methodology. The participants were than thanked for their time and rewarded with their earnings.

6.2 Results

Analyses reported here are conservatively based on the 56 participants who provided aggressive responses which showed a sufficiently normal distribution to meet the assumptions of the statistical tests. The other six individuals introduced skew and are arguably a qualitatively different group of “never-aggressors” rather than upon the same continuum of aggressive responses as other participants. To ensure that this issue did not affect the results the author also repeated all analyses including the six participants (n = 62). This analysis provided completely
consistent results making only trivial differences to significance (with significant results remaining so at $p < .05$ and non-significant results remaining at $p > .05$). The results of these analyses are available from the corresponding author and in no way account for the results.

Descriptive statistics for behavioural responses on the PSAP and self-report measures of authenticity, agreeableness, trait-anger, and coping are presented in Table 5. All scales demonstrate satisfactory scale reliability. Six participants never made any aggressive responses in comparison the remaining 56 provided between 10 and 2163 aggressive responses. The six participants had non-statistically significantly lower scores on authentic-living in the direction expected by the predictions.
Table 6.0

Descriptives for Behavioural Responses on the PSAP, Authenticity, Trait-anger, Agreeableness, and Functional Dimensions of Coping.

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**Self-report measures**

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<td>Functional Dimensions of Coping</td>
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<td>Approach</td>
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<td>Emotional regulation</td>
<td>.82</td>
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<td>Reappraisal</td>
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</table>

Note. PSAP = Point-subtraction aggression paradigm. Scores on authentic-living, self-alienation and external influences from the Authenticity Scale can range from 4-28; scores for Trait Anger can range from 10-50; Agreeableness from 10-50. Subscales from the Functional Dimensions of Coping can range from 0-24.

Table 5.0 demonstrates that the reward response to earn points ranged from 3456 to 8023 button presses. This table also shows that aggressive responses ranged from 10 to 2163 and protective responses ranged from 50 to 1420 button presses. All subscales from the Authenticity Scale and the Functional Dimensions of Coping Scales and agreeableness facet from the IPIP showed good internal consistency with the exception of trait anger, which showed an acceptable alpha level according to Kline (1999). Generally, this sample measured high
levels of authentic-living and moderate levels of agreeableness. This sample also self-reported reasonable coping styles and did not demonstrate high levels of external influences, self-alienation, or trait anger. These characteristic are indicative of a non-clinical, healthy student sample.

Table 5.1 demonstrates that individuals who spent more time hitting the point reward response (option 1) gained more points, showed less aggressive responses (option 2), protected their points less often (option 3), and were provoked more frequently. The amount of provocations received was not significantly correlated to aggressive responses and were negatively correlated to protective responses. Therefore the more times that individuals protected their points the less often they were provoked.

Table 5.1 also shows correlations between subscales of authenticity (authentic-living, self-alienation, and accepting external influences), agreeableness, trait-anger and subscales of Functional Dimensions of Coping (approach, avoidance, reappraisal and emotional regulation). Results indicate that authentic-living is negatively correlated with aggressive responses on the PSAP. Self-alienation is negatively correlated with agreeableness, and positively correlated with trait-anger. Trait-anger is negatively correlated with agreeableness. Finally, the coping dimension of approach is negatively correlated with avoidance and positively correlated with emotional regulation and reappraisal.

A stepwise multiple regression was conducted to explore to what extent aggressive responses were predicted by authenticity. To control for anger; trait-anger and agreeableness together with age and gender were entered into step 1. To control for coping FDC measures were entered into step 2. Authenticity subscales were entered into the final step. The results indicate that aggressive responses were predicted by authentic-living alone accounting for 14.2% of the variance in aggressive responses $F (3, 51) = 2.818, \ Adj.R^2 = .092, \beta = -.37, p = .048.$ (See Table 5.2).
Table 5.1

*Bivariate Correlations between Authenticity and Behavioural Responses of the PSAP, and Self-report Measures of Agreeableness, Trait-anger, and FDC.*

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<th>Measures</th>
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<td>Authenticity</td>
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<td>1. Authentic-living</td>
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<td>-.19</td>
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<td>2. Self-alienation</td>
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<td>5. Trait-anger</td>
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<td>7. Avoidance</td>
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<td>8. Emotional regulation</td>
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<td>9. Reappraisal</td>
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<td>10. Reward</td>
<td>-</td>
<td>-.78*</td>
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<td>11. Aggressive</td>
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<td></td>
<td>-.06</td>
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<td>-.31*</td>
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<td>13. Protection</td>
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</table>

Note. PSAP = Point-subtraction aggression paradigm.

*p < .05, **p < .001
Table 5.2

*Stepwise Multiple Regression Predicting Aggressive-Responses on the PSAP.*

<table>
<thead>
<tr>
<th>Step 1. Age, gender and anger.</th>
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<tbody>
<tr>
<td>Age</td>
<td>-.00</td>
<td>-.03</td>
<td>.98</td>
</tr>
<tr>
<td>Gender</td>
<td>.05</td>
<td>.37</td>
<td>.72</td>
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<tr>
<td>Trait-anger</td>
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<td>-.15</td>
<td>.88</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-.01</td>
<td>-.10</td>
<td>.92</td>
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</table>

<table>
<thead>
<tr>
<th>Step 2. Coping</th>
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<tbody>
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<td>Approach</td>
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<td>-.17</td>
<td>.87</td>
</tr>
<tr>
<td>Avoidance</td>
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<td>.30</td>
<td>.77</td>
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<tr>
<td>Emotional regulation</td>
<td>.04</td>
<td>.32</td>
<td>.75</td>
</tr>
<tr>
<td>Reappraisal</td>
<td>.10</td>
<td>.79</td>
<td>.44</td>
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<table>
<thead>
<tr>
<th>Step 3. Authenticity.</th>
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</thead>
<tbody>
<tr>
<td>Authentic-living</td>
<td>-183.41</td>
<td>-.37</td>
<td>-2.77</td>
</tr>
<tr>
<td>Self-alienation</td>
<td>29.77</td>
<td>.06</td>
<td>.44</td>
</tr>
<tr>
<td>Accepting external influences</td>
<td>-93.86</td>
<td>-.20</td>
<td>-1.38</td>
</tr>
</tbody>
</table>

* p < .05

6.3 Discussion

The aim of this study is to present behavioural evidence to explore the relationship between aggression and authenticity within Horney’s (1951, 1977) accounts of neuroticism and aggression. The findings present evidence to demonstrate that low levels of authentic-living predict aggressive responses measured by the PSAP. Findings are consistent with Horney’s perspectives which
suggest inauthentic individuals engage in self-serving punitive behaviours towards others. These self-enhancing, aggressive behaviours are directed to those who threaten the individual’s sense of rightness. This study introduces a feeling of unfairness by informing participants that their “opponent” could steal hard earned points accrued by them and therefore gain monetary rewards. In contrast participants could not keep the points they stole from their opponent. The relationship between aggressive behaviour and authenticity is clearly demonstrated by the regression analysis which shows when controlling for age, gender, trait-anger, agreeableness, and functional dimensions of coping, authentic-living is a significant predictor to aggressive behaviour. Within this student sample 87.09% of participants engaged in aggressive responses when taking part in the PSAP. Previous research found that psychological distress within this population group is regularly treated by university counselling services (Rickinson, 1997). Several counselling psychology therapies, including humanistic/psychodynamic (e.g. Horney, 1951, 1977; Rogers, 1959) have increasing levels of authenticity as the key therapeutic outcome, seeing the relieving of psychopathology as arising from this growth process. Such therapies have strong empirical support on such dimensions as depression (Ward et al., 2000). The current research suggests that such approaches may also be helpful for the reduction of maladaptive levels of anger.

This study also presents evidence to suggest that authentic-living, a component of the tripartite model of authenticity is a good predictor of objective behaviour, and thus propose the use of authentic-living to predict behavioural outcomes. The limitations to this study are acknowledged in that the inference of the findings should be accepted with caution due to a relatively small, homogenous sample used. However the results suggest a statistically significant association between authentic-living and aggressive responses. Future examination of this relationship between authenticity and maladapted levels of aggression within a relevant clinical sample is needed.

To summarise, this study provides empirical evidence that is consistent with Horney’s (1951, 1977) propositions that self-alienated individuals who suffer from low levels of authenticity develop vindictive self-serving behaviours towards others when their sense of fairness has been
challenged. These vindictive behaviours are seen in the form of counter-attacks. Spending more time engaging in counter-attacks in the PSAP resulted in fewer points being accrued, which in turn ensured a lower financial gain, a failing strategy in goal attainment.

Relating to the overall theme of this thesis, evidence proposes that lower levels of authentic-living are related to maladaptive goal-directed behaviours. To extend this finding and to explore adaptive goal-directed behaviours, future research is needed to investigate the role of authenticity and emotional regulation in controlling anger and aggression. It is known that emotional regulation is critical for well-being (Gross, 1998); based on this premise it is necessary to explore whether emotional regulation can lead to greater feelings of authenticity and well-being.
Preface to Chapter 7

The findings from Study 5 revealed the dynamics between authenticity and aggression, in that lower levels of authentic-living predicted aggressive responses when participants were provoked. These findings led to an interest in investigating authenticity within a more applied counselling setting. Study 6 explores post trauma adaptive and maladaptive goal-directed behaviours. This study investigates the tripartite model of authenticity and its role in predicting both positive and negative changes in the aftermath of domestic abuse. Participants were survivors of domestic abuse and were recruited through one local and two national voluntary support organisations that support victims of domestic abuse.
Chapter 7

Overview of Chapter 7

Study 6 explores the relationship between authenticity and posttraumatic growth in the aftermath of domestic abuse. Data from 116 survivors of domestic abuse (79 females and 37 males) were assessed. This study controlled for several known predictors of posttraumatic growth, including severity of abuse, time since leaving the abusive relationship, past and current rumination, intrusion, and avoidance. Results reveal that domestic abuse survivors who report higher levels of authenticity experience more positive changes after leaving the abusive relationship. Authentic-living, a facet of the tripartite model of authenticity along with rumination soon after the event, accounted for 28% in prediction of positive changes in the aftermath of domestic abuse ($r = .53$). Findings also suggest that gender and intrusive memories account for 25% of the variance in negative changes in the aftermath of an abusive relationship ($r = .50$). On deeper inspection results suggest that vicarious re-traumatisation from supporting victims of domestic abuse may impede posttraumatic growth. In summary, findings overall reveal the potential importance of increasing levels of authentic-living within therapeutic settings to aid recovery within individuals following traumatic events.
7 Introduction

The pursuit of goals which are personally meaningful to the individual play a major role in psychological well-being and life adjustments (Brunstein, et al., 1999) and generally studies have reported a beneficial relationship between motivation to rebuild one’s life after a traumatic event and psychological well-being (Forstmeier & Maercker, 2008; McAuley et al., 2007). In the context of trauma, victims who have undergone adversities and respond with behaviours that reflect learned helplessness, suffer with an inability to engage in goal-oriented behaviours such as goal setting and goal implementation (Maier & Seligman, 1976) and are thus more likely to suffer from posttrauma events.

Authenticity has also traditionally been important to well-being (Bettencourt & Sheldon, 2001; Harter, Marold, Whitesell, & Cobbs, 1996; Horney, 1951; Rogers, 1959; Wood et al., 2008; Yalom, 1980) but has traditionally been neglected by empirical research (Sheldon, 2004; Wood et al., 2008). The recent conceptualisation of the tripartite model of authenticity [consisting of authentic-living, self-alienation, and accepting external influences] has stimulated empirical exploration into goal-directed behaviours of authenticity. This newly developed measure of authenticity allows the empirical testing of much of the rich theoretical work that has emerged from humanistic and person-centred psychology. Humanistic literature has emphasised authenticity as the catalyst of positive growth, positive experiences, uniqueness, and truthfulness to oneself, which in turn promote the development of the true self (Rogers, 1965; Sheldon, Arndt, & Houser-Marko, 2003; Wood & Joseph, 2007). The existing literature suggests that it is not uncommon for survivors of traumatic events to experience growth in the form of positive psychological changes (Linley & Joseph, 2004; Tedeschi & Calhoun 2004).

Following traumatogenic events individuals commonly experience extreme distress, which in its greatest severity manifests as posttraumatic stress disorder (American Psychiatric Association, 1994). However, in addition to the intense distress that people experience, people also often report
some benefits arising from overcoming the experience (Linley & Joseph, 2004). Alleviation of distress can be facilitated by recognising the terrible consequences of trauma whilst finding some good in surviving the event (Davis, Nolen-Hoeksema, & Larson, 1998; Frazier, Conlon, & Glaser, 2001). For example, qualitative work has suggested that people commonly report positive changes, such as, attempting to live life to the full, not taking life for granted, and being more determined to succeed (Joseph, Williams, & Yule, 1993). Taylor (1983) characterises these changes as involving "an attempt to regain mastery over the event in particular and over one's life more generally" (p. 1161). Theoretically, authenticity has been linked to both positive and negative changes in the aftermath of trauma (Ehlers, Maercker, & Boos, 2000; Joseph, 2004; Joseph & Linley, 2005). The distress element of traumatic reactions has been linked to a shattering of the self and assumptions about the world, which is typified by self-alienation (Janoff-Bulman, 1992). In contrast, positive changes seem to be more related to new ways of engaging with the world such as undertaking self-directed behaviours which are typified by more authentic-living. Taking into account the fundamental role of authenticity within humanistic approaches, specifically personal growth and shattering of the self, its place within goal-directed posttraumatic reactions will now be considered within this chapter by exploring both negative and positive changes within survivors of domestic abuse.

The dynamic systems theory (Thelen & Smith, 1995) presents a cognitive framework to explore post traumatic events and suggests that being in touch with one's authentic self is a crucial factor in coping with traumatic disturbances. Vallacher and Nowak (1999) believe that the self is the principal structure in the cognitive system and that it is important to understand cognitive and affective elements when exploring self-understanding. The authors argue that a person who attempts to maintain a rigid persona or sacrifice his or her authenticity, loses the potential for personal and positive growth. The authors believe that an individual is able to maintain order in their own environment by making sense of the trauma experienced. This perspective suggests that individual differences exist in the way which individuals process and utilise emotional information
and is consistent with Rogers (1961) in that the more an individual is able to recognise the underlying condition or the true self, the better the ability to expand and grow through recognition of needs. Dynamical systems literature, although largely theoretical, may explain why some people are able to cope with traumatic events and rebuild their lives, yet others experience posttraumatic stress. This study will explore the dynamical systems theory (Thelen & Smith, 1994), conceptualised as a cognitive framework to explore post traumatic events by investigating positive changes in the aftermath of domestic abuse.

Domestic abuse is a profound social problem in the UK. Approximately 45% of women and 26% of men report at least one incident of interpersonal violence in their lifetime (Walby & Allen, 2004). Domestic abuse also known as spousal abuse, domestic violence, family violence, intimate partner violence (IPV), and battering involves the abuse by one person against another within an intimate setting such as, cohabitation, dating, marriage or within a family setting. Domestic abuse includes physical aggression or assault such as, battery, biting, kicking, hitting, throwing objects, restraining, shoving, and slapping. This definition also includes behaviours or threats of, control or domination, emotional abuse, economic deprivation, intimidation, neglect, sexual abuse, and stalking (Siemieniuk, Krentz, Gish, & Gill, 2010).

The cost of treating both physical and mental health of those experiencing abuse is estimated to run into hundreds of millions of pounds (Walby, 2004). Whilst women comprise 89% of all victims who had experienced four or more incidents of domestic violence, men are also adversely affected, although less likely to report feeling fearful in their own homes, less likely to experience serious injuries, and also less likely to have experience of repeat incidences of domestic abuse (Gadd, et al., 2002)). This gender difference in traumatic experiences is interesting and will be addressed within this body of work. Research on domestic violence has understandably sought to address negative consequences such as lowered self-esteem, increased anxiety, eating disorders, sexual dysfunctions, severe depression, and posttraumatic stress disorder (Clements & Sawhney 2000). Yet despite adverse effects, previous findings reveal correlates of posttraumatic growth in
survivors of domestic violence. These growth variables include personal strengths, such as improved ability in relating to others, helping and reaching out to others, improved perception of new possibilities, and appreciation of life through trying to make sense of the traumatic event(s) (Calhoun, Cann, Tedeschi, & McMillan, 2000; Cobb, Tedeschi, Calhoun, & Cann, 2006). In light of growth variables such as personal strengths which include the ability to reach out and relate to others, and the appreciation of making sense of the trauma, this study will focus upon survivors of domestic abuse who are now employed as domestic abuse support workers and who are no longer living in an abusive setting.

One coping mechanism when a person’s assumptive world is threatened is automatic rumination. Automatic rumination that occurs soon after the traumatic event leads to more deliberate evaluation and reappraisal of the trauma. This deliberate rumination is focused upon the impact and meaning of life. The higher the threat to life the more deliberate the rumination, leading to more positive growth (Calhoun & Tedeschi, 2000; 2004; Weiss, 2002). Severity of the event has also been suggested as a predictor of positive changes (McMillan, Smith & Fisher, 2001; Park, Cohen & Murch, 1996). For instance; subjective ‘mild’ trauma will lead to minimal growth, ‘moderate’ to ‘high’ degree of trauma may lead to maximal growth, whilst extreme perception of trauma may lead to poor adaptation and negative changes (Calhoun & Tedeschi, 1998; Carver, 1998). Tang (2007) also found that intrusive thoughts and avoidance behaviour were associated with posttraumatic growth in victims of the 2004 Tsunami disaster. However, other studies such as Anderson’s (2005) found no such association between intrusion, avoidance, and growth in a longitudinal study for newly diagnosed cancer sufferers. This study will, therefore, explore the role of authenticity and intrusive thoughts, rumination, and avoidance behaviours within both positive and negative changes in the aftermath of trauma. Previous findings reveal that the longer the length of time since the trauma the higher the level of growth (Cordova, Cunningham, Carlson, & Andrykowski, 2001), however, other findings show the time frame to be unconnected to posttraumatic growth (Belliui & Blank, 2006). Therefore exploring the relationships between
authenticity, and the length of time since the trauma, and posttraumatic growth may facilitate the understanding of goal-directed behaviours which promote the growth process.

To summarise, Study 6 will explore the role of authenticity and goal-directed behaviours in the aftermath of trauma within domestic violence support workers by investigating the relationships between authenticity and both negative and positive changes in the aftermath of severely abusive relationships. In doing so this study will control for several known predictors of adversarial growth including: severity of the abuse, time since leaving the abusive relationship, past and current rumination, intrusive thoughts, avoidance behaviours, age and gender. Based upon humanistic theories, dynamical systems theory and previous empirical exploration into posttraumatic growth, it is predicted that authentic-living together with rumination soon after the event predicts positive changes. Given the fact that more likely to be victims of domestic abuse, results expect to show that gender and intrusive thoughts predict negative distress in the aftermath of trauma.

7.1 Method

7.1.1 Participants

Participants were domestic abuse support workers recruited through one local and two national organisations. Permission from Heads of Research Departments of these voluntary organisations was obtained to distribute a questionnaire to potential respondents through the internal email systems. The study inclusion criteria stipulated that respondents must have experienced either physical or emotional abuse in a domestic setting within the last five years, but were no longer in the abusive relationship. Domestic abuse was defined as any incident of physical, psychological, emotional, verbal, sexual, financial, or threatening behaviours between adults (regardless of gender or sexuality) who have been in intimate relationships. This definition also covers individuals who are related within a family or domestic setting. Of 141 participants who volunteered to participate in the study, 116 met the eligibility criteria of experiencing domestic
abuse in the last five years but were no longer in the abusive relationship (79 females and 37 males). Participation was totally voluntary without payment or incentive. Age ranged from 20 to 73 yrs (50.6% below 40 yrs), and ethnicity was predominantly white (87%). Asians made up 6.1%, and mixed race individuals made up 2.6%. Education was to the level of Bachelor’s degree (21.6%), higher degree (18.2%), vocational qualification (28%), secondary education (17.2%), or no formal qualifications (9%). Religion was predominantly Christian (38.8%), agnostic or atheist (41.4%), or Sikh (2.6%).

7.1.2 Measures and procedure

Participants completed various self-report measures which they accessed through a link onto the University’s Plone site. This online method of data collection was implemented as it may prove more effective than generic paper and pencil methods especially for sensitive questions (Tourangeau & Smith 1996; Bowling 2005). Participants also reported upon the length of time they had been away from the abusive relationship and selected demographics such as age and gender.

Authenticity was measured via the 12-item Authenticity Scale (Wood et al., 2008). Respondents completed the 12-item scale to measure: self-alienation (4 items, e.g., “I don’t know how I feel inside”), accepting external influences (4 items, e.g., “I usually do what other people tell me to do”), and authentic-living (4 items, e.g., “I always stand by what I believe in”). Items were rated from a 1 (does not describe me at all) to 7 (describes me very well) scale. Internal stabilities’ for the subscales range from $\alpha = .70$ to .86, and test-retest reliabilities range from $r = .78$ to .91 for 2 and 4 week periods, with factor structure invariance across gender and broad ethnic groupings (Wood et al., 2008).

Positive and negative changes arising from the trauma were assessed with the short version of the Changes in Outlook Questionnaire (Joseph et al., 2005). This 10-item scale measures both positive (5 items) and negative changes (5 items) in the aftermath of trauma. Responses ranged from 1 (strongly disagree) to 6 (strongly agree). Negative change items included “I don’t look
forward to the future anymore” and “my life has no meaning anymore”-in contrast, positive items included “I’m a more understanding and tolerant person now” and “I no longer take people or things for granted.” The authors report good internal stabilities; $\alpha = .78$ for positive items and $\alpha = .83$ for negative items, and satisfactory convergent reliabilities ranging from $r = .46$ for positive and $r = .61$ for negative items.

The extent and severity of the abuse was measured with the Index of Spouse Abuse (ISA, Hudson & McIntosh, 1981). This 30-item questionnaire presents examples of physical (e.g., “threatening with a weapon” and “forcing participation in sexual acts”) and psychological (“my partner belittled or shamed me”) abuse. Respondents indicated how frequently they experienced each behaviour in the past abusive relationship on a 1 (never) to 5 (very frequently) scale. Hudson and McIntosh report good internal stabilities’ for the ISA with alpha levels ranging from $\alpha = .90$ to .91, satisfactory discriminant validity from $r = .73$ to .80 and good construct validity ranging from $r = .75$ to .80.

Rumination was measured with the Event Related Rumination Inventory (Calhoun, Cann, Tedeschi, & McMillan, 2000). This 14-item scale measures the degree to which a survivor reported intrusive thoughts, and tries deliberately to: (a) make sense of the event, (b) make something positive come out of the struggle with the event, (c) see benefits in the events, and (d) consider the meaning of life. Separate scores are provided for rumination that occurred directly after the event, and rumination that is still occurring. The authors report internal consistency as measured by Cronbach's alpha as $\alpha = .81$ and .88, respectively for the two (then and now) rumination scales.

The extent of the trauma was assessed with the Impact of Event Scale (Horowitz, Wilner, & Alvarez, 1979). This 15-item self-report scale assesses subjective distress after a traumatic event. Referring to how they reacted after leaving the abusive relationship respondents rated 7 items on how frequently they experienced intrusive thoughts (e.g., “I thought about it when I didn't mean to”), and 8 items of avoidance (e.g., "I tried to remove it from memory"). Responses ranged from 0 (not at all) to 5 (often). Internal stability is reported for the intrusion scale as .78, and .82 for the
avoidance scale. Test-retest reliability of $r = .89$ for the intrusion subscale and $r = .79$ for the avoidance subscale.

After submitting the online survey, respondents were presented with a debriefing page which explained the nature of this study (See Appendix C). Out of the 116 participants who voluntarily took part in the study only 4 individuals contacted the researcher by telephone and a small amount (approx. 5 contacted the researcher by email. They assured the researcher that they did not suffer from any adverse effects of the study. The intention of these respondents was to encourage the research and to reiterate that they too have experience growth in the aftermath of domestic abuse. The researcher took this opportunity to answer all questions that were presented to her, and thanked the respondents for initiating contact.

7.2 Results

Descriptive statistics for self-report measures for the Authenticity Scale, Changes in Outlook Questionnaire, Index of Spouse Abuse, Events Related Rumination Scale, and The Impact of Events Scale can be seen in Table 6.0. All scales show good internal reliability with both subscales on the Event Related Rumination Inventory demonstrating satisfactory alpha scores according to Kline (1999). Generally, this sample measured high levels of authentic-living and high levels on the Index of Abuse scale. This sample also demonstrated higher levels of self-alienation than was measured in Studies 1 to 6 within this thesis. These individuals experienced more negative changes than positive ones, higher levels of intrusive thoughts and lower levels of avoidance from the Impact of Events Scale, high levels of rumination soon after the event and high levels of recent rumination. These characteristics are indicative of a sample that has suffered trauma.
Table 6.0

Scale Reliability and Descriptive Statistics for the Authenticity Scale, Assessment of Abuse Scale, Changes in Outlook Questionnaire, Impact of Events Scale, and Events Related Rumination Scale.

<table>
<thead>
<tr>
<th>Measures</th>
<th>Scale reliability(α)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authenticity Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authentic-living</td>
<td>.726</td>
<td>21.89</td>
<td>3.70</td>
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<tr>
<td>Self-alienation</td>
<td>.898</td>
<td>14.96</td>
<td>7.16</td>
</tr>
<tr>
<td>External influences</td>
<td>.784</td>
<td>13.30</td>
<td>4.23</td>
</tr>
<tr>
<td>Index of Spouse Abuse</td>
<td>.927</td>
<td>87.66</td>
<td>21.89</td>
</tr>
<tr>
<td>Changes in Outlook Questionnaire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive changes</td>
<td>.862</td>
<td>11.46</td>
<td>5.40</td>
</tr>
<tr>
<td>Negative changes</td>
<td>.853</td>
<td>17.50</td>
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</tr>
<tr>
<td>Impact of Events Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrusive</td>
<td>.837</td>
<td>22.80</td>
<td>4.30</td>
</tr>
<tr>
<td>Avoidance</td>
<td>.846</td>
<td>21.71</td>
<td>6.42</td>
</tr>
<tr>
<td>Event Related Rumination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soon after the event</td>
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<td>20.04</td>
<td>4.08</td>
</tr>
<tr>
<td>Recently</td>
<td>.696</td>
<td>18.61</td>
<td>4.20</td>
</tr>
</tbody>
</table>

Note: Scores on authentic-living, self-alienation and external influences can range from 4-28, Index of Spouse Abuse from 30-150, Changes in Outlook from 1-30 for both positive and negative changes, intrusion from 0-35 and avoidance from 0-40 from the Impact of Events scale and finally the score on the Event Related Rumination scale can range from 0-28 for rumination soon after the event and for recent rumination.
In terms of the relationship between authenticity and other measures; authentic-living is positively correlated to positive changes, avoidance of distressing memories, and negatively correlated with negative changes in the aftermath of trauma. On the other hand, self-alienation is positively correlated to negative changes in the aftermath of trauma, and negatively correlated to avoidance of distressing memories (See table 6.1).

Two stepwise multiple regression analyses were conducted to explore to what extent both positive and negative changes were predicted by authenticity in the aftermath of trauma, after controlling for (a) the extent of the abuse, (b) time away from the abusive relationship, (c) rumination at the time of the event, (d) current rumination, (e) current intrusion of the event, (f) current avoidance of the event, (g) age, and (h) gender.

In predicting positive changes the control variables of age, gender, time away from the abusive relationship, and severity of the abuse were entered into the 1st step. Cognitively-oriented variables of current rumination, current intrusion of the event, and current avoidance of the event were entered into the 2nd step. Authenticity domains were entered into the 3rd step. Results indicate that authentic-living and rumination soon after the event account for 28% of the variance in positive changes, $F(6, 109) = 7.012$, $Adj.R^2 = .239$, $r = .528$, $p = .001$. See Table 6.2.

To predict negative changes, the control variables gender, age, time away from the abusive relationship, and severity of the abuse were entered into the 1st step. Cognitively-oriented variables of current rumination, current intrusion of the event, and current avoidance of the event were entered into the 2nd step. Authenticity domains were entered into the 3rd step. Results indicate that both gender and current intrusion of the event
accounted for 25% of the variance in negative changes, $F(6, 115) = 5.919$, $Adj.r^2 = .204$, $r = .496$, $p = .001$. Individual predictors can be seen in Table 6.3.
Table 6.1

Bivariate Correlations of Authenticity, Assessment of Abuse, Positive and Negative Changes, Impact of Abuse, and Rumination.

<table>
<thead>
<tr>
<th>Measures</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>10</th>
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</thead>
<tbody>
<tr>
<td>1. Authentic-living</td>
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<td>-.29*</td>
<td>-.37**</td>
<td>.35**</td>
<td>-.24*</td>
<td>-.16</td>
<td>.21*</td>
<td>.15</td>
<td>.10</td>
<td>-.03</td>
</tr>
<tr>
<td>2. Self-alienation</td>
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<td>.36**</td>
<td>-.09</td>
<td>.30**</td>
<td>.07</td>
<td>.49**</td>
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<td>-.06</td>
<td>-.12</td>
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</tr>
<tr>
<td>3. External influences</td>
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<td>.18*</td>
<td>.12</td>
<td>.30**</td>
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<td>-.17</td>
<td>-.02</td>
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<td></td>
</tr>
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<td>Changes in outlook</td>
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<td>-.51**</td>
<td>-.20*</td>
<td>-.30**</td>
<td>-.23*</td>
<td>.24*</td>
<td>.10</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4. Positive changes</td>
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<td>-.29**</td>
<td>-.08</td>
<td>.05</td>
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<td>5. Negative changes</td>
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<td>-.02</td>
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<td>Impact of event</td>
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<td>.01</td>
<td>-.07</td>
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<td></td>
<td></td>
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<td>6. Intrusion</td>
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<td>.17</td>
<td>.38**</td>
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<td>7. Avoidance</td>
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<td>Event Related Rumination</td>
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<td>8. Now</td>
<td>-</td>
<td>.23*</td>
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<td></td>
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<td>9. Then</td>
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<td>.23*</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Index of Spouse Abuse</td>
<td>-</td>
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<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
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Note, *p < .05, **p < .001
Table 6.2
Stepwise Multiple Regression Predicting Positive Changes in the Aftermath of Trauma Whist Controlling for Gender, Age, Time Away from the Abuse, Severity of the Abuse, Rumination, Intrusion, and Avoidance.

<table>
<thead>
<tr>
<th>Step</th>
<th>b</th>
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<th>t</th>
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<td>-.62</td>
<td>.531</td>
<td></td>
</tr>
<tr>
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<td>.61</td>
<td>.543</td>
<td></td>
</tr>
<tr>
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<td>.558</td>
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<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.05</td>
<td>-.56</td>
<td>.579</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.05</td>
<td>-.62</td>
<td>.531</td>
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</tr>
<tr>
<td>Time away</td>
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<td>.61</td>
<td>.543</td>
<td></td>
</tr>
<tr>
<td>Index of Abuse</td>
<td>.06</td>
<td>.60</td>
<td>.548</td>
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<tr>
<td>Time away</td>
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<td>.543</td>
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</tr>
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<td>Index of Abuse</td>
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<td>.22</td>
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</table>

Note. * p < .05
Table 6.3

*Stepwise Multiple Regression Predicting Negative Changes in the Aftermath of Trauma Whist Controlling for Gender, Age, Time Away from the Abuse, Severity of the Abuse, Rumination, Intrusion, and Avoidance.*

<table>
<thead>
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<th>t</th>
<th>sig</th>
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<td>Age</td>
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<td>.14</td>
<td>1.76</td>
<td>.101</td>
</tr>
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<td></td>
<td>Time away</td>
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<td>.14</td>
<td>1.51</td>
<td>.134</td>
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<td></td>
<td>Index of Abuse</td>
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<td>.574</td>
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<td>.14</td>
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<td></td>
<td>Time away</td>
<td>.13</td>
<td>.14</td>
<td>1.51</td>
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</tr>
<tr>
<td></td>
<td>Index of Abuse</td>
<td>-.05</td>
<td>.57</td>
<td>.574</td>
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</tr>
<tr>
<td></td>
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<td>.768</td>
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<tr>
<td></td>
<td>Rumination then</td>
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<td>1.08</td>
<td>.285</td>
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<td></td>
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<td>-.23</td>
<td>-2.71</td>
<td>.008*</td>
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<tr>
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<td>Avoidance</td>
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<td>.14</td>
<td>.888</td>
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</tr>
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<td>2.89</td>
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<td>Time away</td>
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<td>.14</td>
<td>1.51</td>
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<tr>
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<td>Index of Abuse</td>
<td>-.05</td>
<td>.57</td>
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<td>External influences</td>
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<td>.00</td>
<td>.09</td>
<td>.927</td>
</tr>
</tbody>
</table>

Note. * p < .05
7.3 Discussion

Results demonstrate that authentic-living together with rumination soon after the event predicts positive changes in the aftermath of domestic abuse. However the coefficient for predicting positive changes for authentic-living as seen in Table 6.2 is -.472. This negative relationship suggests that those support workers who live authentically are inhibited in their growth. In other words, survivors of domestic abuse who ruminate to make sense of their world soon after leaving the abusive relationship and who begin to live authentically begin to experience positive changes. However, although turning one’s life around and helping others in similar situations is considered a positive change (Calhoun, et al., 2000; Cobb, et al., 2006), findings here suggest vicarious re-traumatisation. Table 6.0 is reflective of this phenomenon and depict that more negative changes as opposed to positive changes are experienced in this sample. Hence, positive changes may be less prevalent in this sample of domestic abuse support workers as they re-experience abuse vicariously through the experiences of their service users, reliving the pain and anguish that their clients have suffered. Supporting a victim is often an emotionally and physically taxing occupation. Often case workers become so connected to their victims that they feel emotional trauma as thought they had suffered the event(s) themselves, and can often experience negative changes. McCann and Pearlman (1990) coined this phenomena vicarious traumatisation after observing a similar transformation in psychotherapists working with victims of trauma.

As well as proposing that the sample was suffering from vicarious traumatisation the anomaly in the direction of the predictive relationship between authentic-living and positive changes can also be attributed to the manner in which both positive and negative changes were measured. For instance the Changes in Outlook questionnaire devised by (Joseph et al., 2005) comprises five negative and five positive items. Nevertheless the five items which measure negative changes are made up of three items that measure existential changes that are self-
referential such as “I don’t look forward to the future anymore” and two items that measure relational phenomena which are other-referential “I have very little trust in other people now”. Conversely, the positive items only consist of one self-referential item; “I don’t take life for granted anymore”. The scale items are pertinent here, considering that authenticity is about personal growth and therefore self-referential. Self-alienation and external influences on the other hand are other-referential and the Changes in Outlook questionnaire fails to present a balance of self-referential items for the positive changes subscale. Both these postulations are separate considerations of the anomalous finding between authentic-living and positive changes and neither consideration undermines the other. To unravel this atypical finding, a replication of this study is required with a posttraumatic growth scale that is more suitable for measuring self-referential behaviours, and one in which a comparison can be made between those who continue to be exposed to trauma through vicarious living and those who do not.

Results also demonstrate that gender together with experience of current intrusions account for negative changes in the aftermath of abuse. Although self-alienation and accepting external influences did not predict negative changes, correlational analyses revealed that individual victims who suffered higher levels of self-alienation experienced more negative changes in the aftermath of trauma and avoided intrusive thoughts more often.

Findings are consistent with the dynamical systems theory suggested by Vallacher and Nowak (1999), who state that a person who attempts to sacrifice authenticity loses the potential for personal and positive growth. The authors also believe that by making sense out of the trauma experienced, the individual is able to maintain order in their own environment and therefore suffer less negative changes. Findings are also consistent with Joseph and Linley (2005), Joseph et. al. (1993) and Taylor (1983), who explained that positive changes such as attempting to live life to the full, not taking life for granted, and being more determined to succeed, all arise from overcoming a traumatic experience. This positive change results in a self that is more authentic than the self that existed prior to the trauma. Findings are also consistent with Calhoun's et al's. (2000) account of posttraumatic events, who state that survivors of
trauma who deliberately try to make sense of the trauma in order to find the real self after assumptions have been shattered, experience positive changes. Findings here account for the predictive value of deliberate rumination soon after the event. Here survivors of abuse who experience posttraumatic growth do so by attempting to make sense of the trauma soon after the event. They also look for benefits in the events whilst considering the meaning of life soon after the leaving the abusive relationship.

The positive relationship between self-alienation and negative changes in the aftermath of trauma is consistent with Janoff-Bulman’s (1992) widely accepted perspective on posttraumatic distress. Janoff-Bulman views negative changes as occurring from “shattered assumptions” and a fractured and contradictory belief system, manifesting as feelings of self-alienation, this finding is further reiterated by the multiple regression predicting negative changes. Findings show that female experiences of repeat victimisation and engagement with intrusive thoughts regarding the events, account for negative changes in the aftermath of abuse.

Overall the findings suggest an important role for authenticity and adaptive goal-directed behaviours in managing traumatic reactions. Authentic-living, the behavioural component of the tripartite model of authenticity (Chapter 6) is especially important in situations where decisions need to be made in highly personal and important domains of life, and also reflects goal-directed behaviours that lead to growth in the aftermath of trauma. The correlation between self-alienation and negative changes in the aftermath of trauma illustrates the importance of reducing self-alienation and increasing levels of authenticity within therapeutic settings to aid recovery of victims of trauma.

Limitations arise from the use of cross sectional studies, although informative, to better access the development of growth, time 1 and time 2 investigations are needed in the form of longitudinal studies.

To summarise, there is a dynamical relationship between authenticity, positive and negative changes and vicarious re-traumatisation; authenticity predicts adaptive goal-directed behaviours that predict positive changes in the aftermath of trauma. Living authentically reflects
autonomous goal-directed behaviours which may lead to positive growth. However, re-experiencing traumatic events vicariously through trauma victims can stunt or prevent more positive changes from occurring. Findings also show that a persistent and maladaptive, intrusive, rumination style may lead to more negative changes in the aftermath of trauma leading to a more self-alienated victim who suffers from more negative effects of the abuse.
Chapter 8

Discussion and Conclusion
Overview of Chapter 8

This chapter is divided into five sections and will begin by restating the aims of the thesis, which in brief is to investigate various theoretical conceptualisations of the tripartite model of authenticity and consider its role within goal-directed behaviours and cognitions. This chapter will then summarise the findings reported in this thesis within the context of previous literature upon authenticity and goal-directed behaviours and cognitions. Following on, this chapter will then provide an evaluation of the strengths and limitations of the methodologies adopted here. The practical implications of these findings will then be discussed. The utility of drawing together personality and counselling theories to employ both survey and experimental methodologies to examine goals, behaviours and cognitions within the study of the tripartite model of authenticity will also be discussed. The chapter will then introduce future research directions to expand the understanding of authenticity, and as a final reminder list the main findings of this thesis.
8 Recap of Aims.

This thesis set out to investigate theoretical conceptualisations of the tripartite model of authenticity and its role within goal-directed behaviours and cognitions. Previous work has identified authenticity to be a critical characteristic of adaptive functioning and psychological well-being (Horney, 1951; Maslow, 1968; Rogers, 1961; Winnicott, 1965; Wood et al., 2008), but this work has mainly been on a theoretical level and focused heavily upon personality and counselling literature. Previously, gathering empirical evidence that mainly focused upon cognitive processes as an antecedent to authenticity and hence well-being has been difficult to develop; mainly due to the lack of a direct measure of trait authenticity. However, since the development and reconceptualisation of the person centred and humanistic propositions of the tripartite model of authenticity (Wood et al., 2008) a resurgence of interest has occurred. Thus the aim of this thesis is to advance the understanding of the tripartite model of authenticity which has previously been supported by both personality and counselling literature. In doing so, this thesis adopts a framework of goals, behaviours and cognitions within an individual differences approach; to apply a combination of cross sectional survey designs and experimental methodologies which explore a number of behaviours and cognitions within the tripartite model of authenticity.

8.1 Summary of Findings

8.1.1 Chapter 2 - Study 1

Study 1 within Chapter 2 considered to what extent the tripartite model of authenticity (Wood et al., 2008), as derived from person centred and humanistic approaches, is related but distant from extant biological motivational models of personality. This first study which is published in Personality and Individual differences (Pinto, Maltby, & Wood, 2011) explored the positioning of authenticity within Gray’s (1982, 1985) behavioural inhibition/approach systems and Cloninger’s psychobiological model (Cloninger, Svrakic, & Przybeck, 1993). Main
findings revealed that authenticity as a personality trait is related but distinct from Gray's and Cloninger's personality dimensions. Correlational analysis demonstrated that all three facets of authenticity correlated with Cloninger’s et al.’s domains of harm-avoidance, reward-dependence, self-direct, and self-transcendence. Of Gray’s domains, only BIS-anxiety and BIS-fear showed significant correlations with all three facets of authenticity. These findings when generalised identified dynamic processes between the tripartite model of authenticity and inhibitory and approach dimensions of goal-directed behaviour.

Overall, the findings in Study 1 support earlier literature asserting that the tripartite model of authenticity is distinct from extant models of personality (Maltby, Wood, Day, & Pinto, 2011; Wood et al., 2008). The findings also support previous empirical works which reveal that individuals who engaged in inhibitory behaviours reported lower levels of authenticity (Lopez & Rice, 2006; Neff & Harter, 2002a). The directions of the relationship between authenticity and inhibitory and approach behaviours are consistent with existing counselling perspectives, such as Horney’s (1945, 1951), who theorised that higher levels of authenticity reflect lower levels of reward dependence. The findings are also consistent with Maslow (1954) who emphasises authenticity as reflecting physiological and social drives to attain needs, whilst requiring determination and goal direction to maintain those needs. The findings from Study 1 are also consistent with Deci and Ryan (2000) and Sheldon (2002) who found correlations between authenticity and goal-directed behaviour.

In summary, Study 1 within Chapter 2 provides the first empirical evidence of the link between the tripartite model of authenticity and inhibitory and approach dimensions of goal-directed behaviour; also the positioning of the tripartite model of authenticity as a unique measure within extant biological models of personality.

8.1.2 **Chapter 3 - Study2**

Study 2 within Chapter 3 presented a behavioural methodology to investigate cognitive differences within authenticity. This Study employed a computer based task-switching
paradigm adapted from Rodgers and Monsell (1995) to measure the extent to which authenticity predicts the ability to change goal-directed behaviour in response to the environment. Findings revealed that although there was an effect of task-switch, this task-switch cost was not due to differences in authenticity. In other words, cognitive differences as measured by the Task-switch Paradigm were due to the effect of the complexity of the task and not to individual differences in authenticity. Findings indicate that there were no differences in executive functioning as measured by the task-switch cost between the three facets of authenticity.

However correlational analysis did reveal that self-alienation is the only authenticity facet to correlate with reaction time on all three trials, suggesting that self-alienated individuals took longer to make their responses. It must be noted here that although self-alienated individuals took longer to make a response, this significant delay in response time did not lead to enhanced correct responses on the Task-switch Paradigm. Davidson et al. (2006), Rogers and Monsell (1995), and Monsell (2003) all argue that task-switch experiments are a direct measure of failure to control top–down executive processes. These tasks also measure the ability to flexibly shift from one mind-set to another, and are also believed to measure working memory. Based on these findings it is suggested that overall, authenticity does not play a role in this aspect of goal-directed behaviour, but it may play a role in the ability to make a decision.

The findings in Study 2 only partially support existing theoretical literature which proposes that differences in the three facets of authenticity lie in actual cognitive differences (Rogers 1959; 1961; Wood et al., 2008). For instance, although results from Study 2 did not find that authenticity can predict executive functioning, it did reveal that self-alienated individuals took longer to reconfigure their mental resources and therefore delayed their decision making more often than those who lived-authentically. The finding that self-alienated individuals took longer to make responses, compared to authentic individuals may support Rogers’ (1959; 1961) and Wood et al.’s (2008) propositions. However more research is needed to unravel which specific cognitive element is responsible in individual differences within the tripartite model of authenticity as suggested by Rogers (1959, 1961) and Wood et al. (2008).
light of the self-report measures from Studies 3 and 4, taking longer to reconfigure mental resources could be suggestive of self-alienated individuals engaging in the task with a diminished sense of control, and experienced little confidence in their own problem solving abilities, and thus hesitated or avoided making a quick decision.

In summary, Study 2 provides behavioural evidence that overall the tripartite model of authenticity is not linked to working memory, flexibility in mind-set, or executive control processes as measured by the Task-switch Paradigm (Rodgers & Monsell, 1995); however findings may reflect that self-alienated individuals take longer to reconfigure their mental resources and/or have a diminished sense of confidence in their own problem solving abilities which result in a slower, tentative, decision making style.

8.1.3 Chapter 4 - Study 3

Study 3 within Chapter 4 follows on from Chapters 2 and 3 in that it aimed to further explore the dynamics between authenticity and lack of inhibition or impulsive and reward seeking behaviours that were identified in Studies 1 and 2. To recap, Study 3 applied a behavioural methodology to administer the Information Sampling Task (IST, Clark, et al., 2003) to explore authenticity within a decision-making model termed reflection impulsivity (Evenden, 1999; Kagan, 1966). Results show that there was no significant relationship between authenticity and behavioural reflection impulsivity as measured by the IST. However correlations between self-reported decision-making strategies and authenticity revealed a number of relationships. For instance; authentic-living was positively related to rational decision making from the general decision-making scale (Scott & Bruce, 1995). correlational analysis also found that accepting external influences is positively correlated with dependent decision making, in addition self-alienation is positively correlated to both avoidant and dependent-decision making styles. Results propose that the IST may measure only one specific dimension of behaviour; either the value of delayed rewards or the ability to inhibit an impulsive response (Reynolds, et al., 2006) and, therefore, conclude that authenticity does not
play a factor in the ability to inhibit a response as measured by the IST, nor does it play a part in recognising the value of a delayed response. The need to address bias and homogeneity in reference to the findings from the self-report decision making measure is acknowledged and this limitation was addressed in Study 4 within Chapter 5 of this thesis.

Overall, the findings from Study 3 do not support existing literature in that inauthentic individuals reflect less, and engage in more reward seeking decision-making strategies (Maltby, Wood, Day, & Pinto, 2012) as measured by the IST. Findings are also not consistent with Berzonsky (1988) who argues that identity issues are linked to cognitive processing dimensions. Chapter 4 is, however, consistent with previous findings (Crean, et al., 2000; Reynolds, et al., 2004; & White et al., 1994) which also failed to find relationships between self-report and behavioural measures of impulsivity. It is most likely that self-reported decision-making styles differ from those detected with the IST. The IST typically measures only one dimension of behaviour; either the value of delayed rewards or the ability to control an impulsive response (Reynolds, et al., 2006). Therefore findings in Study 3 suggest that the relationship between authenticity and this broad domain of decision making, mainly impulsivity, only exists in self-report form.

In summary, Study 3 presents behavioural evidence that the tripartite model of authenticity (Wood et al., 2008) is not related to impulsive or reflective decision-making strategies as measured by the IST. However, Study 3 does present empirical evidence that the tripartite model of authenticity is related to maladaptive strategies of dependent and avoidant decision making.

8.1.4 Chapter 5 – Study 4

The aim of Study 4 within Chapter 5 was to extend the findings from Study 3 by addressing sample size and gender bias; also to inspect the replication and generalisability from a student sample used in Study 3 to an older overall sample. Study 4 applied a survey methodology to further explore the relationships between authenticity and decision-making
strategies identified in Study 3. Findings reveal that self-alienation and accepting external influences are related to maladaptive decision-making strategies of avoidance. Results also show that people who live by accepting external influences make decisions that are dependent upon the advice of others. Conversely, results also show that authenticity is related to adaptive decision-making styles, in that those who live authentically do so by adopting more independent based decision making and adopt a healthy practice of engaging with choices as opposed to evading decision making. These findings partially replicate the findings in Study 3 as correlational analysis failed to duplicate the positive correlation between authentic-living and rational decision making. These results suggest that the findings from the smaller, younger, student sample in Study 3 did not generalise fully to an older, non-student sample employed in Study 4.

Overall findings partially contradict existing literature. For instance both Erickson (1959) and Berzonsky (1988) suggested that authentic individuals are more intuitive in their decision-making styles; however, no correlation was found between intuition and authentic-living (although the literature suggests that authentic individuals use self-referent information when making decisions (Berzonsky, 1988)). It might be argued that individuals who live authentically make independent decisions not based upon intuition or hunches, but make conscientious decisions that are more conducive to living according to their own values and beliefs.

Findings also reveal that accepting external influences was the only unique predictor to dependent decision-making style over and above the Big-Five facets of personality which failed to emerge as unique predictors. It was also found that when predicting avoidant decision-making styles both openness to new experiences from the Big-Five and self-alienation emerged as unique predictors. Taken together these findings lend support to previous theoretical propositions that the authentic individual is open to new experiences, has the ability to perceive events accurately, has trust in their inner experiences to guide their behaviours, and is adaptive and flexible (Cloninger, 1993; Kernis & Goldman, 2006; Maslow, 1968; Rogers, 1961).
In summary Study 4 presents empirical evidence of a relationship between the tripartite model of authenticity and decision-making strategies.

8.1.5 Chapter 6 – Study 5

Study 5 within Chapter 6 addressed authenticity within an applied university setting by using a behavioural methodology. This study explored the links between Horney’s (1951, 1977) theoretical account of human growth and neurosis to the tripartite model of authenticity by examining aggressive responses on the Point Subtraction Aggressive Paradigm (PSAP, Carré & McCormick, 2009; Cherek, 1981). Study 5 also provides an empirical test of whether the tripartite model of authenticity can predict objective behaviour, and is published in Personality and Individual Differences (Pinto, Maltby, Wood, & Day, 2011). Findings reveal that authentic-living is negatively correlated with aggressive responses on the PSAP. Furthermore, self-alienation is negatively correlated with self-report measures of agreeableness, and positively correlated with trait-anger.

Overall, the findings from Study 5 are consistent with Horney’s theoretical perspectives which suggest inauthentic individuals engage in self-serving punitive behaviours towards others. These self-enhancing, aggressive behaviours are directed to those who threaten the individual’s sense of rightness.

In summary, Study 5 presents experimental evidence to link Horney’s (1951, 1977) theoretical account of human growth and neurosis to the tripartite model of authenticity. The relationship between aggressive behaviour and authenticity is clearly demonstrated here by the regression analysis, which shows when controlling for age, gender, trait-anger, agreeableness and functional dimensions of coping, authentic-living is a significant predictor of aggressive behaviour. These findings suggest that anger is a barrier to developing an authentic personality.
8.1.6 **Chapter 7 - Study 6**

Study 6 within Chapter 7 also addresses authenticity within an applied, but real world setting. This study investigated authenticity and its role in positive changes in the aftermath of domestic violence. Findings reveal that authentic-living is positively correlated to positive changes and avoidance of distressing memories, and negatively correlated with negative changes in the aftermath of trauma. Furthermore, self-alienation is positively correlated to negative changes in the aftermath of trauma, and negatively correlated to avoidance behaviours. Findings also reveal that after controlling for several known predictors of posttraumatic growth, such as severity of abuse, time since leaving the abusive relationship, past or current rumination, intrusive thoughts and avoidance, domestic abuse survivors who report that they engage in living authentically also experience positive changes after leaving the abusive relationship. Findings also suggest that these domestic violence case workers may experience re-traumatisation vicariously through their service users and are thus limited to the degree of positive changes that they experience. More research is needed to compare the growth between those who work with trauma victims and survivors who go on to experience a life distant from trauma. A replication of this study which administers a posttraumatic scale containing more self-referential items is needed to fully capture the changes to the self that occur in the aftermath of trauma.

Overall Study 6 presents evidence that supports existing theoretical literature by Calhoun et al. (2000), Jannoff-Bulman (1992), Joseph and Linley (2005), Joseph et al., (1993) and Taylor (1983). These authors explained that positive changes which arise from overcoming a traumatic experience originate from the development of a self that is more authentic than the self that existed prior to the trauma. Findings are also consistent with humanistic literature that emphasises authenticity as the catalyst of positive growth, positive experiences, uniqueness, and truthfulness to oneself; which in turn promote the development of the true self (Rogers, 1965; Sheldon, Arndt, & Houser-Marko, 2003; Wood & Joseph, 2007). Theoretical findings suggest
that it is not uncommon for survivors of traumatic events to experience growth in the form of positive psychological changes (Linley & Joseph, 2004; Tedeschi & Calhoun, 2004).

In summary Study 6 provides empirical evidence to link the tripartite model of authenticity with positive growth in the aftermath of trauma. Findings are also suggestive of vicarious re-traumatisation in individuals who work in supporting victims of trauma.

8.2 Strengths and Limitations

8.2.1 Strengths and novelties

An exploration of goal-directed behaviours and cognitions by bringing together both personality and counselling models of authenticity is a novel attempt to integrate two schools of thought. This thesis explored a range of goal-directed behaviours and cognitions; the results by means of this synthesis have revealed novel insights which all contribute to the theoretical development of the tripartite model of authenticity.

The first biological/physiological study embedded in Chapter 2 which is published in Personality and Individual Differences (Pinto, Maltby, & Wood, 2011) emphasised a trait approach to goal-directed behaviours based on self-reports. The strength of this work is that this consideration was extended in Study 2, Chapter 3 to an experimental assessment of goal-directed behaviour termed task-switching, a well-established methodology used to investigate cognitive adaptability to a changing environment. The use of an experimental methodology allowed an objective examination of the responses to environmental events generated by the task. This experimental approach avoided the subjective nature of responses collected via questionnaires, in that the computer programme recorded responses that were automatic and without conscious thought. The principle behind these measures is that the more the participant is engaged in the task, the closer their responses will match behaviours that they would exhibit in real world events. More importantly, naturally occurring behaviours are considered an implicit insight into the personality of the individual. However although the individuals were
engaged in the task, a question does arise about whether these brain processes are utilised in situations outside the strict laboratory setting and also to the same level of difficulties that the task switch presents. To address this, improvements could perhaps include a self-report test of dysexecutive functions to explicitly tap into a different set of cognitive processes in which the individual can reliably report upon.

Study 3 within Chapter 4 also applied a behavioural methodology to administer the Information Sampling Task (IST, Clark, et al., 2003). This chapter provided the first behavioural research to explore the tripartite model of authenticity within a decision-making model termed reflexive impulsivity (Evenden, 1999; Kagan, 1966). Once again, the use of an experimental task allowed participants to be unaware of the phenomena that was being measured and in doing so avoided response bias and hopefully more nearly match behaviours that they would naturally exhibit. A further strength of this thesis is that Study 4 attempted to address gender and sample bias identified in Study 3; a second round of data collection was conducted to gather more data from males (106 males and 171 females) to further explore the relationships between authenticity and decision-making strategies identified in Study 3. However multiple regression analysis revealed that gender was not a significant predictor to decision-making styles, enhancing the generalisability of the findings.

Further strengths of this thesis are that two of the chapters presented here are within an applied setting. For instance Study 5 within Chapter 6 explored aggressive behaviours within a university student population by considering Horney’s (1951, 1977) account of human growth and neurosis by using an experimental methodology that centred upon aggressive responses (albeit in a controlled setting). This study explored the link between Horney’s account of neurosis and authenticity by examining aggressive responses on the Point Subtraction Aggressive Paradigm (PSAP, Carré & McCormick, 2009; Cherek, 1981). This study not only provided empirical evidence for Horney’s propositions that low authenticity can lead to feelings of anger and aggression, but also provided the first empirical test of whether the tripartite model of authenticity can predict objective behaviours; it is published in Personality and Individual
Differences (Pinto, Maltby, Wood & Day, 2011). This experimental approach allowed us to set up an unfair situation to temporarily deceive participants into believing that they were competing against an opponent employing an underhand strategy. Once again this methodology engaged participants fully in the task, allowing for more natural and automatic behaviours to be recorded.

Study 6 within Chapter 7 also addresses authenticity within an applied setting. This study investigated authenticity and its role within positive and negative changes in the aftermath of domestic violence. This is the first study to explore the relationship between the tripartite model of authenticity and posttraumatic growth. A further strength of this research is that it involves an actual trauma sample; although this thesis is concerned with exploring goal-directed behaviours and cognitions and their links with authenticity, it is of further practical use to examine the role of the tripartite model of authenticity within a sample of individuals who have been involved in life threatening traumatic experiences. The use of online questionnaires where all data was explicitly anonymous may also have been more effective as this method of data collection can affect the answers that are obtained, especially for sensitive questions (Tourangeau & Smith 1996; Bowling 2005).

The strengths of exploring authenticity within a real world applied setting are that findings can help to solve practical issues as well as to acquire knowledge for theory development. Findings through applied research such as the two chapters presented in this thesis have strong potential to be incorporated into research or intervention designs that seek to enhance psychological well-being within clinical and counselling settings.

8.2.2 Addressing Limitations

Although this thesis presents unique empirical evidence for the role of authenticity within goal-directed behaviours and cognitions, it is not without its limitations. This section acknowledges that the use of self-report methodologies raises concerns about the legitimacy of causal conclusions. Although all the psychometric measures used in this thesis have been well
researched and assessed for sufficient reliabilities and construct and face validities, a possibility remains that their use may have led to some information held outside conscious awareness being omitted. It is often cited that responses to questionnaires may have been affected by social desirability; however Wood et al. (2008) present satisfactory evidence that the Authenticity Scale is free from such confounds. Regardless, there has been an attempt to introduce experimental measures when and where possible to address the issue of subjective responses.

It is also worth acknowledging that there are limitations to the generalisability of the findings presented here, mainly due to the relatively homogenous sample used [sample in study 3 were comprised mostly of female university students]; however, an attempt was made to address this bias in Study 4 by recruiting more male participants and to recruit from a real world setting. All but one of the findings from study 3 was replicated in Study 4, and it is proposed that this is due to sampling differences. Also the correlational design used here does not allow us to make causal inferences. The current studies therefore provide a platform for future studies that use multivariate and longitudinal designs to determine if authenticity is a causal determinant of well-being in terms of some of the factors and theories considered within this thesis.

There are also a number of brief points that are worth highlighting. Firstly, there are limitations to the inference of the findings in Study 3, due to a relatively small homogenous sample being used, and therefore suggest that this be addressed in future research. Secondly, although this thesis revealed novel findings, they are within what is considered to be mainly student populations. Given that the literature of authenticity is based within counselling settings, it is possible that clinical settings will unearth findings that are both quantitatively and qualitatively different. Thirdly, it is worth drawing attention to the non significant correlations between the IST and self-report decision-making styles in Study 3. However, the current findings are consistent with previous findings (Crean, de Wit, & Richards, 2000; Reynolds, Richards, Horn, & Karraker, 2004; White et al., 1994) who also failed to observe relationships between self-report and behavioural measures of impulsivity. Finally, it is also worth
acknowledging that the use of the Big-Five measure of personality (Gosling, Rentfrow, & Swann, 2003) in Study 4, rather than the BIS/BAS (Carver & White, 1994) as was administered in Study 1, may be seen as a weakness. However the Big-Five measure of personality was administered as there is evidence that the facets of the Big-Five identifies a broader spread of personality and may encompass [at least at a self-report level] those factors within the BIS/BAS measure of personality (Maltby, Wood, Day, & Pinto, 2012).

8.3 Implications of this Research

The implications of this research are that to further current understandings of authenticity an integrated approach which draws together various schools of thought should be conceded. This approach will build upon and extend the present understanding of authenticity. Although positive, humanistic, psychodynamic, existential, and counselling psychologists do and have always acknowledged authenticity as a core component of well-being and adaptive functioning, by introducing an experimental approach into what has predominately been based upon personality and counselling theories, outcomes can reveal novel experimental evidence to complement and bring together these various schools of thought. By incorporating both counselling and personality perspectives to examine behaviour and cognitions, this thesis has discovered empirical evidence which can be added to theoretical considerations of authenticity.

The findings reported in this thesis have practical implications; particularly for the management of psychological well-being and the treatment of psychopathology. Essentially, the current understanding within this thesis is that authenticity is paramount in the study and treatment of maladaptive cognitive outcomes; authenticity is the core of psychological well-being as suggested by Horney (1951), May (1981), Rogers (1980), Winnicott (1965), Wood et al. (2008) and Yalom, (1980) and can been seen through adaptive goal-directed cognitions and behaviours. For instance, in Study 1 all three facets of authenticity correlated with Cloninger’s (1993) Temperament and Character domains of harm-avoidance, reward-dependence, self-
direct, and self-transcendence, with the exception of persistence which correlated with authentic-living and self-alienation. Of Gray’s (1982, 1985) behavioural inhibition and approach systems, BIS-anxiety and BIS-fear showed significant correlations with all three facets of authenticity. These findings suggest that the therapeutic approaches that are more solution focused and/or concentrate upon an individual’s childhood experiences should focus upon trait cognitions which relate to goal related behaviours. By attending to trait cognitions, therapists and clinicians would help clients more to tap into and become aware of the totality of their temperament (emotions and physiological states).

The relationship between authenticity and rational decision making, in Study 3 reflects an adaptive cognitive style. Furthermore, high levels of self-alienation and accepting external influences are positively correlated with dependent decision making, and self-alienation to avoidant decision-making strategies. Study 4 again replicated the relationship between self-alienation and accepting external influences and avoidant and dependant decision making strategies. These findings imply that deficits in cognitive processes such as maladaptive decision making should be addressed within therapeutic settings; since authenticity can be increased by encouraging autonomous decision making. Therefore clinical interventions will do better in enhancing feelings of authenticity, an antecedent to psychological well-being. Findings also imply that therapeutic settings can improve authenticity by teaching individuals to be more rational and less dependent upon others when making decisions.

The evidence presented here provides a context for considering this information when developing interventions that are focused upon developing skills among individuals. This will help to remove barriers to success and encourage higher levels of psychological well-being. In this case within therapeutic settings, where practitioners are working with people who suffer from higher levels of self-alienation and accepting external influences a successful outcome would be achieved by encouraging a better set of cognitions and skills around decision making. The findings presented here may also have important applications where self-knowledge may be found to influence decisions and decision making, such as in opportunities for
entrepreneurship in business. Also opportunities in education or work may be missed because of an individual’s decision-making style.

Within an applied setting such as Chapter 6, the findings from Study 5 reveal that authentic-living was negatively correlated to aggressive responses in the PSAP (Cherek 1981). This finding is consistent with Horney’s model of growth and neurosis (1951, 1977) in that the inauthentic person’s self-enhancing aggressive behaviours are directed towards those who threaten this person’s neurotic sense of rightness, often resulting in disproportionate reactions of frustration and aggression. Implications of this finding are two-fold. Firstly, that authentic-living is a good predictor of objective behaviour and should be used to predict behavioural outcomes in research that address positive psychological phenomena such as well-being. Secondly, that approaches such as those used in several counselling therapies including humanistic and psychodynamic, should continue to focus upon authenticity as the key therapeutic outcome, with the relieving of psychopathology arising from this growth process. Current findings suggest that this approach may also be helpful for the reduction of maladaptive levels of anger.

Chapter 7, which again sits within an applied setting, reveals that victims of trauma who try to make sense of the experience soon after the traumatic event go onto live more authentically and experience positive growth in the aftermath of trauma. On the other hand individuals who suffer from more intrusive thoughts go onto suffer from more negative changes and also more feelings of self-alienation. Findings from this sixth study also suggest that domestic violence support workers may suffer from vicarious re-traumatisation in comparison to other survivors that go onto live trauma free lives. These findings suggest a dynamic role for authenticity and adaptive goal-directed behaviours in managing traumatic reactions. Once again, authentic-living has emerged as a good predictor for behavioural outcomes as revealed in Study 5 and is especially important in situations where decisions need to be made in highly personal and important domains in life. These findings taken together imply the importance of reducing self-alienation and increasing levels of authenticity within therapeutic settings to aid
the recovery within victims of trauma. Findings also suggest that perhaps the Changes in Outlook Questionnaire is not a good measure for tapping into authentic self-referential goal-directed behaviours as the scale predominately consisted of items to measure relational or other-referential behaviours. A replication of this study is needed which employs a scale that is able to tap into self-referential authentic behaviours.
8.4 Future Directions

This thesis has echoed previous propositions that authenticity is the core of psychological well-being (Horney, 1951; May, 1981; Rogers, 1980; Winnicott, 1965; Wood, Linley, Maltby, Baliousis, Joseph, 2008; Yalom, 1980) by exploring novel aspects of goal-directed behaviours and cognitions. The findings reported in this thesis and their subsequent implications underscore three key directions for future work.

Previous theoretical work states that authentic-living is the more cognitive congruent of the three facets of authenticity (Wood et al., 2008) therefore higher levels of authentic-living would reflect a more superior cognitive functioning, however findings did not reflect this. Davidson, Amso, Anderson, and Diamond (2006), Rodgers and Monsell (1995), and Monsell (2003) all argue that task-switch experiments indicate a direct measure of failure in top–down executive functioning, they reflect the ability to flexibly shift from one mind-set to another, and are also thought to measure working memory. Therefore, future work would entail looking at different sets of executive functions to explore differences in goal-directed behaviour within the tripartite model of authenticity. Future work would also benefit from exploring cognitive flexibility [the ability to shift from one mind set to another] within the tripartite framework.

The reward-based model of decision making (Cabanac, 1992; Franken & Muris, 2005) suggests that many decisions are made through irrational choices whereby some individuals do not weigh up the consequences of their decisions. The authors account for this rash decision-making style to be based upon hedonic and not upon rational motives, suggesting that non-rational experiences such as pleasure and displeasure are the currencies for satisfying conflicting motivations (Cabanac, Guillaume, Balasko, & Fleury, 2002). However Study 3 did not find this interaction. Therefore it is suggested that further experimental work be considered to explore the dynamics between the tripartite model of authenticity and maladaptive decision-making strategies. More specifically, to identify a suitable behavioural task that measures reward seeking decision-making strategies.
Study 6 addressed several theoretical conceptions which suggest that increased feelings of authenticity may arise in people who have experienced trauma (Joseph, 2004; Joseph & Linley, 2005; May, 1981). Although this cross sectional study revealed the posttraumatic phenomena, more research is needed to explore the development of authenticity through the course of posttraumatic events. In addition, vicarious re-traumatisation through supporting victims of trauma needs to be further examined in terms of personal growth and authenticity. A greater understanding of the relationship between authenticity and positive changes is also needed; such a scale which directly measures self-referential items should be identified and employed. In moving forward, future work should administer the Authenticity Scale to test more multifaceted models of growth after traumatic events, such as whether authenticity arises as a form of growth when unconditionally accepting relationships are available as a source of support (Joseph, 2004; Joseph & Linley, 2005).

8.5 List of Main Findings

1. Authenticity is related to inhibitory and approach dimensions of goal-directed behaviour.
2. Authenticity is distinct from extant biological models of personality.
3. Authenticity does not predict cognitive processes as measured by the Task-switching Paradigm.
4. Authenticity is related to reconfiguring mental resources.
5. Authenticity does not predict reflection impulsivity styles of decision making as measured by the Information Sampling Task (Clark, et al., 2003).
6. Authenticity predicts dependant and avoidant decision making styles.
7. Authenticity predicts aggressive behaviours as measured on the Point Subtraction Aggression Paradigm (Carre’ and McCormick, 2008).
8. Authentic-living a facet of the tripartite model of authenticity can predict purposeful goal-directed behaviour.

9. Authenticity can predict posttraumatic growth in the aftermath of trauma.

10. However, re-traumatisation through vicarious living when supporting trauma victims may hamper growth.
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Publications arising from this Thesis


Appendix A

Task Instructions- to be read out to participants for the practice trial and the fixed win condition.

You are about to play a game for points. The game will take 10 minutes to complete. It consists of two parts and in each part there will be 10 goes. On every go, you will be able to see 25 boxes on the screen. Initially, the boxes will all be greyed out, but when you pick a box, it will reveal itself to be one of two colours. Your task is to decide which colour you think is in the majority. It is entirely up to you how many boxes you open before making your decision. When you have made your decision, you should touch that colour panel at the bottom of the screen.” You will now take part in 3 practice trials, during which 100 points are available to win or lose for a correct or wrong response.

For the fixed win condition, participants were also told that:

You will win 100 points if you pick the correct colour, regardless of how many boxes you open, and you can open as many boxes as you wish. You will lose 100 points if you get it wrong. Try to win as many points as you can.” To measure behavioural dependency participants were also told “You may ask the person next to you for help at any time.”

In the decreasing win or risky condition, participants were told:

You now have 250 points to start with. On these goes, the amount you can win will drop by 10 points with every box you uncover, therefore the earlier you make your decision the more points you will win if you are right. If you are wrong, you will lose 100 points regardless of when you make your decision. Try to win as many points as you can.” Again to measure behavioural dependency participants were told “You may ask the person next to you for help at any time.”
Appendix B

Debriefing for Study 5

Thank you for your participation in today’s study. Social psychologists are interested in understanding the relationship between people’s personality and their behaviours. Some studies have indicated that when we experience unfairness we may also experience anger and frustration, and are then more likely to fall back on certain behaviours in order to make ourselves feel better. Today you took part in an area of research, where we are examining a new personality variable termed the authentic personality and the effects of unfair situations on people behaviours.

Our experiment today required that you play a game against another ‘individual’ in the adjoining lab who played unfairly by stealing your points. In fact there was no such person. You played against a computer programed to steal your hard earned points. This was done to induce a level of unfairness which may have led to increased levels of anger! So if you did feel angry against this other person, do not worry, the computer program was designed to make you feel this way! Furthermore I was popping in and out of the two labs to ensure that our cover story was believable.

We were measuring whether people would retaliate by stealing points back from the ‘other person’, or if they would save their points more often to prevent them from being stolen, or if they would ignore the ‘unfair players’ and continue to win as many points as they could. All the information that we collected in today’s study will be confidential, and there will be no way of identifying your responses within the data archive. We are not interested in any one individual’s responses; we want to look at the general patterns that emerge when the data are aggregated.

Your participation today is appreciated and will help psychologists to discover more ways of promoting pro-social behaviour and psychological well-being. We ask that you do not discuss the nature of the study with others who may later participate, as this could affect the validity of our research conclusions. If you have any questions or concerns, you are welcome to talk with Diana Pinto on 2997155 email dp122@le.ac.uk of the university of Leicester Psychology Department. If your participation in this study has caused you concerns, anxiety, or otherwise distressed you, you may contact the Student Counselling Centre at The Student counselling Service : (0116) 2231780 Or www.le.ac.uk/ssds/counselling

THANK YOU AGAIN FOR YOUR PARTICIPATION.
Appendix C
Debriefing for Study 6

First and foremost we would like to thank you for taking part in this study.

As you are aware, domestic abuse is a disturbing social problem in the U.K that occurs at all levels of intimate partner relationships, including cohabitation, dating, marriage or within a family setting. Although women tend to be more harmed or frightened by domestic abuse, one third of those injured and one quarter of which are chronic (repeat) victims are men.

Understandably, research on domestic violence has focused upon its negative consequences. However despite these negative effects of domestic violence, recent findings have found positive changes which we call posttraumatic growth in survivors of Domestic Abuse (Cobb et al., 2006). One of these positive changes is that some people, after experiencing trauma, may turn themselves around to help others in similar situations. For instance they may train to support victims of trauma just like you do. We are not undermining or ignoring the negative changes that occur after traumatic events, but we want to know why some people can go on to live full and happy lives and why others really struggle to do so.

To fully understand an individual’s response to trauma, we, as researchers at the University of Leicester, some of whom have been victims of domestic and sexual abuse and some of whom are also domestic violence and sexual violence case workers are investigating the positive reactions to such trauma, so that we can help people move on with their lives. We are hoping to find a therapeutic method to help sufferers of posttraumatic stress after traumatic events such as domestic abuse.

All the information that we collect in this study will be confidential, and there will be no way of identifying your responses in the data archive. We are not interested in any one individual’s responses; we want to look at the general patterns that emerge when the data are aggregated.

Today you took part in very sensitive research and we are very grateful for your help. You were asked to take part as we know that as a domestic violence support worker you have access to daily debriefing sessions, and also have access to other trauma workers with whom you can discuss any adverse effects that you may have suffered after completing this survey. However if you feel affected by this study and would like to discuss this with someone in the research team please phone Diana Pinto of the University of Leicester Psychology Department, who is a trained domestic violence and sexual violence case worker for Victim Support on (office number given), or email dp122@le.ac.uk. You may also contact the following services:

- Victim Support's national telephone support line: 0845 30 30 900, Or www.victimsupport.org.uk.
- Domestic Violence Integrated Response Project helpline (DVIRP). Tel No: 0116 255 0004 or www.dvirp.co.uk.
- Families need fathers on 0300 0300 363 or http://www.fnf.org.uk/.

Once again, thank you for taking part.