# Visual Imagery Perspective During Autobiographical Memory Recall: Cultural Considerations

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**Declaration of Original Authorship**

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

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**Abstract**

When recalling autobiographical memories (AMs) persons often engage in visual imagery using two types of visual imagery perspectives (VIPs); Field (first-person perspective) and Observer (third-person perspective). The type of VIP adopted can impact the nature and content of recalled memories as well as play an important role in emotion regulation, emotional wellbeing, and the development of one's sense of self. The impact of culture on VIP use has received little attention but preliminary findings comparing Asian and North American persons have suggested that persons from collectivistic cultures more often use an Observer perspective during AM recall than persons from individualistic cultures. Self-construal (i.e., being independently or interdependently oriented) has been proposed to mediate the relationship between culture (in terms of nationality) and VIP use. The studies of this thesis explore the interrelationships between nationality, self-construal, and VIP use during AM recall. They are the first to explore the role of culture in VIP use using Caribbean and United Kingdom samples. They are also the first to measure self-construal at the individual level as opposed to assuming culture based on nationality alone. Measuring self-construal also allowed for its mediating role in the relationship between culture and VIP use to be tested. Taken together, the results did not consistently reveal the culturally expected patterns of VIP use or self-construal and they did not provide support for the mediating role of self-construal in the relationship between nationality and VIP use. These findings not only challenge preliminary research but they highlight the difficulties associated with measuring complex concepts such as self-construal. The findings of this research have important implications for the field of AM and cross-cultural psychology at large.

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# 1 Chapter 1: Introduction

## 1.1 Overview

The overarching goal of this thesis is to explore and better understand the influence of culture on Visual Imagery perspective (VIP) use during autobiographical memory (AM) recall. This chapter sets the stage for the current research. It first introduces the concept of AM and describes its importance especially as it relates to the self including one's self-concept and self-established goals. The chapter then shifts focus towards culture and the concept of self-construal. An overview of the most frequently used measures of self-construal is provided and the challenges and controversies surrounding the measurement and conceptualization of self-construal are outlined. The interrelationships between AM, culture, and the self is then discussed. The impact of culture on AM encoding and aspects of AM recall is briefly outlined. This thesis is primarily focused on exploring and understanding how AMs are recalled. As such, an introduction to visual imagery is presented followed by a focus on VIP use in particular. The two types of VIPs (Field and Observer perspectives) are described and research concerning the consequences of using particular VIPs is presented. The non-cultural factors that influence and determine which VIP people tend to adopt are outlined followed by a focus on culture, the primary factor of interest within this thesis. A critical review of previous research exploring culture and VIP use is presented and the issues and gaps within this field of research are highlighted. These present an argument for the importance of the empirical research presented in this thesis. Finally, this introductory chapter concludes by describing the aims of this thesis and presenting the research questions addressed by its studies.

## 1.2 An Introduction to Memory and AM

The human memory system is dynamic and integrative (Eichenbaum & Cohen, 2001; Squire, 2004). It is comprised of declarative and non-declarative memory. Non-declarative memory is more implicit and refers to our knowledge of procedures, skills and actions (e.g., driving a car or playing the piano) while declarative memory refers to explicit knowledge about

ourselves and the world. Declarative memory can be further subdivided into semantic and episodic memory (Tulving, 1972, 1985). Semantic memory refers to knowledge of factual information about ourselves and the world (e.g., knowing which school we attended and knowing that Rome is the capital of Italy). On the other hand, episodic memory refers to memories of past events and experiences in one's life (e.g., the day your friends threw you a surprise birthday party). Unlike semantic memory, episodic memory is accompanied by a sense of reliving/re-experiencing via mental time travel which Tulving (1985) defined as "autonoetic consciousness." This differs from noetic consciousness which relates to the experience persons have when recalling semantic information (i.e., facts) about one's life which does not require projecting oneself back in time or a sense of reliving (Tulving, 1985).

The episodic-semantic distinction has been supported by neuroimaging studies (e.g., Brown et al., 2018; Cabeza & St Jacques, 2007; Levine, 2004; Svoboda et al., 2006). Despite being separate components of memory, semantic and episodic memory coalesce to form one's personal history which can otherwise be referred to as AM (Conway et al., 2013; Williams et al., 2008). While there are both semantic and episodic components of AM, the episodic components have been argued to be the essential feature of AM given that they allow for the vivid and detailed reconstruction and recollection of one's past (Conway, 2001; Rubin, 2005). In fact, AM is most often defined in episodic terms, referring to memory for personally experienced events of one's life that occurred at a particular time and in a particular place and are typically meaningful (Conway & Rubin, 1993; Nelson, 2003; Nelson & Fivush, 2004).

Memory researchers have proposed three main functions of AM including directive, social, and self (Bluck, 2003; Bluck & Alea, 2002; Bluck et al., 2005). The directive function of AM involves the use of past experiences to assist with decision-making and problem-solving (e.g., Cohen, 1998; Pasupathi et al., 2002) and to help guide behaviour in the present and in the future (e.g., Bluck et al., 2005). The social function of AM involves the sharing of personal

experiences in order to connect with others and to develop and strengthen interpersonal bonds (Alea & Bluck, 2003; Bluck, 2003; Bluck et al., 2005). The self-function of AM is of most interest within this thesis. It involves the role of AM in developing and maintaining a coherent sense of self and identity over time (Bluck, 2003; Bluck et al., 2005; Conway & Pleydell-Pearce, 2000; Demiray & Janssen, 2015; Nelson, 2003; Wilson & Ross, 2003) which is considered critical for psychological well-being (Conway, 2005; McAdams & McLean, 2013). It is important to note that the purposes (directive, social, or self) for which persons use AM vary according to the needs of the individual at a given time and within a given context (Bluck, 2003; Bluck & Alea, 2002).

### 1.3 AM and the Self

Many researchers have demonstrated that AM and the self are intimately related (e.g., Berntsen & Rubin, 2002; Conway, 2005; Conway & Pleydell-Pearce, 2000; D'Argembeau & Van der Linden, 2008). The concept of self itself is difficult to define given its complex and multidimensional nature (see Klein, 2012) but one of the earliest conceptualizations of the self was proposed by William James in 1892 (see McAdams, 2013) who described the self in terms of two components, the "I" (observing agent) and the "Me" (observed by the I and consisting of knowledge about the self). An array of definitions of the self has since been proposed but one largely agreed upon view of the self is that it is not unitary but instead comprised of a range of constructs and processes (e.g., Klein, 2012; Klein & Gangi, 2010; Power, 2007; Prebble et al., 2013). It has been argued that the development of the self is rooted in one's AM since one's personal history explains who one is across time and allows for a continuous and coherent sense of self (e.g., Conway et al., 2004; McAdams, 1992). The strongest evidence of the important link between AM and the self comes from neuropsychological studies involving persons with amnesia following brain injury or disease. Their inability to remember their personal history results in a loss of sense of self and identity (e.g., Addis & Tippett, 2004; Bennouna-Greene et al., 2012; Hirst, 1994).

The most influential theoretical model which explores the relationship between AM and the self is the Self Memory System (SMS; Conway & Pleydell-Pearce, 2000). This model views memory as the database of the self and it highlights the bidirectional relationship between the self and AM. Autobiographical memory is important for the development and maintenance of a sense of self and in turn, the self plays a cognitive role in organizing memories and influencing memory encoding, storage, and retrieval (Conway & Pleydell-Pearce, 2000; Conway et al., 2004; Ross & Wilson, 2003). Within the most recent version of the SMS, Conway and Loveday (2015) describe three main components. These include AM, episodic memory, and the "working self." Autobiographical memory is organized hierarchically and varies in terms of level of abstraction. At the highest level is the "life story" which contains themes such as those surrounding relationships and education. The next level contains "lifetime periods" which contain information about themes of a particular life period (e.g., being a university student). These lifetime periods can be used to cue and access information about "general events," the next level in the hierarchy. General events are more specific than lifetime periods and are comprised of repeated events (e.g., attending lectures or presenting research at conferences). These are often clustered in themes related to goal attainment (Conway, 1992; Conway & Pleydell-Pearce, 2000; Robinson, 1992). Knowledge at the level of general events can then cue "event-specific knowledge" (ESK; Conway, 1996) which includes detailed information about particular events in one's life. These are often represented as mental images which are high in sensory and perceptual detail. These episodic memories are often considered essential for autobiographical remembering (Sheldon et al., 2018).

Conway and Loveday (2015) stated that memory accessibility is controlled by the "working self" which consists of the "conceptual self" as well as one's goals system. The conceptual self is described as the abstract mental representation of the self including one's attitudes, beliefs and values, and it allows persons to describe themselves and their identity (Conway et al., 2004). The working self contains currently active information about the self as

well as its current goals. Memories consistent with the goals of the working self are most likely to be stored in long term memory and later reconstructed and retrieved (Conway & Pleydell-Pearce, 2000). Memories which are not (or no longer) related to current goals are not stored in long term memory (Conway, 2009). During memory retrieval, autobiographical information and goals of the current self coalesce to form an AM (Conway & Pleydell-Pearce, 2000). This process engages a range of cortical and subcortical neural circuitry (Martinelli et al., 2013; Svoboda et al., 2006). Overall, the SMS suggests that AM and self are intimately related through a multilevel and interconnected system which is also influenced by the goals, values, and belief systems of one's cultural context (Wang & Conway, 2004).

### 1.4 Culture and Self-Construal

The development of one's self-concept and their self-established goals is influenced by both biological (e.g., Northoff et al., 2006) and sociocultural (e.g., Markus & Kitayama, 1991, 2003) factors. The relationship between culture and the self is of interest in this thesis. Markus and Kitayama (2010) propose that cultures and selves develop via their interaction with each other in what they called "an ongoing cycle of mutual constitution" (p. 241). As with the concept of self, the concept of culture is complex and there is no universally accepted definition. One of the most commonly referred to definitions of culture was that proposed by Geert Hofstede (1980) who defined culture as "the collective programming of the mind which distinguishes the members of one human group from another" (Hofstede, 1980, p. 25).

Based on a large-scale multinational survey of work values of IBM employees, Hofstede (1980) used culture-level factor analyses to identify four dimensions of culture including power distance (degree of unequal power between superior and subordinate), masculinity (degree of focus on assertiveness versus nurturance), uncertainty avoidance (degree of acceptance of uncertainty or ambiguity), and the most commonly referred to dimension, individualism (or Individualism-Collectivism; I-C). The I-C dimension refers to the degree to which persons are viewed as separate identities as opposed to members of social

groups. Hofstede calculated country-level scores per dimension and country rankings were produced. According to Hofstede's work, individualism is viewed as a unidimensional bipolar construct with individualism and collectivism at either ends of this continuum. In individualistic societies, relations between persons are loose and persons are expected to look after themselves and their immediate family members. On the other hand, persons in collectivistic societies are strongly interconnected and these societies are comprised of cohesive in-groups (Hofstede & Minkov, 2010). While the concepts of individualism and collectivism were proposed at the cultural level, Hofstede acknowledged that country-level characteristics may not reflect an individual's values and cultural orientation (Hofstede, 1980; Hofstede & Minkov, 2010). Hofstede's work fueled the expansion of cross-cultural research (Smith et al., 2013).

Cultural psychologists have highlighted the important role of culture in influencing how persons develop, view, and express their sense of self. In 1989, Triandis proposed three types of selves which exist at the individual level. These included the "private self" (the way persons understand themselves), the "public self" (the way persons believe they are viewed by others), and the "collective self" (persons' sense of belonging to societal groups). Triandis suggested that culture determines the expression of each of these selves such that persons from collectivist cultures may value public and collective aspects of the self to a greater degree than persons from individualistic cultures who may place greater value on the private aspects of the self.

Soon after Triandis' proposal of multiple selves, the concept of "self-construal" emerged and rapidly gained attention. The term self-construal was coined by Markus and Kitayama (1991) and relates to the way in which persons make meaning of the self and its relation to others. The concept of self-construal (differentiated into independent and interdependent self-construal) was developed in relation to the concepts of individualism and collectivism but at the individual level as opposed to the cultural/national level. Markus and Kitayama (1991) proposed that independent selves more often emerge in Western cultures

(e.g., North America) which are assumed to be more individualistic in nature with a view of individuals as autonomous, uniquely different from others, and inwardly focused on their own psychological experiences (Markus & Kitayama, 2010; Nisbett et al., 2001). On the other hand, interdependent selves more often emerge in Asian cultural contexts (e.g., China, Japan and Korea) which are assumed to be more collectivistic in nature with a view of individuals as group members defined by their relationships with others and in which persons are outwardly focused on maintaining the harmony of the group. In this interdependent vein, the self is considered flexible and influenced by context, which differs from the bounded and stable characteristics of independent self-construal (Markus & Kitayama, 1991). While cultural background may impact which self-orientation is more dominant, persons have both independent and interdependent aspects of their selves (Conway & Jobson, 2012; Markus & Kitayama, 1991; Singelis, 1994; Wang & Ross, 2005). Markus and Kitayama's theory of self-construal has been one of the most influential theories within the field of cultural psychology (Cross et al., 2011; Matsumoto, 1999) and studies have revealed relationships between self-construal and a range of psychological outcomes including self-esteem, well-being, and social motivation (see Cross et al., 2011; Gudykunst & Lee, 2003).

### *1.4.1 Frequently Used Measures of Self-Construal*

Since Markus and Kitayama's seminal article proposing the presence of independent and interdependent self-construals, many measures of self-construal have emerged. Two of the most frequently used approaches to measuring self-construal have been via the use of Likert-type scales and the use of open-ended free descriptions of the self. The most frequently used self-construal measures are outlined in the following sections (see Cross et al., 2011 for a more extensive outline of self-construal measures).

**1.4.1.1 Likert-Type Scales.** Three main Likert-type scales have been developed to measure self-construal based on Markus and Kitayama's (1991) self-construal theory. These include the Singelis Self-Construal Scale (Singelis, 1994), the Gudykunst et al. (1996) scale, and

the Leung and Kim (1997) scale. These scales consider the two types of self-construal (independent and interdependent) to be orthogonal. Of these scales, the Singelis Self-Construal Scale (SCS) has been most widely utilized and researched (Cross et al., 2011) and will therefore be the focus of this section. The SCS was developed by Singelis (1994) as a means of detecting independent and interdependent self-construal based on Markus and Kitayama's (1991) two-dimensional model. Singelis (1994) initially pooled 45 items including original items as well as items from other measures of constructs related to self-construal and individualism-collectivism. Using a principal components factor analysis and a confirmatory factor analysis in a sample of Asian American and Caucasian American participants, the final scale was comprised of 24 items with 12 items for independence and 12 items for interdependence. Each participant received an average score for independent self-construal and an average score for interdependent self-construal. As expected, and in support of construct validity, Asian Americans rated higher levels of interdependent and lower levels of independent self-construal compared to Caucasian Americans. Additionally, participants' interdependent self-construal scores predicted their tendency to make situational attributions for behaviours described within different situations. Cronbach alphas were .73 and .74 for the independent scale and .69 and .70 for the interdependent scale. Singelis then added six items to improve internal reliabilities of the scale resulting in a 30-item version. Cronbach alphas using this version ranged from the high .60s to the middle .70s (Singelis et al., 1995) which was considered adequate given the broadness of the construct of self-construal and the range of behaviours, feelings and beliefs assessed by the scale. Additional versions of the SCS have been developed but the 24-item and the 30-item versions are most commonly used (Cross et al., 2011). The SCS (Singelis, 1994) has been used across many cultures and it has been translated into many languages (Cross et al., 2011).

The patterns found by Singelis (1994) with Asian Americans rating higher levels of interdependent and lower levels of independent self-construal compared to Caucasian

American participants has been replicated in multiple studies (e.g., Kwan et al., 1997; Singelis et al., 1999; Singelis & Sharkey, 1995; Singelis et al., 1995). There are also multiple studies showing similar patterns of results using the Gudykunst et al. (1996) scale and the Leung and Kim (1997) scale (see Gudykunst & Lee, 2003). However, several researchers have not found the expected differences in independent and interdependent self-construal ratings between North American and Asian participants (e.g., Krull et al., 1999; Levine et al., 2003; Matsumoto, 1999; Sato & Cameron, 1999) and others have found theoretically incongruent differences with North Americans rating higher levels of interdependent self-construal than Asians (e.g., Kleinknecht et al., 1997; Oyserman et al., 2002; Sato & Cameron, 1999). Challenges associated with conceptualizing and measuring self-construal are explored in section 1.4.2.

**1.4.1.2 Open-Ended Self Descriptions.** The Twenty Statements Test (TST; Kuhn and McPartland, 1954) was originally developed with the goal of measuring different aspects of one's self-concept. However, it has become the most commonly used open-ended measure of self-construal within cultural psychology as it allows researchers to compare the nature of self-descriptions (e.g., personal traits versus social roles) elicited by persons from different cultures. The TST requires participants to complete twenty statements about themselves beginning with the words, "I am…" These responses are then coded into categories comparable with independence (e.g., "I am creative") or interdependence (e.g., "I am an American"). The original coding scheme used by Kuhn and McPartland (1954) was comprised of two categories. These included "consensual" responses which included social roles (e.g., "I am a wife") and "sub-consensual" responses which included traits (e.g., "I am intelligent"). The TST has been reported to have good interrater reliability and adequate test-retest reliability, content validity, and concurrent validity (Kuhn & McPartland, 1954; Spitzer et al., 1971). Over the years, a multitude of coding schemes have been developed for use with the TST. Categories used to describe the concepts of independence and interdependence are highly variable and researchers often produce many categories and subdivisions of concepts related

to independence and interdependence (Bochner, 1994; Cousins, 1989; Gabriel & Gardner, 1999; Madson & Trafimow, 2001; McCrae & Costa, 1988; Rhee et al., 1995). Using the TST, many researchers have shown that persons from regions assumed to be more individualistic such as North America more often describe themselves in relation to personal traits and less often describe themselves in terms of social roles and relationships compared to persons from regions assumed to be more collectivistic such as East and South East Asia (e.g., Bond & Cheung, 1983; Cousins, 1989; Dhawan et al., 1995; Kanagawa et al., 2001; Rhee et al., 1995; Wang, 2001).

As with the SCS (Singelis, 1994), there have been some inconsistent and theoretically incongruent findings when using the TST to measure self-construal in Western and Eastern cultures such that persons from East Asian countries have less often described themselves in terms of social roles or more often described themselves in terms of personal traits compared to persons from Western countries such as America (e.g., Del Prado et al., 2007; Kanagawa et al., 2001; Rhee et al., 1995; Watkins & Gerong, 1997). Theoretically inconsistent findings have also been observed beyond America-Asia comparisons including comparisons between persons from Western Europe (e.g., Denmark and Spain) and other cultures assumed to be collectivistic such as Mexico (e.g., Santamaria et al., 2010). These unexpected results are not consistent with the patterns expected based on Markus and Kitayama's (1991) theory of self-construal. Challenges associated with the concept and measurement of self-construal are explored in the following section.

### *1.4.2 Challenges and Controversies: Concept and Measurement of Self-Construal*

Cultural classifications using the I-C dimension (Hofstede, 1980; Hofstede & Minkov, 2010) as well as Markus and Kitayama's (1991) two-dimensional model of self-construal have been highly influential in the development of cross-cultural research (Cross et al., 2011; Matsumoto, 1999). Focusing on self-construal at the individual level, the two-dimensional model drove the development of Singelis' (1994) SCS scale which continues to be commonly

used in cross-cultural research. However, researchers have criticized these widely adopted self-construal approaches on both conceptual and empirical grounds. Given the importance of attempting to understand cultural aspects of the self at the individual level, the associated challenges must be considered.

Despite the common assumption that persons from North America are largely more individualistic than persons from East Asian cultures, multiple researchers have not found the expected differences in independent and interdependent self-construal using measures such as the SCS (e.g., Kleinknecht et al., 1997; Krull et al., 1999; Levine et al., 2003; Matsumoto, 1999; Oyserman et al., 2002; Sato & Cameron, 1999; Takano & Osaka, 2018) and the TST (e.g., Del Prado et al., 2007; Kanagawa et al., 2001; Rhee et al., 1995; Watkins & Gerong, 1997). Additionally, findings have varied with respect to the relationships between self-construal (as measured by the aforementioned scales) and psychological functioning and cognition (see Cross et al., 2011; Gudykunst & Lee, 2003; Matsumoto, 1999). These inconsistent findings have fueled ongoing debates within the field of self-construal and cross-cultural psychology in general. This section outlines some of the main criticisms and debates surrounding the conceptualization and measurement of self-construal. More comprehensive discussions of these issues can be obtained from publications by Oyserman et al. (2002), Levine et al. (2003), Gudykunst and Lee (2003), Kim and Raja (2003), Harb and Smith (2008), Cross et al. (2011), and Smith et al. (2013).

**1.4.2.1 Theoretical Criticisms and Alternative Models.** On a conceptual level, several researchers have criticized the widely adopted two-dimensional model of self-construal arguing that it is too dichotomous and vague, and that the concept of the self and self-construal is complex and multidimensional (Grace & Cramer, 2003; Hardin et al., 2004; Levine et al., 2003; Vignoles et al., 2016). The need for further differentiation of independent and interdependent aspects of the self has been argued (e.g., Gabriel & Gardner, 1999; Harb & Smith, 2008; Hardin et al., 2004; Kagitcibasi, 2013; Kashima & Hardie, 2000; Vignoles et al.,

2016). This differentiation of the self has most often involved aspects of interdependence. For example, a three-component model of the self has been proposed by multiple researchers which includes the personal/independent, relational/interpersonal and collective selves (Brewer & Gardner, 1996; Cross et al., 2000; Kashima & Hardie, 2000; Kashima et al., 1995; Sedikides & Brewer, 2015). Within this tripartite model, interdependence is separated into relational interdependence (the self-concept resulting from one's relationships with significant others) and collective interdependence (the self-concept related to social identity and group membership). While evidence has been provided in support of this model and its associated measures (e.g., Kashima & Hardie, 2000; Oyserman et al., 2002), some researchers have argued that the three-factor model does not always fit the associated scales, and that it can be difficult to differentiate between the relational and collective aspects of self-construal (Cross et al., 2011; Smith et al., 2013).

One of the most recent multifactor models of self-construal was proposed by Vignoles et al. (2016). They developed a seven-dimensional model of self-construal involving seven ways in which persons could be independent or interdependent. These included looking after oneself (self-reliance versus dependence on others), experiencing oneself (self-containment versus connectedness to others), defining oneself (difference versus similarity to others), dealing with conflict (self-interest versus commitment to others), changing with context (consistency versus variability), decision-making (self-direction versus reception to influence), and expressing oneself (self-expression versus harmony with others). Each of these dimensions has an independent and an interdependent pole. Vignoles et al. (2016) tested how the seven dimensions varied across 33 nations from six world regions. Although their results did show some global patterns of self-construal consistent with Markus and Kitayama's (1991) theory, the independence-interdependence dichotomy could not explain much of the variations in patterns observed and the dimensions did not cluster into two factors of independence and interdependence (Vignoles et al., 2016). Persons from Western regions

obtained high scores for difference, self-expression, and self-direction, as well as commitment to others. The pattern was more variable for persons from non-Western samples such that Latin American participants obtained high scores for self-interest and consistency, Middle Eastern participants obtained high scores for self-reliance, connectedness, and harmony, East Asian participants obtained high scores for similarity, harmony, and variability, Eastern European participants obtained high scores for commitment and self-reliance, and Sub-Saharan participants obtained high scores for self-interest and self-containment. The findings from this study suggested that different cultures value being independent and interdependent in a range of different ways which may be related to factors such as socioeconomic development and religious background (Vignoles et al., 2016). In an attempt to improve their self-construal model, Vignoles et al. (2016) have since expanded their seven-dimension model to include an eighth dimension (Decontextualized self vs. Contextualized self) based on the concept of contextualism (Owe et al., 2013) which relates to the importance of context in defining and understanding oneself.

Overall, researchers continue to work towards more accurately conceptualizing and measuring self-construal but a commonly agreed upon model/measure of self-construal has not yet been established.

**1.4.2.2 Empirical Criticisms and Alternative Measures.** In addition to issues related to the conceptualization of self-construal, additional challenges related to its measurement have been proposed. Firstly, related to the theoretical criticisms of Markus and Kitayama's (1991) two-dimensional model, measures modelled upon the two-dimensional model have been described as too simplistic. Some researchers have shown that this two-factor structure often does not provide a good fit for data obtained from scales including the SCS (Singelis, 1994) and the TST (Kuhn & McPartland, 1954), and a multidimensional structure has been revealed across both Western and non-Western cultural groups (Guo et al., 2008; Hardin, 2006; Hardin et al., 2004; Levine et al., 2003; Sato & McCann, 1998; Somech, 2000). However, some

researchers argue that the lack of expected findings using these scales cannot simply be used to discount the validity of self-construal scales (Gudykunst et al., 1996; Kim & Raja, 2003). For example, Gudykunst and Lee (2003) argue that clear patterns of independent and interdependent self-construal consistent with cultural expectations would not always be expected, especially if samples used do not fit the expected patterns of individualism-collectivism (e.g., when persons do not strongly identify with their culture). In these cases, the samples would account for the unexpected findings as opposed to problems with the scale itself (Gudykunst & Lee, 2003). This is argued to be especially present in younger samples (e.g., university students) often used within self-construal research (Gudykunst & Lee, 2003).

In terms of the content of the SCS (Singelis, 1994), Hardin et al. (2004) argued that it fails to capture vital aspects of both independent self-construal (e.g., the importance of one's private thoughts and feelings) as well as interdependent self-construal (e.g., ones' preference for communicating indirectly). Some researchers have also argued that the wording of some items is culturally biased (i.e., too abstract and decontextualized) which may affect the scales ability to detect interdependent self-construal (Fiske et al., 1998). With respect to the reliability of the SCS, Oyserman et al. (2002) argued that Cronbach reliabilities of the SCS within many studies are below .70, the conventionally suggested cutoff for research purposes (Nunnally, 1978). Additional concerns regarding the SCS include issues with response bias including acquiescent responding given the absence of reversed items which may obscure cultural differences observed since response styles vary across cultures (Heine et al., 2000; Smith et al., 2013; Vignoles et al., 2016). For example, East Asians have been shown to more often use an acquiescence style of responding (e.g., greater agreeableness) than European-Americans (e.g., Choi & Choi, 2002; Grimm & Church, 1999) and it is often difficult to determine whether these are individual differences that should be controlled for, or whether these response styles reflect cultural differences that should be maintained (Hamamura et al., 2008).

Reference group effects have been argued to impact responding on self-construal scales such as the SCS (Singelis, 1994) given that they do not specify to which group one should be comparing oneself (Harb & Smith, 2008; Heine et al., 2002; Peng et al., 1997). According to social comparison theory (Festinger, 1954), persons understanding of themselves is based on comparison to others within their cultural group which some researchers argue confounds cross-cultural comparisons, reducing the likelihood that cross-cultural differences in self-construal will be captured (Harb & Smith, 2008; Heine et al., 2002). Harb and Smith (2008) argued that providing reference context by specifying a reference group can significantly impact participant responses on these measures. Heine et al. (2002) demonstrated reference group effects using the SCS with bicultural Canadian and Japanese participants. Cross-cultural differences in self-construal were weak when no reference instructions were provided but significant differences emerged (in the expected direction) when participants were explicitly instructed to compare themselves to the other group (e.g., bicultural Canadians who compared themselves to the majority of Japanese persons rated themselves as more independent and less interdependent than bicultural Japanese participants who compared themselves to the majority of Canadians).

Contextual factors have been argued to impact responding on self-report measures including the SCS (Singelis, 1994) and the TST (Kuhn & McPartland, 1954) since they may alter the salience of independent and interdependent self-construal through "situational priming" (Levine et al., 2003). The self is often described as multifaceted, dynamic and context dependent (Grace & Cramer, 2003; Hardin et al., 2004; Levine et al., 2003; Vignoles et al., 2016) and many researchers have shown that self-construal can be induced or manipulated by contextual and environmental factors through priming (e.g., Lee et al., 2000; Oyserman & Lee, 2008; Trafimow et al., 1991). Research has shown that priming interdependent self-construal can increase collectivistic value endorsement, sensitivity to interpersonal cues, and increased relationship-seeking (e.g., Brewer & Gardner, 1996; Gardner et al., 2002; Gardner et al., 1999;

Kühnen & Hannover, 2000; Mandel, 2003). However, the effects of priming across studies are variable (Oyserman & Lee, 2008; Wang & Ross, 2005) and formal self-construal measures often do not capture the effects of priming (for reviews see Levine et al., 2003; Oyserman & Lee, 2008).

The limited priming effects have been used to question the validity of scales including Singelis' (1994) scale (Levine et al., 2003) due to the fact that self-construal scales were designed to measure stable trait-like constructs which is problematic when measuring interdependent self-construal which is theoretically defined as context-dependent and flexible (Cross et al., 2011; Levine et al., 2003; Singelis, 1994) and should therefore be sensitive to priming (Levine et al., 2003). However, other researchers have argued that limited priming effects are insufficient to argue against the validity of self-construal scales including the SCS since priming effects cannot be expected to be strong enough to significantly impact one's fundamental level of interdependent self-construal (Gudykunst & Lee, 2003; Kim & Raja, 2003). Kim and Raja (2003) further stated that the original purpose of self-construal scales was to capture stable and trait-like aspects of the self versus dynamic aspects of the self to which Levine et. al (2003) further disagreed based on the definitions of the interdependent self (as context-dependent and flexible) as described by Markus and Kitayama (1991) and Singelis (1994).

Finally, in terms of the samples used for developing and validating both Likert-type scales as well as open-ended measures, the majority of studies compare persons from particular world regions, most often North America versus East Asia, and these patterns may not be generalizable to other regions of the world (Cross et al., 2011; Oyserman et al., 2002; Vignoles et al., 2016). Other sample-related issues include the predominance of university student samples used within self-construal research (Schimmack et al., 2005; Smith et al., 2013). It has been argued that these samples may not accurately reflect characteristics of the

larger population due to socioeconomic factors as well as generational changes in self-construal (e.g., Gudykunst & Lee, 2003; Triandis et al., 1988).

The majority of the above discussions surrounding self-construal relates to the SCS (Singelis, 1994) scale and the two-factor model from which it was developed. However, there are also challenges and criticisms specifically related to the measurement of self-construal via open-ended measures such as the TST (Kuhn & McPartland, 1954). This measure was not developed specifically as a measure of self-construal but it has been increasingly used in cross-cultural research over the past few decades. One of the main challenges regarding the use of the TST is the large number of coding schemes applied to participant responses which makes it difficult to compare findings across studies and also questions the objectivity of TST results (Grace & Cramer, 2003; Smith et al., 2013; Trafimow et al., 1991). The TST has also been criticized for lacking context as well as encouraging introspection, both of which may prime independence, making it difficult for persons who are more interdependently-oriented to describe themselves in absolute terms (Harb & Smith, 2008; Kanagawa et al., 2001). The TST also does not provide information of the importance of self-statements provided (Smith et al., 2013; Triandis, 1995).

The relationship between measures of self-construal including the SCS (Singelis, 1994) and the TST (Kuhn & McPartland, 1954) have been explored but strong correlations have not been found and findings have been inconsistent (Bresnahan et al., 2005; Grace & Cramer, 2003). While some have used these results to indicate problems with convergent and construct validity of one or both of these scales (Grace & Cramer, 2003) others have argued that convergence should not be expected given that the SCS measures stable traits while the TST measures momentary and dynamic aspects of the self (Kim & Raja, 2003).

In summary, despite years of debate, there continues to be no consensus regarding the most appropriate approaches to conceptualizing and measuring the self and self-construal. Formal measures of self-construal continue to be routinely used in cross-cultural studies and

researchers continue to strive for improved conceptualization and measurement of self-construal. Additionally, researchers have been attempting to avoid the challenges associated with self-report measures by using neuroimaging studies (e.g., Kim & Sasaki, 2014) and implicit association tests (e.g., Kitayama et al., 2009).

This thesis is not primarily focused on determining which theoretical or methodological approaches to self-construal are most useful or most accurate. However, the areas of debate outlined in the above sections are important to consider given that multiple attempts are made to measure self-construal within this thesis, as part of exploring cross-cultural differences in VIP during AM recall.

### 1.5 AM, Culture and Self

Given that culture impacts the development of the self and one's goals (Conway et al., 2005; Markus & Kitayama, 2003) and that AM and the self are intimately related (e.g., Berntsen & Rubin, 2002; Conway, 2005; Conway & Pleydell-Pearce, 2000; D'Argembeau & Van der Linden, 2008) the interactions between culture, AM and the self are clearly important. According to the SMS model, there is a bidirectional relationship between AM and the self which is situated within one's cultural context (Conway & Jobson, 2012). Culture impacts the contents of the working self so that the hierarchy of goals are either predominantly independent or predominantly interdependent (Conway & Jobson, 2012). This in turn impacts the nature and functions of the AMs recalled (Conway & Jobson, 2012; Wang, 2013). While AM contributes towards the development and maintenance of the conceptual self, it also serves to maintain culture by storing and accessing memories that are consistent with the values and goals of a particular culture (Wang & Conway, 2004). The impact of culture on AM recall is of primary interest in this thesis, specifically as it relates to VIP use. Before discussing VIP use in particular, it is important to understand the ways in which cultural factors impact the purpose for which memories are retrieved, as well as the ways in which culture impacts memory encoding and storage, and memory content. These cultural influences will be outlined

within the following sections and accompanied by discussions regarding the reasons behind the emergence of these cross-cultural differences in AM.

### *1.5.1 Culture and the Functions of AM*

While this thesis is primarily focused on cultural differences in the nature of AM recall, it is important to consider the different ways in which the functions of AM may vary across cultures. As described in section 1.2, three main functions of AM have been proposed including directive, social, and self-functions (Bluck, 2003; Bluck & Alea, 2002; Bluck et al., 2005). These functions have been observed across many cultures and they are assumed to be universal (Alea & Wang, 2015). However, their relative use may vary across cultures. For example, some researchers have found that Americans often use AM for self-purposes (e.g., Maki et al., 2015; Wang et al., 2015) due to the individualistic cultural demand of establishing the self as unique and distinct from others (Markus & Kitayama, 1991). However, persons from individualistic cultures have also been found to use AM for social functions as a means of forming and maintaining social bonds which their culture may not readily provide (Alea et al., 2017). Given that interdependence and social connectedness are often associated with collectivistic cultures, the social functions of AM may be expected to be particularly important within these cultures. Interestingly, researchers have found that in cultures assumed to be largely collectivistic such as parts of East Asia and the Caribbean, AM is less often used for both self and social functions (Alea & Wang, 2015; Kulkofsky et al., 2009; Maki et al., 2015; Wang et al., 2015). The limited use of the social function has been suggested to be related to the fact that social connections are readily preserved within these cultures due to the value of kinship and the existence of extensive social networks which reduces the need for persons to use AM for establishing and strengthening social connections (Alea & Wang, 2015; Liao et al., 2016; Wang et al., 2015). Research involving persons from East Asia and the Caribbean have revealed that the directive function of AM is most commonly used (Alea & Wang, 2015; Kulkofsky et al., 2009; Maki et al., 2015; Wang et al., 2015) though the reason behind this use

may vary slightly between cultures. For example, for persons from China and Japan, the directive use of AM has been proposed to stem from Confucianism (see Yao & Yao, 2000) and the cultural importance of using past experiences to reflect on and learn lessons as a means of supporting future decision-making (Wang & Conway, 2004; Wang & Ross, 2007). Additionally, for persons from collectivistic cultures of developing nation status (including Trinidad and Tobago) in which there is also a great deal of socioeconomic challenge, the directive function of AM allows persons to reflect on past experiences in order to assist in decision-making and problem-solving in the face of daily struggles such as criminal activity and poverty (Alea & Bluck, 2013; Alea et al., 2015). Within-culture variability in the uses of AM have also been found (Nile & Van Bergen, 2015; Reese & Neha, 2015; Sahin-Acar & Leichtman, 2015). This indicates that the functional usage of AM does not simply reflect East-West or collectivistic-individualistic values and that AM use is dynamic and specific to the needs of particular cultures and individuals.

### *1.5.2 Culture and Memory Encoding*

Cultural differences in self-goals impact AM on multiple levels including the encoding and storage of memories (Chua et al., 2005; Hedden et al., 2008; Jobson & O'Kearney, 2009; Masuda et al., 2008). On a perceptual level, researchers have found that persons from cultures assumed to be largely collectivistic (e.g., parts of East Asia) more often attend to and process contextual aspects of a visual scene including the relationship between persons and objects (Chua et al., 2005; Hedden et al., 2008). On the other hand, persons from cultures assumed to be largely individualistic (e.g., North America) more often focus on the salient aspects of a scene/situation and their role within the situation with less attention directed to the context (Chua et al., 2005; Hedden et al., 2008). These culturally-driven perceptual differences may impact which aspects of a situation are processed, encoded, and stored in memory. Further discussion regarding cross-cultural differences in the degree to which persons attend to context is presented in Chapter 5. Differences in self-construal may also influence how

elaborate one's personal experiences are stored. For example, Wang (2011) showed that persons who are more independent in self-construal may encode more elaborate memories focused on the role of oneself compared to persons who are more interdependent in self-construal who may encode less elaborate memories of the self and instead encode more general information about the event including information congruent with social harmony and other collectivistic goals. In summary, culture can impact memory encoding processes and in turn influence the nature and content of memories stored in one's AM base.

### *1.5.3 Culture and Memory Recall: Content*

A number of cultural differences in AM recall have been reported to date. Persons from Western cultural backgrounds tend to access and report memories from earlier on in their childhood (as well as a greater number of early memories) compared to persons from Asian cultural backgrounds (Mullen & Yi, 1995; Wang, 2001). Wang (2001) reported that persons from America reported their earliest memories at approximately three-and-a-half years of age while persons from China reported memories from approximately the age of four. In a later study, self-construal appeared to mediate the age of persons' earliest memories given that priming independent versus interdependent self-construal resulted in Asian Americans reporting earlier memories (Wang & Ross, 2005).

In terms of the nature and content of memories, persons from Western cultural backgrounds have been shown to more often recall memories that are self-focused (versus focused on group activities and social interactions), lengthier, more detailed, and more specific (versus general or relating to routine events), compared to persons from Asian cultural backgrounds (Han et al., 1998; Jobson et al., 2014; Jobson & O'Kearney, 2006; Ross & Wang, 2010; Wang, 2001, 2013, 2016; Wang & Conway, 2004; Wang & Ross, 2005). Self-focused specific memories have been suggested to be important for differentiating oneself from others within individualistic cultures (Wang & Conway, 2004). This has been argued to be less important in collectivistic cultures in which the self strives for interdependence and

relatedness which may be threatened by the retrieval of specific self-focused memories (Wang & Conway, 2004). Additionally, European Americans have also been found to more often discuss their thoughts and feelings at the time of recalled events compared to Asians and Asian Americans (Wang, 2001; Wang & Conway, 2004; Wang & Ross, 2005). Cultural differences have also been found in the emotional valence of recalled memories with European Americans recalling more positive memories than Asians who often recall a balance of positive and negative memories and occasionally emphasize negative experiences (Endo & Meijer, 2004; Oishi, 2002).

Wang (2001) investigated the relationship between culture, AM, and self-concept in university students from America and China. Participants were asked to recall their earliest memories and they completed 10 "I am…" self-descriptions. Results reflected cross-cultural differences in both self-descriptions (more independent and self-focused for the American group) and memory content (shorter, more collective-focused, more general, less elaborate, and more emotionally neutral memories for the Chinese group). However, nationality aside, individual-level differences based on self-descriptions also emerged. Persons who described themselves in more positive, independent, and self-focused terms more often reported specific (versus general) and self-focused (versus other-focused) memories compared to persons who described themselves in more interdependent/relational terms (Wang, 2001). These results were taken as support for the relationship between self-construal and AM (Wang, 2001). Wang (2008) later found that priming self-construal in bicultural Asian Americans impacted the content of their memories such that they reported more self-focused and less socially-focused memories when their "American self" was primed than when their "Asian self" was primed. This finding also supports the SMS model (Conway & Loveday, 2015; Conway & Pleydell-Pearce, 2000) in that it reflects the impact of the current goals of the working self on AM recall.

It is important to note that the majority of studies on cross-cultural differences in AM content have involved the comparison of Asian (often Chinese, Korean, or Japanese) and American groups as examples of collectivistic and individualistic cultures, respectively. Additionally, these studies rarely attempt to measure self-construal at the individual level, often making assumptions about culture based on nationality alone. These limitations and areas in need of additional research are further outlined in section 1.8.2.

### *1.5.4 The Emergence of Cross-Cultural Differences in AM*

Cross-cultural differences in the nature and characteristics of AM are believed to emerge from early socialization practices, particularly parent-child reminiscing (Wang, 2016). Within conversations with their children, parents vary in terms of the frequency with which they recall memories, the types of memories they recall, how often they refer to others in their memories, and the level of detail they provide (e.g., Han et al., 1998; Schröder et al., 2015; Wang & Conway, 2004). These variations often reflect the cultural self-goals of independence and interdependence (Miller et al., 1997; Mullen & Yi, 1995; Wang et al., 2000). For example, researchers have found that mothers from Western cultures are more elaborative when recalling and discussing past events with their children compared to mothers from non-Western cultures (e.g., Hayne & MacDonald, 2003; Leichtman et al., 2003; Wang et al., 2000). This has been shown to impact the degree of specific details that children later recall such that European American children recall more specific memory details than Asian children (Wang, 2007). Additionally, during reminiscing, European-American mothers more often consult with their children about their thoughts and emotions, and often highlight their child's role in past events while East-Asian mothers more often refer to social aspects of the past and the behavioural expectations based on these (Miller et al., 1997; Mullen & Yi, 1995; Wang et al., 2000). These parent-child conversations provide a model for which children learn how to organize and narrate their own memories which in turn impacts the development of their sense of self (Merrill & Fivush, 2016; Nelson & Fivush, 2004; Wang & Brockmeier, 2002).

This is a key component of Nelson and Fivush's (2004) social cultural developmental theory, which describes the emergence of AM as the interaction between these parent-child conversations, the development of language and other areas of cognitive abilities, and the understanding of one's self.

### 1.6 Visual Imagery During AM Recall

The focus of this thesis is the "how" of remembering, specifically with respect to the VIP used when recalling events. Autobiographical memories not only differ in the content of what is remembered or the purpose for which events are remembered, but also the way in which AMs are recalled. This section outlines the role of VIP use during the recall of AMs. Before delving into the discussion of VIP use during AM recall, it is important to outline the general role of mental visual imagery in AM recall. Visual imagery has been described as mental representations of visual information (previously obtained from sensory input) which are held in one's mind as neural representations (Holmes & Mathews, 2010). It has also been described as the defining feature of AM recall (Brewer, 1988). Neuroimaging studies have shown that damage to brain regions largely responsible for visual imagery (i.e., posterior occipital cortical areas) not only results in an impaired ability to generate visual images but also impairments in one's ability to recall AMs (e.g., Brown & Chobor, 1995; Conway, 1996; Conway & Fthenaki, 2000). Similarly, both visual imagery and AM retrieval have been found to be associated with increased posterior cortical activity (Cabeza & St Jacques, 2007; Spreng et al., 2009; Svoboda et al., 2006). Research involving blind participants has revealed lower levels of visual imagery and lower numbers of retrieved AMs compared to sighted participants (Eardley & Pring, 2006; Greenberg et al., 2005; Tekcan et al., 2015). Some studies have also revealed that persons with aphantasia (an inability to form mental images) experience AM deficits (e.g., Dawes et al., 2020; Milton et al., 2021; Zeman et al., 2015) though findings in this area have been mixed (see Pounder et al., 2022; Zeman et al., 2020). Persons with severely deficient autobiographical memory (SDAM) have also been shown to have visual imagery

problems (Palombo et al., 2015). Research within the field of eye-movements has shown increased saccadic movement during AM recall which has been taken to support the idea that AM recall is associated with visual imagery and the visual exploration of past events (El Haj et al., 2014). Taken together, the above neuroscientific studies provide support for the idea that visual imagery and AM are closely linked and highlight the important role of visual imagery in AM retrieval and recall.

## 1.7 VIP: Field and Observer Perspectives

Nigro and Neisser (1983) identified two types of VIPs used when recalling memories; "Field" and "Observer." Field memories are memories viewed from a first-person perspective (i.e., using the same viewpoint that it was originally experienced) while Observer perspectives are viewed from a third-person perspective (like an observer/onlooker). Research conducted in Western cultures has found that the majority of memories are recalled from a Field perspective (Nigro & Neisser, 1983; Robinson & Swanson, 1993). However, most persons can view memories from both perspectives as well as purposefully switch between these two perspectives (Nigro & Neisser, 1983; Robinson & Swanson, 1993).

### *1.7.1 Consequences of Adopting a Particular VIP*

Memories recalled using an Observer perspective have been shown to be less vivid (Robinson & Swanson, 1993; Sutin & Robins, 2010) and less detailed (McIsaac & Eich, 2002), as well as result in a reduced sense of reliving (Berntsen & Rubin, 2006; El Haj et al., 2016; Greenberg & Rubin, 2003; Rubin, 2005) and reduced emotionality at recall (Akhtar et al., 2017; Berntsen & Rubin, 2006; Libby et al., 2005; Nigro & Neisser, 1983; Talarico et al., 2004) compared to memories recalled using a Field perspective. Research in Western countries has often revealed enhanced emotional engagement with prior experiences when a Field perspective is used while adopting an Observer perspective has been shown to serve an emotionally distancing function from prior experience (Williams & Moulds, 2007; Wilson & Ross, 2003).

An Observer perspective has most often been found to be associated with the recall of negatively valenced events, especially those which are traumatic in nature (e.g., Ayduk & Kross, 2010; Kenny & Bryant, 2007; McIsaac & Eich, 2004). This has been interpreted as a self-protection mechanism by which persons can shield themselves from the pain and distress associated with difficult memories, especially given that the use of a Field perspective has been shown to increase emotional distress in these situations (e.g., Berntsen & Rubin, 2006; Kross & Ayduk, 2008; McIsaac & Eich, 2002; Williams & Moulds, 2007). While the use of an Observer VIP may serve an emotional coping function, several researchers have found that recall from an Observer perspective may have negative effects on one's ability to process and recover from trauma in the long term (e.g., Kenny & Bryant, 2007; McIsaac & Eich, 2004) and trauma therapy commonly requires that emotions be processed rather than avoided (Brewin & Holmes, 2003).

In opposition to research revealing emotional dampening with the use of an Observer perspective, some researchers have found that there are instances in which the use of an Observer perspective (compared to a Field perspective) can enhance emotional experiences including distress. One such situation is when recalled memories involve particular focus on the self, or self-conscious emotions such as shame (D'Argembeau & Van der Linden, 2008; Terry & Barwick, 1998; Terry et al., 1995), especially when persons have low self-esteem (Libby et al., 2011). Increased emotionality (as well as memory vividness) with the use of an Observer perspective has also been observed in some clinical populations including persons with social anxiety (Coles et al., 2001; Wells et al., 1998), and the use of an Observer perspective has been shown to compromise mental health in persons with depression (Kuyken & Moulds, 2009).

The consequences of Field versus Observer perspective use on emotionality can be further evaluated via VIP manipulation (Akhtar et al., 2017; Berntsen & Rubin, 2006; Robinson & Swanson, 1993; Williams & Moulds, 2008). For example, Robinson and Swanson (1993) had undergraduate participants report their VIP used during the recall of multiple AMs.

Participants also rated the intensity of emotionality they experienced at the time of the event as well as at the time of recall. Two weeks later, participants recalled the same memories but were instructed on which VIP (i.e., Field or Observer) to adopt. Participants' emotionality ratings did not significantly change when the type of VIP they were instructed to use was consistent with that used two weeks earlier. Additionally, for persons who had switched from an Observer to a Field perspective, there was minimal impact on past and current emotionality. On the other hand, switching from a Field to an Observer VIP resulted in significantly reduced levels of past and current emotionality (see also Akhtar et al., 2017). Similarly, in a sample of mildly dysphoric participants who recalled intrusive AMs, Williams and Moulds (2008) found that instructing participants to switch from their natural Field to an Observer perspective reduced their ratings of emotional distress and vividness while there was little impact of switching from a natural Observer to a Field perspective. Neuroimaging data related to VIP manipulation further supports the role of VIP use in emotion re-experiencing and regulation given the associated changes in activity in brain regions involved in controlling one's emotional responses to past events (see Eich et al., 2009 for further discussion on the neural systems mediating VIP use).

In summary, VIP is clearly an important phenomenological characteristic of memory recall given its potential to significantly impact emotional regulation and overall wellbeing.

### *1.7.2 Factors That Influence VIP use*

While the relationship between culture and VIP use is of primary interest within this thesis, it is important to consider some additional factors which have been found to impact the type of VIP adopted by persons during AM recall (for further reading see Eich et al., 2012; Nigro & Neisser, 1983).

**1.7.2.1 Memory Age.** The majority of research exploring the relationship between memory age and VIP has shown that remote memories (e.g., from childhood) are more often retrieved using an Observer perspective than recent memories (Akhtar et al., 2017;

D'Argembeau & Van der Linden, 2004; Eich et al., 2012; McIsaac & Eich, 2002; Nigro & Neisser, 1983; Piolino et al., 2006; Pronin & Ross, 2006; Rice & Rubin, 2009; Robinson & Swanson, 1993; Sutin & Robins, 2007; Verhaeghen et al., 2018). Some researchers have suggested that the use of an Observer perspective for remote memories may serve to distance the rememberer from past versions of their self-concept when their past and current self-concepts differ (D'Argembeau & Van der Linden, 2004; Libby & Eibach, 2002). Others have proposed that information about our distant selves including our thoughts and feelings at the time of previous events diminishes over time, reducing the likelihood of a Field mode of memory retrieval (Pronin & Ross, 2006). The shift from a Field to Observer perspective with time has been considered evidence for the reconstructive nature of memory such that general knowledge about memories are used to reconstruct aspects of memories after visual and other sensorial details from the original event have been lost (Nigro & Neisser, 1983; Rice & Rubin, 2009). Over time, individual memories lose their episodic details and become more generalized and semanticized (Piolino et al., 2002; Tulving, 1985).

**1.7.2.2 Memory Emotionality.** Emotionality refers to the emotions experienced by someone at the time when the memory was encoded (i.e., at the time of the recalled event). The research regarding the relationship between VIP use and memory emotionality is not clear cut. Some researchers have found that emotional memories (versus neutral memories) are more often recalled from a Field perspective (e.g., D'Argembeau et al., 2003) and others have found that VIP use does not differ for memories associated with positive versus negative emotions (e.g., Talarico et al., 2004). While VIP use may not significantly differ between positive and negative memories, Talarico et al. (2004) found that the strength of emotionality at the time of the recalled event was a stronger predictor of VIP use than emotional valence such that events stronger in emotionality were more often recalled using a Field perspective (D'Argembeau et al., 2003; Talarico et al., 2004). However, this may not be the case for events that are very strongly negative/traumatic, in which case an Observer perspective is more often

adopted (e.g., Ayduk & Kross, 2010; Kenny & Bryant, 2007; McIsaac & Eich, 2004). Multiple researchers have proposed that the use of an Observer perspective may be a cognitive avoidance strategy that dampens the intensity of the distressing emotions and protects the self from the impact of the traumatic memory (e.g., Cooper et al., 2002; Kenny & Bryant, 2007; McIsaac & Eich, 2004).

Aside from emotional avoidance/distancing, another explanation proposed for the tendency for traumatic memories to be recalled from an Observer perspective is due to the limited amount of visual information encoded during traumatic events since attention is narrowed and specifically aimed at the threat (Rubin et al., 2008). Rubin et al. (2008) suggest that this restricts persons' ability to reconstruct the memory from the Field perspective. This is also consistent with research showing more frequent use of an Observer perspective in persons who experience events without visual input (Rubin et al., 2003).

**1.7.2.3 Level of Self-Awareness.** Memories that contain situations involving a high degree of self-awareness or self-conscious emotions (e.g., embarrassment or shame) such as giving a public presentation or running from a threatening situation have been found to be associated with an Observer perspective (D'Argembeau & Van der Linden, 2008; Nigro & Neisser, 1983; Rice & Rubin, 2011). The use of the Observer perspective allows persons to obtain information about how the self is viewed by others (McIsaac & Eich, 2002). The focus on the self in memories is explored and further discussed in Chapter 5. An increased use of an Observer perspective has also been demonstrated in persons with high levels of trait self-consciousness (Robinson & Swanson, 1993) and in clinical populations in which persons often excessively focus on the self, such as in the case of social anxiety (D'Argembeau et al., 2006; McIsaac & Eich, 2004; Wells et al., 1998) and body dysmorphic disorder (Osman et al., 2004).

**1.7.2.4 Level of Visual and Sensory Detail.** Some researchers have proposed that VIP use often depends on the level of recollective detail available for a particular event. Events for which a high level of detail is available have been associated with the use of a Field

perspective while events with minimal recollective sensory detail or with a sense of knowing rather than remembering (e.g., memories which are more general and sematic in nature as opposed to more episodic and specific) are more often associated with the use of an Observer perspective (Crawley & French, 2005; Piolino et al., 2006; Robinson & Swanson, 1993; Sutin & Robins, 2007). This argument can also be tied to the findings on memory age and changes in VIP use with time and forgetting (see section 1.7.2.1) as well as findings of increased Observer perspective use in persons who experience events without visual input (Rubin et al., 2003).

**1.7.2.5 Contextual Versus Emotional Details.** The type of VIP adopted during AM recall has been shown to be related to the type of details persons are aiming to recall. In their seminal work on VIPs, Nigro and Neisser (1983) found that persons who were asked to focus on recalling emotional aspects of an experience more often used a Field perspective compared to persons who were asked to recall information related to the context and surroundings of the memory. Additionally, memories recalled from a Field perspective were richer in affective detail while memories recalled from an Observer perspective contained more descriptive details (Nigro & Neisser, 1983). Additionally, when persons did not receive instructions as to which aspects of the memory to focus on, they primarily used a Field perspective which may reflect a natural tendency for persons to remember the feelings and emotions associated with past events as opposed to contextual details (D'Argembeau et al., 2003).

**1.7.2.6 Concrete Details Versus Broader Meaning.** Libby and Eibach (2011) proposed that the meaning attached to a memory is critical in determining VIP use during AM recall. In a study in which persons recalled a graduation event, VIP use depended on whether they focused on concrete aspects of the memory or whether they focused on integrating the meaning of the memory within the broader scope of their lives. A Field perspective was more often observed by the former group while an Observer perspective was more often observed by the latter group (Libby & Eibach, 2011).

**1.7.2.7 Rehearsal.** A few studies have reported a relationship between memory rehearsal (i.e., how often persons think or talk about a memory) and VIP use, although the proposed nature of this relationship is mixed. Some researchers have reported the use of an Observer perspective for memories which have not been frequently rehearsed (Siedlecki, 2015; Terry & Barwick, 1998) while other researchers have reported that a Field perspective is more often used for less frequently rehearsed memories (Berntsen & Rubin, 2006; D'Argembeau et al., 2003; McIsaac & Eich, 2002; Nigro & Neisser, 1983; Robinson & Swanson, 1993). The latter pattern has also been demonstrated in persons with depression (Kuyken & Moulds, 2009). Butler et al. (2016) found that memory rehearsal can significantly impact the rate of which memories shift from Field to Observer perspective with time but this depends on which perspective is used during rehearsal. When rehearsed from a Field perspective, the shift in Field to Observer perspective was slowed while repeated retrieval from an Observer perspective accelerated the shift from Field to Observer perspective over time.

**1.7.2.8 Perception of Self-Change.** The recall of AMs has been proposed to play an important role in maintaining a coherent sense of self over time (Bluck, 2003; Bluck et al., 2005; Conway & Pleydell-Pearce, 2000; Demiray & Janssen, 2015; Nelson, 2003; Wilson & Ross, 2003). Researchers have proposed that VIP facilitates self-evaluative processes particularly those involving perceptions of self-change (Libby & Eibach, 2002; Libby et al., 2005). An Observer perspective has been shown to be associated with a sense of self-change and it is often used when persons view remembered events as incongruent with and distant from their current self-concept. On the other hand, a Field perspective has been shown to be associated with a sense of self-stability and continuity and it is often used when persons view their past and current selves as congruent (Libby & Eibach, 2002; Libby et al., 2005; Sutin & Robins, 2008).

**1.7.2.9 Additional Individual Differences.** This section outlines some of the most common individual-level factors found to be related to VIP use. One's overall preference for Field versus Observer perspective use is in and of itself an individual contributor towards VIP use (Siedlecki, 2015; Verhaeghen et al., 2018). For example, Verhaeghen et al. (2018) reported that when recalling multiple memories, young adults tended to consistently use a particular perspective (Cronbach alpha of .72).

As discussed in section 1.7.2.1, memory age has been found to significantly impact VIP use. However, participant age has also been shown to be a significant independent predictor of VIP use (Piolino et al., 2006; Rathbone et al., 2015; Siedlecki, 2015). For example, Piolino et al. (2006) found that older adults (aged 60 and above) more often used an Observer perspective when recalling memories compared to younger adults (aged 21 to 34).

In terms of gender, several studies have found more frequent use of an Observer perspective in female versus male participants (Huebner & Fredrickson, 1999; Rice & Rubin, 2009). This finding has been explained in terms of sexual objectification theory (Huebner & Fredrickson, 1999) which proposes that societal attitudes and beliefs tend to encourage the objectification of female bodies. Females may internalize this objectification of themselves resulting in the more frequent use of an Observer perspective during AM recall (Huebner & Fredrickson, 1999). Heubner and Fredrickson (1999) further argued that in some situations, women may be more self-conscious than men and more likely to consider how they appear to others, which later predisposes them to adopt an Observer perspective when remembering these events. These findings can also be linked to the findings that regardless of gender, an Observer perspective is often used when recalling situations that involve a high degree of self-awareness or self-conscious emotions (D'Argembeau & Van der Linden, 2008; Nigro & Neisser, 1983; Rice & Rubin, 2011).

Personality factors have been found to impact VIP use during AM recall (Robinson & Swanson, 1993; Sutin & Robins, 2010). For example, Sutin and Robins (2010) found that being

narcisisstic increased the likelihood of persons recalling positive memories from an Observer perspective and this was explained as a means by which narcissistic persons could increase their positives evaluation of themselves. Increased Observer perspective use in narcisisstic persons has also been linked to their general tendency to enjoy watching themselves (Robins & John, 1997).

In terms of psychopathology, an increased use of an Observer perspective has been found in clinical populations including persons with depression (Bergouignan et al., 2008; Holmes et al., 2016; Kuyken & Moulds, 2009; McIsaac & Eich, 2002), post-traumatic stress disorder (Rice, 2010), social anxiety disorder (D'Argembeau et al., 2006; Rice, 2010; Wells et al., 1998), and body dysmorphic disorder (Osman et al., 2004). On the other hand, persons with other psychological disorders such as obsessive compulsive disorder have been shown to primarily use a Field perspective during AM recall (Lipton et al., 2010; Speckens et al., 2007).

## 1.8 Culture and VIP use During AM Recall

As outlined in the section 1.7.2, VIP use during AM recall can be influenced by a number of factors. However, the particular factor of interest within this thesis is culture.

### *1.8.1 Previous Findings Regarding Culture and VIP use*

The role of culture in VIP use has rarely been examined despite preliminary evidence to suggest that culture influences the type of VIP used when persons recall memories (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). Persons from interdependently oriented cultures such as East Asia have been found to more frequently use an Observer perspective when recalling memories compared to persons from independently-oriented cultures such as Europe and North America (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007).

Cohen and Gunz (2002) gave North American and Asian university students (both attending a North American university) 10 situations for which they recalled a memory. Some situations involved them being at the centre of attention (e.g., giving an individual

presentation or being embarrassed) while others did not (e.g., watching the news on television or being in a group performance). Participants rated their VIP using an 11-point scale ranging from "Entirely a first-person memory" (i.e., a Field perspective) to "Entirely a third-person memory" (i.e., an Observer perspective). Cohen and Gunz (2002) found that the type of perspective used by participants depended on whether or not they were at the centre of attention in their memories. When Asians reported memories for which they were at the centre of attention, they used more of an Observer versus Field perspective compared to when they reported memories in which they were not at the centre of attention. Asians also more often used an Observer perspective when they were at the centre of attention compared to North Americans. Americans used similar levels of an Observer perspective for memories in which they were at the centre of attention as well as memories in which they were not at the centre of attention. Interestingly, in situations in which Asians were not the centre of attention, they less often used an Observer perspective compared to Americans.

Cohen and Gunz (2002) proposed that cultural differences in self-construal (independent versus interdependent) cause persons from Eastern cultures to more often experience themselves through the eyes of a "generalized other" (Triandis, 1989) compared to persons from Western cultures when they are at the centre of attention. As such, Easterners exhibit more of an "outside-in" view of the self while Westerners exhibit more of an "inside out" view of the self (Cohen & Gunz, 2002). Some researchers have suggested that adopting an Observer view of the self in interdependent cultures may allow persons to monitor and regulate their behaviours in accordance with collectivistic/interdependent cultural expectations (Libby & Eibach, 2013). On the other hand, the use of a Field perspective by Westerners allows persons to re-experience being the centre of attention which is more in accordance with Western individualistic cultural values (Libby & Eibach, 2013).

Two additional studies have revealed a relationship between VIP use and culture. As part of developing and validating the Memory Experiences Questionnaire (MEQ), Sutin and

Robins (2007) asked Asian and Caucasian university students to recall their earliest memory as well as a general-self-defining memory (one important and central to their identity). While VIP use was not the primary focus of this research, VIP was measured (as part of the MEQ) using a series of statements rated along a 5-point scale ranging from "Strongly disagree" to "Strongly agree." Results indicated that Asians reported more Observer perspectives than Caucasians for their general self-defining memory, though this difference was no longer observed when the affective and motivational content of the memory were controlled for.

Martin and Jones (2012) examined VIP use in university students from 26 countries. The authors used numerical estimates of individualism based on Hofstede's country classification system (Hofstede, 2001). Participants recalled a memory in which they received an important piece of news. They rated their VIP along a 7-point scale ranging from "Entirely looking out through my own eyes" to "Entirely observing myself from an external point of view." They found that individualism scores significantly and uniquely predicted VIP use and that higher individualism scores were associated with more Field perspective ratings.

### *1.8.2 Issues and Gaps in Research Regarding Culture and VIP use*

While all three of the studies outlined in the previous section found a relationship between culture and VIP use, the results of the studies were not entirely consistent with one another in the sense that the observed relationship depended on particular situations, as in Cohen and Gunz's (2002) study, or the content of the memory itself as shown by Sutin and Robins (2007). It is important to note that the varying methodological approaches within the above studies may have contributed to varying results. Firstly, VIP use was measured in different ways across the studies. Secondly, the nature of the memories recalled in the above studies varied significantly. Cohen and Gunz (2002) provided particular situations with the centre of attention being a primary focus of their analysis. Participants in Sutin and Robins' (2007) study reported self-defining memories and those in Martin and Jones' (2012) study reported memories for receiving an important piece of news. It is unknown as to whether

participants in the latter two studies were at the centre of attention or not in their memories. It is therefore possible that the preference for persons from collectivist/interdependent cultures to use an Observer perspective (more often than persons from individualistic/independent cultures) may extend beyond situations in which they are the centre of attention.

There are additional concerns regarding the above studies. With respect to the samples used, most non-Western participants were from Asia and in at least two of the three studies, participants were enrolled in Western universities. There is no information provided regarding the length of time that non-Western participants had been living or studying in Western countries. This is an important consideration given the potential influence of acculturation. A major limitation of all three studies exploring VIP use across cultures is that cultural self-construal was assumed based on the nationality of participants. Research has shown that cultural groups are not homogenous and that there is often great within-country variability in self-construal (Green et al., 2005; Matsumoto, 1999; Oyserman et al., 2002; Singelis, 1994).

Overall, it is not yet clear whether cross-cultural differences in VIP use is a stable and generalizable finding. Additional research is needed to explore more thoroughly the nature of the relationship between culture and VIP use, especially in non-Western cultures outside of Asia. This is a primary goal of the current thesis and countries of the Caribbean region, most frequently Trinidad and Tobago (TT), are used as non-Western samples. There is currently no published research regarding VIP use or self-construal (measured at the individual level) in persons from the Caribbean region including TT. Before delving into the research of the current thesis, a brief introduction to TT, especially as it relates to culture, is provided. Information regarding additional Caribbean territories from which participants were also recruited (i.e., Barbados, and Jamaica) is presented in Chapter 3.

## 1.9 An Overview of Culture and Self-Construal in TT

Trinidad and Tobago (TT) is the southernmost island of the Caribbean. It is a democratic nation with an industrialized economy primarily driven by the petrochemical industry (Ministry of Finance and the Economy, 2019). It has been described as a high income developing country (World Trade Organization, 2012). Charles Tidwell (2001) argued that TT has aspects of both individualism and collectivism based on Hofstede's cultural predictors of individualism (Hofstede, 2001). While there are strong elements of individualism including a significant amount of economic development, a relatively large middle class, and access to public education, there are also elements that are less predictive of individualism such as a tropical climate and extended family structures (Tidwell, 2001).

In terms of ethnicity, 41% of the TT population are of African descent and 35% are of East Indian descent (Central Statistical Office, 2011). Descartes (2012) has argued that the African population in Trinidad is more individualistic and that the East Indian population is more collectivist in nature. Some researchers have attributed this difference to the fact that Africans arrived in Trinidad as slaves and were forced to release their collectivistic cultural identity and instead adopt a more individualist European cultural identity (Stewart, 2004). Additionally, due to the colonial history of the Caribbean (including TT) there has also been significant acculturation (Brathwaite, 2005). Some researchers describe TT as having a central core of culture in which all races participate (Hodge, 1996). While some researchers argue that the TT culture is a balance of individualism and collectivism (Descartes, 2012; Stewart, 2004; Tidwell, 2001), its current Individualism index within Hofstede's classification system (Hofstede Insights, 2021) is much lower (index of 16) than that of Western countries including the United States and the United Kingdom (indices of 89 and 91, respectively). The TT individualism index is more in line with that of several Asian countries such as China (20), South Korea (18) and Taiwan (17). According to Hofstede's Individualism index, TT is considered a collectivistic (interdependent) society (Hofstede Insights, 2021).

## 1.10 Aims of the Thesis

Exploring the way culture impacts VIP is important given that research emerging from Western countries has revealed an impact of VIP use on several aspects of recalled memories (see section 1.7.1) and VIP use has been shown to play an important role in emotion regulation (Berntsen & Rubin, 2006; Libby et al., 2005; Nigro & Neisser, 1983; Talarico et al., 2004; Williams & Moulds, 2007; Wilson & Ross, 2003), emotional wellbeing (Kuyken & Moulds, 2009), and the development of a coherent sense of self and identity over time (Libby & Eibach, 2002; Libby et al., 2005). Are the consequences of using particular VIPs similar in cultures across the globe? If an Observer perspective is more commonly used (or even the dominant perspective) in collectivistic/interdependent countries, then how does the use of this perspective impact the characteristics of the recalled memory, the rememberer's wellbeing, and the rememberer's sense of self, compared to persons from individualistic/independent cultures? In other words, does the role of VIP use differ depending on one's culture and culturally informed self-goals? Before questions like these can be answered, the nature of the relationship between culture and VIP use needs to be more fully established. This is the goal of the current thesis.

The overarching objective of this thesis is to explore and better understand the influence of culture on VIP use. To begin with, the existing research does not provide sufficient evidence to confirm that cross-cultural differences in VIP use are in fact stable and generalizable findings. Additional research is clearly needed to understand more thoroughly the nature of the relationship between culture and VIP use, especially in non-Western cultures outside of Asia. The studies within this thesis are the first to explore VIP use through the comparison of Caribbean samples to a Western sample (the United Kingdom).

The four studies within this thesis aim to address some of the gaps in the literature relating to the relationship between culture and VIP use. They are geared towards exploring the relationships between nationality (UK versus Caribbean), self-construal, and VIP use during

AM recall. Unlike previous studies exploring cross-cultural differences in VIP use, the studies within this thesis do not assume self-construal based on nationality alone or national aggregates of individualism. Instead, multiple attempts are made to formally measure self-construal at the individual level using measures including the SCS (Singelis, 1994), the TST (Kuhn & McPartland, 1954), and the CIRN-SCS-3 (Vignoles et al., 2016). This allows for a more accurate determination of self-construal within and across cultures.

*Studies 1 and 2* primarily aim to explore and compare the nature of VIP used by participants from the UK and the Caribbean region. Study 2 also considers the impact of temporal factors on VIP use in these cultures by exploring memories from different periods of persons' lives. A primary aim of Studies 1 and 2 is to determine whether cross-cultural differences in VIP use exist and whether self-construal mediates the relationship between culture (in terms of nationality) and VIP use. The overall relationship between self-construal and VIP use (regardless of nationality) is also explored. As a further attempt to explore the role of self-construal in VIP use between persons from the UK and persons from the Caribbean, *Study 3* utilizes a priming technique to manipulate the salience of interdependent and independent self-construal as a means of observing the impact on both self-reported self-construal and more so, VIP use in these cultures. Finally, *Study 4* aims to determine whether cross-cultural differences in VIP use (if any) depend on whether or not persons are the focus/centre of attention in their recalled memories. Of the three studies known to have explored cross-cultural differences in VIP use during AM recall, the strongest effect has been found when researchers considered this factor (Cohen & Gunz, 2002).

Secondary aims of these studies include the exploration of cross-cultural differences in additional memory characteristics (e.g., image vividness, age of memory, ease of imagery, emotional valence of memories, strength of emotionality at the time of the recalled event, frequency of memory rehearsal, memory specificity, and whether the memory was individually or socially focused), ethnic considerations, the relationship between independent

and interdependent self-construal, and the relationship between different measures of self-construal.

Table 1.1 displays the main research questions within this thesis alongside the chapters in which they are addressed.

**Table 1.1**

*Primary Research Questions and Corresponding Chapters*

| Chapters | Research Questions |
|---|---|
| All | Are there differences in the type of VIP used during AM recall between persons from the United Kingdom and persons from the Caribbean? |
| 2 | What is the impact of temporal factors on VIP use in both cultures? |
| All | Are there differences in self-construal between persons from the United Kingdom and persons from the Caribbean? |
| 1, 2 | Is there a relationship between self-construal and VIP use during AM recall regardless of nationality? |
| 1, 2, 4 | Does self-construal mediate the relationship (if any) between culture (in terms of nationality) and VIP use? |
| 3 | What is the impact of self-construal priming on VIP use? |
| 3 | What is the impact of self-construal priming on self-construal ratings? |
| 4 | Is there a differential impact of memory type (being the centre of attention versus not being the centre of attention in one's memory) on VIP use depending on nationality? |
| 4 | Is there a differential impact of memory type (COA versus NCOA) on VIP use depending on self-construal? |

# 2 Chapter 2: Initial Investigations of Culture and VIP use During AM Recall

## Study 1

As discussed in section 1.4, culture has been shown to impact the development of the self and one's goals (Markus & Kitayama, 2003). Culture is often described in terms of "self-construal" (independent or interdependent), a term coined by Markus & Kitayama (1991) and developed in relation to the concepts of individualism and collectivism (Hofstede, 1980). In some regions of the world, including many Asian countries, individuals are viewed as members of a group who are defined by their relationships with others and outwardly focused on maintaining the harmony of the group. On the other hand, Western countries have largely been assumed to view the individual as autonomous, uniquely different from others, and inwardly focused on their own psychological experiences (Markus & Kitayama, 2010; Nisbett et al., 2001). Researchers have proposed that persons can have both independent and interdependent aspects of themselves but culture tends to impact which orientation is more dominant (e.g., Conway & Jobson, 2012; Singelis, 1994; Wang & Ross, 2005).

Cultural differences in one's self-goals have been shown to impact the encoding and storage of AMs (e.g., Chua et al., 2005; Hedden et al., 2008; Jobson & O'Kearney, 2009; Masuda et al., 2008). In terms of AM recall, researchers have found that persons from Western cultural backgrounds tend to access and report memories from earlier in their childhood than persons from Asian cultural backgrounds (e.g., Mullen & Yi, 1995; Wang, 2001). In terms of the nature and content of memories, persons from Western cultural backgrounds have been found to more often recall memories that are self-focused versus other-focused, longer, and more specific, compared to persons from Asian cultural backgrounds (Han et al., 1998; Jobson et al., 2014; Jobson & O'Kearney, 2006; Ross & Wang, 2010; Wang, 2001, 2013, 2016; Wang & Conway, 2004; Wang & Ross, 2005). Cultural differences have also been found in the emotional valence of recalled memories with European Americans recalling more positive memories than Asians (e.g., Oishi, 2002).

Of particular interest in this study is the impact of culture on VIP use during AM recall. Nigro and Neisser (1983) identified two types of VIPs; “Field” and “Observer.” When recalling memories from a Field perspective, persons use a first-person perspective (i.e. the same viewpoint from which their memory was originally experienced). When recalling memories from an Observer perspective persons use a third-person perspective (like an observer/ onlooker). As reported in section 1.7.2, VIP use during AM recall can be influenced by a number of factors. The particular factor of interest within the current research is culture. Three studies to date have reported the influence of culture on the type of VIP used when persons recall memories (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). These are reviewed in detail in section 1.8.1. In summary, these studies have demonstrated that persons from interdependently-oriented cultures such as parts of East Asia more frequently use an Observer (third-person) perspective when recalling memories compared to persons from independently-oriented cultures such as Europe and North America (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). In the case of the Cohen and Gunz’s (2002) study, cross-cultural differences in VIP use depended on whether or not persons were at the centre of attention in their memories. Cohen and Gunz (2002) proposed that cultural differences in self-construal (independent versus interdependent) cause persons from Eastern cultures to more often experience themselves through the eyes of a “generalized other” (Triandis, 1989) when they are at the centre of attention compared to persons from Western cultures.

While all three studies exploring cross-cultural differences in VIP use found a relationship between culture and VIP use (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007), the results of these studies were not entirely consistent with one another in the sense that the observed relationship depended on particular situations (Cohen & Gunz, 2002), or the content of the memories (Sutin & Robins, 2007). It is important to note that the different methodological approaches within the above studies may have contributed to the

varying results. An additional concern regarding these studies include the fact that participants (including those of Asian background) all resided in Western countries which brings into question issues such as acculturation. Finally, and most concerning, is the fact that all three studies exploring VIP use across cultures to date assumed cultural self-construal based on the nationality of participants. Research has shown that cultural groups are not homogenous and that there is often great within-country variability in self-construal (e.g., Green et al., 2005; Matsumoto, 1999; Oyserman et al., 2002; Singelis, 1994).

In summary, it is not yet clear whether cross-cultural differences in VIP use is a stable and generalizable finding and additional research is needed to more thoroughly explore the nature of the relationship between culture and VIP. This is of particular interest given the impact that VIP use has been shown to have on the nature and characteristics of memories as well as the way memories are used to regulate emotions and maintain a coherent sense of self and identity over time (Berntsen & Rubin, 2006; Libby et al., 2005; Nigro & Neisser, 1983; Talarico et al., 2004; Williams & Moulds, 2007; Wilson & Ross, 2003).

### 2.1 Study Aims

The present study is considered a first step towards understanding the impact of culture (at the national level as well as based on self-report measures of self-construal) on VIP use beyond the East-West dichotomy. It is the first study of VIP use to be conducted using a Caribbean sample (TT) in comparison with a Western sample (the UK). Importantly, unlike previous studies exploring cross-cultural differences in VIP use, this study does not assume self-construal based on nationality alone. Instead, an attempt is made to formally measure self-construal at the individual level using the Singelis Self-Construal Scale (SCS; Singelis, 1994). By avoiding making individual assumptions of self-construal based on nationality alone or national aggregates of individualism, a more accurate determination of self-construal within and across cultures is expected. If cross-cultural differences in VIP use do exist between TT and the UK, measuring self-construal allows for determining whether these differences are

mediated by self-construal itself. The overall relationship between self-construal and VIP (regardless of nationality) is also explored. Secondary aims of this study include exploring cross-cultural differences in other memory characteristics (image vividness, memory age, ease of imagery, emotional valence of memories, and strength of emotionality at the time of recalled events), as well as exploring the relationship between independent and interdependent self-construal.

## 2.2 Research Questions and Hypotheses

The following research questions are addressed in Study 1:

1. *Are there differences in the type of VIP used during AM recall between persons from the United Kingdom and persons from the Caribbean?*

   It is hypothesised that persons from the UK will more often utilize a Field VIP when recalling AMs compared to persons from Trinidad and Tobago (TT).

2. *Are there differences in independent and interdependent self-construal between persons from the United Kingdom and persons from the Caribbean?*

   (a) It is hypothesised that self-construal ratings obtained from UK persons will reflect higher independence ratings and lower interdependence ratings compared to self-construal ratings obtained from TT persons.

   (b) It is hypothesised that self-construal ratings obtained from UK persons will reflect higher independent than interdependent self-construal ratings relative to TT persons.

3. *Is there a relationship between self-construal and VIP use during AM recall regardless of nationality?*

   It is hypothesised that regardless of nationality, higher independent self-construal ratings will be associated with more frequent use of a Field VIP during AM recall while higher interdependent self-construal ratings will be associated with more frequent use of an Observer VIP during AM recall.

4. *Does self-construal mediate the relationship (if any) between nationality and VIP use?* It is hypothesised that cultural differences (at the nationality level) lead to differences in self-construal, which in turn leads to differences in VIP. Therefore, self-construal will mediate the relationship between nationality and VIP.

## 2.3 Methods

### *2.3.1 Design*

The study employed a cross-sectional between-subjects design in which participants completed questionnaires involving memory recall and self-construal.

### *2.3.2 Participants*

Due to recruitment challenges, the recruitment goal was to obtain the maximum number of participants possible. Ninety-three (93) undergraduate students took part in this study. A sensitivity power analysis for difference between two independent means was conducted using G*Power 3.1 (Faul et al., 2007). Results indicated that with a total sample of 93 participants, the design of the current study had an 80% chance of detecting a medium effect size ($d$ = 0.52).

All participants were citizens of either the UK or TT. Their ages ranged from 18 to 30 years. English was the first language of all participants. All participants gave informed consent after reading the online information sheet (see Appendix A) and consent form (see Appendix B). Participants were given the opportunity to withdraw from the study at any time during the survey. Research was approved by the School of Psychology and Clinical Language Sciences (University of Reading) ethics committee. Additional ethical approval from the University of the West Indies was not required.

**2.3.2.1 TT Sample.** Forty-seven (47) TT participants (43 females, 4 males) were recruited from the Social Sciences department of the University of the West Indies (UWI, TT campus). In order to access these students, two Psychology lecturers at UWI were contacted by the researcher for permission to circulate basic study details (title, brief

description, duration, and link to the study) to students via email. The lecturers then willingly circulated this email within the Social Sciences department of UWI. All TT participants received course credit for participation. One TT participant's data was excluded from analyses as he/she reported an inability to obtain a visual image of their memory during the Visual Imagery Task. The ability to obtain a visual image was pertinent for analyzing VIP and imagery characteristics data. The results presented for this study include the remaining 46 TT participants (42 females, 4 males). Their ages ranged from 18 to 30 years (*M* = 22.40 years, *SD* = 3.06). Demographic information for the UK and TT samples are displayed in Table 2.1.

**2.3.2.2 UK Sample.** The forty-six (46) UK participants (43 females, 3 males) were recruited via Prolific (www.prolific.co). It was originally intended for the UK participants to be recruited from the University of Reading. However, due to a lack of participation from students, Prolific was used for recruitment. For inclusion, participants needed to be current Psychology undergraduate students between the ages of 18 and 30 years who were UK citizens enrolled in UK universities. English needed to be their first language. The UK participants all received £5 for participating. Demographic information for the UK and TT samples is displayed in Table 2.1. Data from all UK participants recruited were included in the analyses for this study.

**Table 2.1**

*Demographic Characteristics of Participants*

| Characteristic | United Kingdom | Trinidad & Tobago |
|---|---|---|
| | n (%) | n (%) |
| Gender | | |
| Female | 43 (93) | 42 (91) |
| Male | 3 (7) | 4 (9) |
| Mean age (SD) | 22.91 (3.90) | 22.40 (3.06) |
| Median age (IQR) | 21.50 (5.00) | 21.00 (3.00) |

### *2.3.3 Materials and Procedure*

All participants completed a two-part online survey administered using Alchemer (https://www.alchemer.com). Both parts of the survey were completed within a single sitting. Before completing part one, participants provided their age, nationality and country of residence. Part one of the survey was comprised of a visual imagery task and a visual imagery questionnaire, and part two was comprised of the SCS (Singelis, 1994). After completing the SCS, participants provided additional demographic details including their gender. They were also given the option to describe their ethnicity via an open-ended text box.[1]

**2.3.3.1 Visual Imagery Task.** Participants were presented with a short description of the two types of VIPs (Field/First Person and Observer/Third Person) that can be used when remembering an event. Descriptions were provided for these perspectives: "One way is to remember/visualize an event where you can see yourself in the scene as well as the action you are performing (like an observer/onlooker). The other way is to remember/visualize an event as if you are viewing it through your own eyes (from the same viewpoint that it was originally experienced)." Participants were also told that events are sometimes remembered entirely from one perspective but that it was also possible to recall an event both ways (switching between perspectives). These descriptions were adapted from studies conducted by Nigro and Neisser (1983) and Rice & Rubin (2009). In addition to written descriptions, participants were provided with a pictured example of the two types of perspectives (see Appendix C) in order to aid understanding. They then received the following instructions: "Please spend the next few minutes carefully thinking back to a social event that occurred more than one month ago but less than 6 months ago. Please take your time and try your best to form a visual image of this memory. Once you have this image in mind, please answer the following questions. Please remember that there are no correct or incorrect answers.

[1] Most participants did not provide information about their ethnicity and data analyses involving ethnicity were not performed for this study.

Many previous studies assessing AM recall provide participants with cue words/specific situations or ask participants to focus on particular aspects of their memories or the feelings they experienced (Cohen & Gunz, 2002; D'Argembeau & Van der Linden, 2004; Martin & Jones, 2012; Nigro & Neisser, 1983; Robinson & Swanson, 1993). Given that this study was an initial exploration of cross-cultural differences in VIP, task instructions were kept relatively simple and free of bias with regard to memory content so as not to overly influence participants. It was however requested that a social memory be recalled given that differences in memory perspective have more often been found in memories involving social situations or those that involve at least one other person (Cohen & Gunz, 2002; Martin & Jones, 2012). Additionally, a relatively recent time frame for the event (one to six months ago) was selected in an attempt to partially control for temporal factors. Research has indicated that memories alter with time and that memory age has often been shown to significantly predict VIP with older memories more likely recalled from a third-person perspective (Berntsen & Rubin, 2006; Nigro & Neisser, 1983; Rice & Rubin, 2009; Robinson & Swanson, 1993). Given that temporal factors were not of primary interest of the current study an attempt was made to reduce its potential influence.

**2.3.3.2 Visual Imagery Questionnaire.** As a means of measuring VIP use, participants were asked: "Using the scale below, please rate how much your memory came as if you were seeing yourself in the scene (like an observer) versus as if it were seen through your own eyes." They responded using a 7-point scale ranging from 1 (Entirely as an Observer) to 7 (Entirely through My Own Eyes). Seven-point ratings scales have been used by multiple researchers to satisfactorily measure VIP (Berntsen & Rubin, 2006; Martin & Jones, 2012; Rice & Rubin, 2009). Some researchers have measured VIP by having participants choose between the categories of Field and Observer (D'Argembeau & Van der Linden, 2004; Nigro & Neisser, 1983; Robinson & Swanson, 1993). However, it has been shown that persons can obtain multiple images of the same event from more than one perspective (Huebner & Fredrickson,

1999; Rice & Rubin, 2009). As such, a 7-point continuum scale was selected for more accurately capturing the participants' perspective experience. Participants were also asked whether or not they saw their image from both perspective types.

As a means of exploring additional memory characteristics (aside from VIP), participants were presented with questions about memory vividness (7-point scale ranging from Not Vivid at all to Extremely Vivid), estimated time of event (one to six months ago), the emotion they felt at the time of the event (later coded as "Positive," "Negative," or "Mixed/Neutral") and the strength of this emotion (7-point scale ranging from Not Strongly at all to Extremely Strongly). Participants were also given the opportunity to comment (via an open ended text box) on how easy or difficult it was for them to form a mental image of their memory. The responses were then categorized by the researcher as either More Easy (e.g., "easy," "very easy," "pretty easy") or More Difficult (e.g., "difficult," "quite hard," "not easy at all"). Finally, they were asked whether they were unable to form a visual image of their memory at all. The latter question was asked as a means of ensuring that persons from whom visual imagery data were obtained had successfully engaged in the visual imagery task. See Appendix D for the items included in the Visual Imagery Questionnaire.

**2.3.3.3 Self-Construal Scale (SCS; Singelis, 1994).** The 30-item SCS was used as the measure of self-construal. The SCS (introduced in section 1.4.1.1.) is comprised of two subscales that were originally developed based on the concepts of independence and interdependence (Markus & Kitayama, 1991). A primary goal of the development of the SCS was to demonstrate and measure the existence of both self-construals (independent and interdependent) at the individual level. Despite existing controversies surrounding the measurement of self-construal (see section 1.4.2), the SCS continues to be one of the most frequently used measures of self-construal in cross-cultural research. The 30-item SCS contains 15 items for the independent subscale and 15 items for the interdependent subscale. An example of an independent item is "I do my own thing, regardless of what others think." An

example of an interdependent item is “My happiness depends on the happiness of those around me.” Participants rate each item using a 7-point scale, with responses ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). See Appendix E for instructions and questionnaire items.

Consistent with standard scoring procedures of the SCS (Singelis, 1994), participants’ ratings (1–7) for the 15 independent items were added together and divided by 15 to give a mean independence score. The same was done for the interdependent items. Therefore, each participant received two scores: one indicating the strength of their independent self-construal and one indicating the strength of their interdependent self-construal. Higher scores indicate stronger self-construals.

Information regarding the development, reliability, and validity of the SCS (Singelis, 1994), was presented in section 1.4.1.1. Cronbach alphas ranging from the high .60s to the middle .70s have been reported using the 30-item version of the SCS. In the current study, reliability analyses revealed overall Cronbach’s alphas of .74 for the independence scale and .79 for the interdependence scale. According to nationality, Cronbach’s alphas for the UK sample were .77 and .82 for the independent and interdependent scales, respectively. For the TT group, Cronbach’s alphas were .69 and .76 for independent and interdependent scales, respectively.

## 2.4 Results

### *2.4.1 Treatment of Data*

All data was entered into Statistical Package for the Social Sciences (SPSS) version 26. Data was visually inspected for data entry errors and missing data. All analyses were performed within SPSS. Descriptive statistics were run in order to detect any missing data. When data was missing, all analyses using the variable where participants had missing data were excluded. All but one TT participant successfully engaged in and completed both primary measures (Visual Imagery Task and SCS) in this study. Missing data was minimal (< 1% of the

entire dataset). No notable outliers were identified or removed.

Prior to running primary and secondary statistical analyses, raw data distributions for scale variables were visually inspected with the use of histograms. Normality was formally assessed with the use of skew and kurtosis values which were converted to Z-scores. Z-scores exceeding 1.96 were considered statistically significant from zero ($p < .05$; Field, 2013) and indicative of non-normally distributed data. In these instances, non-parametric tests were used as appropriate including Mann-Whitney *U* tests, Kruskal-Wallis tests and Spearman's correlations. In the case of *t*-tests, when homogeneity of variance was violated, as indicated by Levine's test, Welch tests were used (Field, 2013). The results of assumption testing are reported within the following sections. Statistical analyses for all studies in this thesis use an alpha level of .05 unless otherwise specified. Effect sizes and confidence intervals (95%) are reported when appropriate.

### *2.4.4 Preliminary Analyses*

**2.4.4.1 Demographic Considerations.** Normality testing revealed non-normal data distributions for age for both the UK and TT samples. Age was significantly positively skewed in both instances. A Mann-Whitney *U* test revealed that age did not differ between the UK (*Mdn* = 21.50, *IQR* = 5.00) and TT (*Mdn* = 21.00, *IQR* = 3.00) samples, $U = 1047.00$, $z = -0.09$, $p = .930$, $r = .01$. Correlation analyses revealed no significant relationship between age and any of the primary outcome variables including VIP, $r_s(90) = .20$, $p = .055$, SCS Independent score, $r(90) = .11$, $p = .279$, or SCS Interdependence scores, $r(90) = -.06$, $p = .560$. As such, there was no need to control for age within the primary analyses.

Both the UK and TT samples were primarily comprised of females with less than five males per group. A Fisher's Exact test confirmed that there were no gender differences between the UK and TT samples ($p > .999$). There was also no significant relationship between gender and VIP, $t(90) = 0.34$, $p = .739$, $d = 0.12$, 95% CI [−1.19, 1.68], SCS Independence scores, $t(90) = 0.22$, $p = .824$, $d = 0.10$, 95% CI [−0.47, 0.58], or SCS Interdependence scores, $t(90) =$

0.52, $p$ = .607, $d$ = 0.17, 95% CI [−0.44, 0.74]. However, the very low number of males in each sample limit the utility of the above significance tests. Overall, gender was not considered an appropriate variable for inclusion within the primary or secondary analyses of this study.

#### 2.4.4.2 Overview of Variable Relationships and Identification of Potential Confounds

**Confounds**. Prior to running primary and secondary analyses, bivariate correlation analyses were run for all primary and secondary variables included in the study (see Appendix F) with the exception of emotional valence (a three-category nominal variable analysed separately). These preliminary correlations provided an overview of variable interrelationships (with relationships of interest discussed in the results section of this chapter) and allowed for the identification of any potentially confounding or extraneous memory characteristic variables that would need to be controlled for during VIP-related analyses. Pearson's correlations were run when variables were normally distributed and Spearman's correlations were run when variables were not normally distributed. The normality assumption was not met for the variables of participant age, age of memory, and strength of emotionality at the time of event. No secondary memory variables were considered potentially confounding (significantly correlated with both VIP ratings and nationality) nor were any secondary memory variables significantly correlated with VIP ratings. As such, there was no need to control for secondary memory variables within the VIP-related analyses of this study.

### *2.4.5 Primary Analyses: Nationality Differences in VIP and Self-Construal*

Normality and homogeneity of variance assumptions were met for VIP scores, SCS Independence scores, and SCS Interdependence scores. Table 2.2 displays descriptive statistics for the VIP scores and SCS scores for the two cultures. Results are presented alongside significance values and effect sizes obtained from independent samples *t*-tests.

**Table 2.2**

*Means and Standard Deviations of VIP and Self-Construal Measures*

| Scale | Total Sample | TT group | UK group | *p (d)* |
|---|---|---|---|---|
| Visual Imagery Perspective (VIP) | 4.35 (1.83) | 3.89 (1.74) | 4.80 (1.82) | .016 (0.51) |
| SCS Independence | 4.94 (0.67) | 5.04 (0.63) | 4.83 (0.70) | .148 (0.32) |
| SCS Interdependence | 4.49 (0.75) | 4.66 (0.73) | 4.32 (0.75) | .032 (0.46) |

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Standard deviations are presented in parentheses. SCS = Singelis Self-Construal Scale. *N* = 46 for each group.

#### 2.4.5.1 Research Question 1: Are There Differences in the Type of VIP Used During AM Recall Between Persons From the United Kingdom and Persons From the Caribbean?.

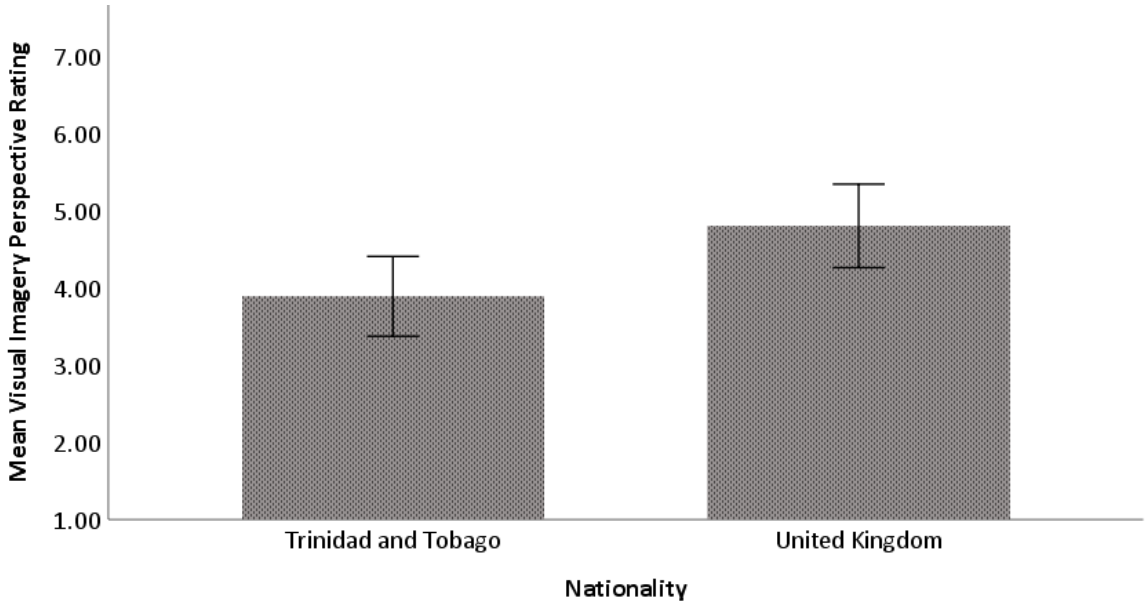
When participants were asked whether or not they saw their image from both perspective types, 67.4% of both the UK and the TT samples reported seeing their memories from both perspectives as opposed to exclusively from one perspective. However, the preference of VIP use between the UK and TT samples was of particular interest in this analysis. As displayed in Table 2.2, the mean VIP rating for the sample as a whole was 4.35 (on a 7-point scale), which is significantly above 3.5 (the midpoint value of the 7-point VIP rating scale), $t(91) = 4.44$, $p < .001$, $d = 0.46$, 95% CI [0.47, 1.23]. While the mean VIP ratings were above 3.50 for both the UK and TT samples, this finding was significant for the UK group, $t(45) = 4.86$, $p < .001$, $d = 0.72$, 95% CI [0.76, 1.85], but not the TT group, $t(45) = 1.52$, $p = .134$, $d = 0.22$, 95% CI [−0.13, 0.91].

An independent samples *t*-test revealed significantly lower VIP scores for the TT versus the UK sample, $t(90) = -2.46$, $p = .016$, $d = 0.51$, 95% CI [−1.65, −0.17] (see Table 2.2 and Figure 2.1). Consistent with the hypothesis, this indicates that TT participants ($M = 3.89$, $SD = 1.74$)

more often used an Observer perspective during the visual imagery task than UK participants (*M* = 4.80, *SD* = 1.82).

**Figure 2.1**

*VIP Ratings According to Nationality*



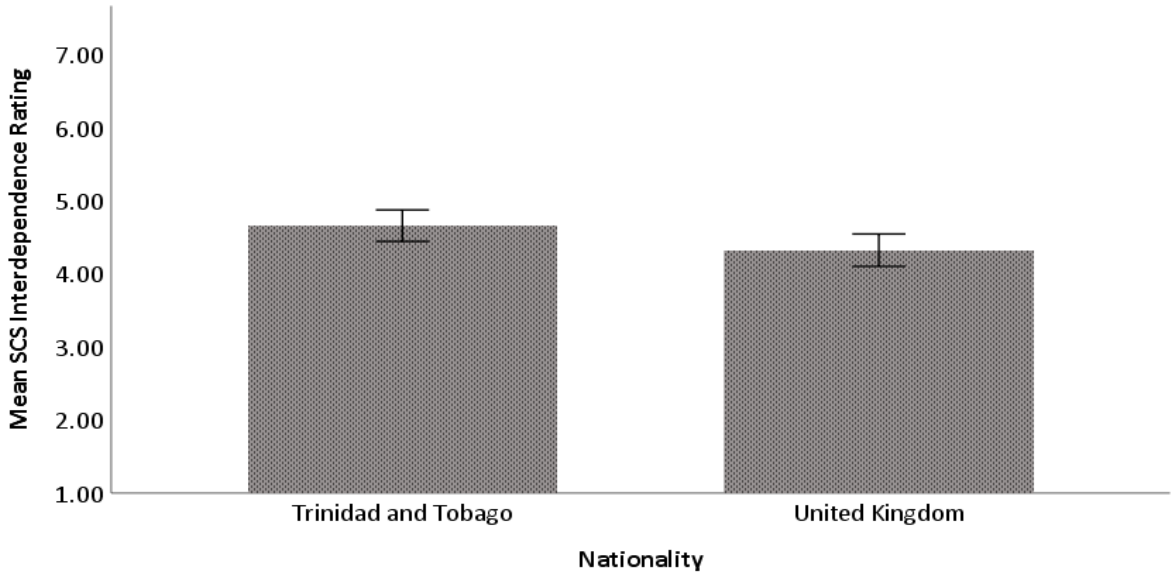

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Error bars represent 95% Confidence Intervals.

#### 2.4.5.2 Research Question 2: Are There Differences in Independent and Interdependent Self-Construal Between Persons From the United Kingdom and Persons From the Caribbean?.

Independent samples *t*-tests were run to compare independence and interdependence self-construal scores between the TT and UK participants. There was no significant difference in independence scores between the two groups, $t(90) = 1.46$, $p = .148$, $d = 0.32$, 95% CI [−0.07, 0.48]. In line with our predictions, TT participants (*M* = 4.66, *SD* = 0.73) rated significantly higher interdependence scores than UK participants (*M* = 4.32, *SD* = 0.75), $t(90) = 2.18$, $p = .032$, $d = 0.46$, 95% CI [0.03, 0.64] (see Table 2.2 and Figure 2.2).

**Figure 2.2**

*SCS Interdependence Ratings According to Nationality*




*Note.* SCS = Singelis Self-Construal Scale. Error bars represent 95% Confidence Intervals.

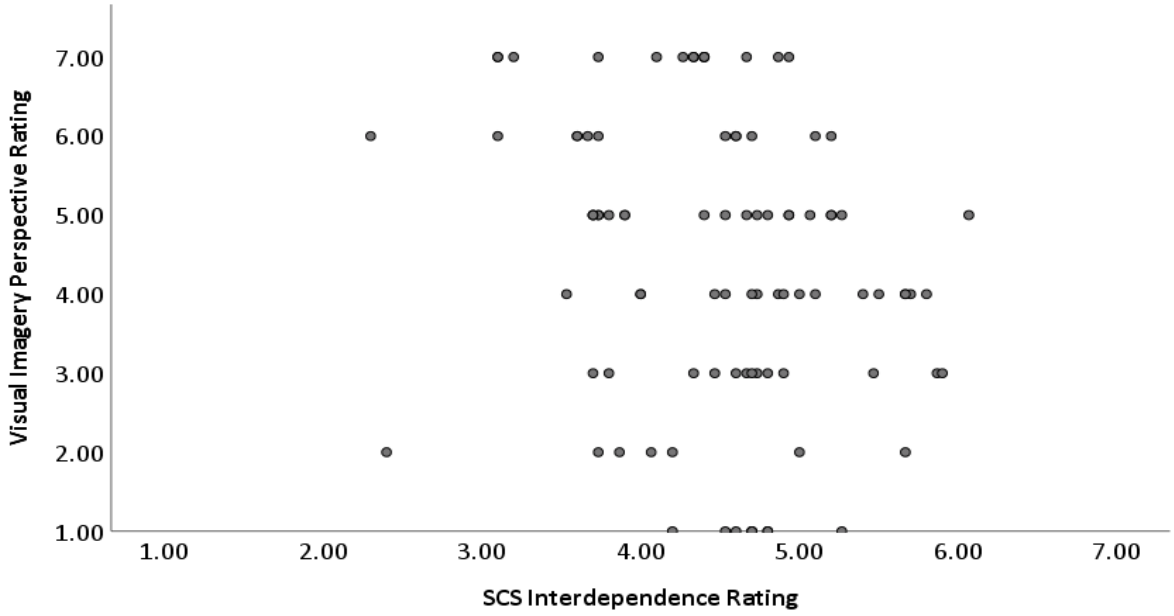
For the purpose of exploring whether UK persons reflect higher independent than interdependent SCS self-construal ratings relative to Caribbean persons (Research Question 2b), SCS discrepancy scores were calculated by subtracting each participants SCS Interdependent rating from their Independent rating. There was no significant difference in SCS discrepancy scores between the UK and Caribbean samples, $t(91) = -0.27$, $p = .789$, $d = 0.05$, 95% CI [−0.52, 0.40]. Nevertheless, the difference in SCS Independence scores between the two nationalities was not significant ($p = .148$) while the difference in SCS Interdependence scores between the two nationalities was significant ($p = .032$).

**2.4.5.4 Research Question 3: Is There a Relationship Between Self-Construal and VIP use During AM Recall Regardless of Nationality?.** Correlation analyses were performed between the two self-construal scores (SCS Independence and SCS Interdependence) and VIP ratings for the overall sample (see Appendix F). There was no significant relationship between VIP ratings and independent self-construal ratings, $r(90) = -.05$, $p = .642$) but there was a

significant weak negative relationship between VIP ratings and interdependent self-construal ratings, $r(90) = -.24$, $p = .024$). This indicates that higher VIP ratings (more Field/Own Eyes) were associated with lower levels of interdependent self-construal as expected. The relationship between interdependence ratings and VIP scores is displayed in Figure 2.3.

**Figure 2.3**

*Association Between SCS Interdependence Ratings and VIP Ratings*




*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. SCS = Singelis Self-Construal Scale.

In order to explore the independent effects of SCS Independence and SCS Interdependence on VIP use, these variables were entered into a simultaneous multiple regression analysis predicting VIP ratings. Multicollinearity between the two predictors was ruled out given that their Variance Inflation Factors (VIFs) and Tolerance values were within the acceptable range as defined by Field (2013); (SCS Independence, Tolerance = .94, VIF = 1.07; SCS Interdependence, Tolerance = .94, VIF = 1.07). Results of the regression analysis indicated that the two self-construal predictors explained 7% of the variance in VIP scores, $R^2$

=.07, $F(2, 89) = 3.25$, $p = .043$. In terms of individual predictors, SCS Independence ratings did not significantly predict VIP, $\beta = -.12$, $t(89) = -1.09$, $p = .279$, while SCS Interdependence rating was a significant negative predictor of VIP, $\beta = -.27$, $t(89) = -2.50$, $p = .014$. Higher interdependent scores predicted lower VIP scores. In other words, people who rated higher levels of interdependent self-construal more often used an Observer versus a Field perspective.

#### 2.4.5.6 Research Question 4: Does Self-Construal Mediate the Relationship (if any) Between Nationality and VIP use?.

A mediation analyses was performed using PROCESS macro Version 3.5 (Hayes, 2017) in order to determine whether the relationship between nationality and VIP was mediated by self-construal (SCS Interdependence). Ninety-five percent (95%) confidence intervals were generated using 5,000 bootstrap samples. There was no significant indirect effect of nationality on VIP through SCS Interdependence, $B = 0.15$, $SE = 0.12$, 95% BCa CI [− 0.01, 0.44]. Consistent with findings of a significant bivariate relationship between nationality and VIP, there was a significant direct effect of nationality on VIP ratings, $B = 0.76$, $SE = 0.38$, 95% CI [0.01, 1.51], $p = .047$, after controlling for self-construal (SCS Interdependence). In summary, self-construal did not mediate the relationship between nationality and VIP use. Despite initial findings of a significant relationship between SCS Interdependence ratings and VIP use, this relationship did not remain significant after controlling for nationality within the mediation model, $B = -0.46$, $SE = 0.25$, 95% CI [−0.96, 0.04], $p = .071$.

### *2.4.6 Secondary Analyses*

Analyses within this section relate to cross-cultural differences in additional memory characteristics, as well as the relationship between independent and interdependent self-construal.

**2.4.6.1 Cross-Cultural Differences in Additional Memory Characteristics**. As displayed in Table 2.3, an independent samples *t*-test revealed no significant cross-cultural differences in memory vividness, $t(90) = 0.32$, $p = .749$, $d = 0.07$, 95% CI [−0.45, 0.62]. Mann-Whitney tests revealed no significant cross-cultural differences in the age of the memories reported ($U = 994.00$, $z = -0.34$, $p = .737$, $r = .04$), or the strength of emotionality experienced at the time of the recalled events, $U = 1248.00$, $z = 1.54$, $p = .124$, $r = .16$. A Fisher's Exact test revealed no differences in the emotional valence of recalled memories between the UK and TT samples ($p = .142$). There was no significant association between nationality (UK versus TT) and ease of imagery, $\chi^2(1) = 2.89$, $p = .089$.

**Table 2.3**

*Descriptive Statistics for Secondary Memory Variables*

| Scale | Total Sample | UK group | TT group | *p (r/d)* |
|---|---|---|---|---|
| Vividness | | | | |
| Mean (SD) | 4.95 (1.29) | 4.89 (1.25) | 5.00 (1.35) | .749 (*d* = 0.07) |
| Median (IQR) | 5.00 (2.00) | 5.00 (2.00) | 5.00 (2.00) | |
| Age of Memory (months) | | | | |
| Mean (SD) | 2.47 (1.46) | 2.37 (1.32) | 2.58 (1.59) | |
| Median (IQR) | 2.00 (2.00) | 2.00 (2.00) | 2.00 (3.00) | .737 (*r* = .04) |
| Strength of Emotionality | | | | |
| Mean (SD) | 4.77 (1.36) | 5.02 (0.93) | 4.51 (1.66) | |
| Median (IQR) | 5.00 (2.00) | 5.00 (1.25) | 5.00 (2.00) | .124 (*r* = .16) |
| Emotional Valence | | | | |
| % Positive: Negative: Neutral[a] | 72:14:14 | 78:7:15 | 65:22:13 | .142 |
| Ease of Imagery | | | | |
| % More Easy: More Difficult | 84:16 | 91:9 | 78:22 | .089 |

*Note*. *N* = 46 for each group.

[a] Reflects the category Mixed/Neutral.

#### 2.4.6.2 Relationship Between Independent and Interdependent Self-Construal.

Correlation analyses (see Appendix F) revealed an overall significant weak negative relationship between independence and interdependence self-construal ratings for the sample as a whole, $r(90) = -.25$, $p = .016$). When nationality was considered, a significant moderate negative correlation emerged between independence and interdependence self-construal ratings for the TT sample, $r(44) = -.35$, $p = .016$, but this relationship was not significant for the UK sample, $r(44) = -.24$, $p = .103$.

## 2.5 Discussion

### *2.5.1 VIP use in the UK and TT*

The results of this study supported the hypothesis that persons from the UK would more often utilize a Field VIP during AM recall compared to persons from TT. This is consistent with existing findings that persons from more individualistic cultures more frequently use a Field perspective than persons from more collectivistic cultures (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). Theoretical explanations have linked the relationship between culture and VIP use to self-construal (Cohen & Gunz, 2002), further discussed in section 1.8.1.

Interestingly, both cultural groups showed an overall preference for using a Field versus Observer perspective according to mean VIP ratings above 3.50 on the 7-point VIP rating scale. However, this finding was only statistically significant for the UK group. Previous studies exploring cross-cultural differences in VIP have also often found an overall preference for a Field perspective despite differences in the relative use of these perspectives (Martin & Jones, 2012; Sutin & Robins, 2007). Cohen and Gunz (2002) was the only study that revealed an overall Observer perspective within their Asian cultural group and this finding specifically emerged when memories involved situations in which participants were at the centre of attention. When participants recalled memories for which they were not the centre of attention, the Field preference emerged for both Western and Asian participants.

It is important to note that methodological aspects of the current study may have further encouraged the adoption of a Field versus Observer perspective. All memories recalled were relatively recent (within the past six months). Age of memory has often been shown to significantly predict VIP with older memories more often recalled from an Observer perspective (D'Argembeau & Van der Linden, 2004; McIsaac & Eich, 2002; Nigro & Neisser, 1983; Piolino et al., 2006; Pronin & Ross, 2006; Rice & Rubin, 2009; Robinson & Swanson, 1993). Having participants recall recent memories may have predisposed them to adopt a Field perspective. Another potential explanation for the Field perspective preference may be due to the fact that participants were not specifically asked to recall situations in which they were at the centre of attention which has been argued to explain cross-cultural differences in VIP use (Cohen & Gunz, 2002). Therefore, in this study, even if TT participants were more interdependent in self-construal than UK participants, there may have been less of a need for them to use an Observer perspective for purposes such as monitoring and regulating their behaviours in accordance with collectivistic/interdependent cultural expectations.

It is also important to note that regardless of imagery preference, the majority of persons in both cultural groups reported seeing their memory from both perspective types. This is consistent with previous findings that most people can experience memories from both perspectives and that persons can shift between perspectives even during a single retrieval event (e.g., Huebner & Fredrickson, 1999; Nigro & Neisser, 1983; Rice & Rubin, 2009; Robinson & Swanson, 1993).

### *2.5.2 Self-Construal in the UK and TT*

Bivariate analyses partially supported the hypothesis that persons from the UK would rate higher levels of independence and lower levels of interdependence on the SCS (Singelis, 1994) than persons from TT. While SCS Independence ratings did not differ between the two cultures, persons from the UK had significantly lower SCS Interdependence scores compared to persons from TT. This provides support for previous findings indicating that the concepts of

independence and interdependence are separate constructs as opposed to two ends of a single dimension (Singelis, 1994). Additionally, our hypothesis that UK persons would reflect higher independent than interdependent self-construal ratings relative to TT persons was not supported. This indicates that the relative difference between independence and independence ratings was similar between the two cultures. It is important to note that caution must be used when interpreting results derived from SCS difference scores since subtracting SCS Interdependence scores from Independence scores creates a single unidimensional-type score which is against the theory and proposed use of the SCS (Singelis, 1994).

While results regarding self-construal as measured by the SCS (Singelis, 1994) are important for the current research, caution must be taken with respect to making conclusions about self-construal within and across cultures based on SCS scores alone. There has been much controversy in terms of measuring the complex concept of self-construal (see section 1.4.2). While the SCS continues to be one of the most widely used measures of self-construal, results have not consistently revealed the theoretically expected patterns put forth by Singelis (1994) that persons from relatively individualistic cultures rate higher independence ratings and lower interdependence ratings compared to persons from relatively more collectivistic cultures. Some researchers have not found differences in independent and interdependent self-construal ratings between North American and Asian participants (e.g., Krull et al., 1999; Levine et al., 2003; Matsumoto, 1999; Sato & Cameron, 1999) and others have found theoretically incongruent differences with North Americans rating higher levels of interdependent self-construal than Asians (e.g., Kleinknecht et al., 1997; Sato & Cameron, 1999). Consistent with mixed results, the results of this study provide partial support for the expected patterns based on the theory and development of the SCS (Singelis, 1994). While persons from the UK did not rate higher levels of independence than persons from TT, they did rate lower levels of interdependence.

It is important to note that the TT culture has not yet been studied in terms of formal assessment of self-construal. Despite its low current Individualism index within Hofstede's classification system (Hofstede Insights, 2021) some researchers have argued that the TT culture is a combination of individualism and collectivism (Descartes, 2012; Stewart, 2004; Tidwell, 2001). As such, the potential uniqueness of TT in this regard may underlie the mixed findings regarding self-construal. Further studies need to be conducted in order to determine consistency of the current findings as well as consistency between self-construal data obtained from the SCS and other measures of self-construal.

### *2.5.3 Self-Construal and VIP use*

While correlation analyses exploring the relationship between self-construal and VIP use (regardless of nationality) did not support the hypothesis that higher independent self-construal ratings would be associated with more frequent use of a Field VIP, higher interdependent self-construal ratings were associated with more frequent use of an Observer perspective. Regression analyses exploring the independent effects of SCS Independence and SCS Interdependence on VIP use further confirmed that people who rated higher interdependent self-construal ratings more often used an Observer versus a Field perspective. Of the studies known to have explored cross-cultural differences in VIP to date, none have formally assessed self-construal at the individual level. As such, the results of the current analyses cannot be directly compared to previous findings. Having said that, the relationship between interdependence and VIP found in this study may still provide support for previous findings that persons from cultures considered to be collectivistic more often use an Observer perspective compared to persons from cultures considered to be individualistic (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). However, as discussed in the next section, the relationship between self-construal and VIP is not yet clear and cannot yet be considered a stable finding.

The differential relationships found between independent versus interdependent self-construal and VIP not only suggest their unique associations with VIP, but also provides support for the claim that independence and interdependence are distinct concepts as opposed to a unidimensional bipolar construct (e.g., Freeman, 1997; Singelis, 1994).

### *2.5.4 Self-Construal as a Mediator Between Culture and VIP use*

The hypothesis that self-construal would mediate the relationship between nationality and VIP was not supported by mediation analyses. At face value this finding does not provide support for the argument that the more frequent use of an Observer perspective in collectivistic versus individualistic cultures is the result of a more interdependent type of self-construal which encourages persons to experience themselves through the eyes of others (Cohen & Gunz, 2002). However, this argument was specifically proposed for situations in which persons were at the centre of attention in their memories which may not have been the case for the current study in which participants were simply asked to recall a memory of a social situation (not necessarily one in which they were at the centre of attention). While mediation analyses did not reveal self-construal as a mediator between culture (in terms of nationality) and VIP, the results of the mediation process are interesting. Although results supported a significant relationship between nationality and VIP, the relationship between interdependence ratings and VIP did not remain significant when nationality was controlled for within the mediation model. This may be due to the fact that nationality and interdependence scores are significantly correlated with each other and that interdependence scores do not have enough unique variance explaining VIP to be significant.

### *2.5.5 Supplementary Findings*

**2.5.5.1 Cross-Cultural Differences in Secondary Memory Characteristics.** Secondary analyses did not reveal cross-cultural differences (as measured via nationality) in memory vividness, memory age, ease of imagery, emotional valence of the reported memory, or strength of emotionality at the time of the recalled event. There was no expectation that

culture would impact ease of imagery or age of memory recalled (given that all memories were relatively recent). However, our lack of cultural differences in other aspects of imagery differs from some reports of cross-cultural differences in memory vividness (e.g., Christian et al., 2013; Sutin & Robins, 2007), emotional valence (e.g., Oishi, 2002; Sutin & Robins, 2007), and strength of emotionality (e.g., Sutin & Robins, 2007; Wang & Conway, 2004). The lack of significant cross-cultural differences in memory characteristics coupled with the limited differences in VIP use may indicate that the cultures are more similar in aspects of AM recall than would be expected based on previous research and theories of self-construal. Further research is needed to establish consistency of these findings.

**2.5.5.2 Relationship Between Independent and Interdependent Self-Construal.** The current study provides support for the notion that independence and interdependence, and individualism and collectivism, are separate constructs as opposed to two ends of a single dimension (Freeman, 1997; Markus & Kitayama, 1991; Singelis, 1994; Triandis, 1995). This is indicated by the fact that interdependent but not independent self-construal ratings differed between the two cultures, as well as the fact that differential relationships emerged between independent versus interdependent self-construal and VIP. Additionally, a moderate correlation was found between independent and interdependent self-construal ratings in the TT sample while no significant correlation was found between these two ratings in the UK sample. If individualism and collectivism are two ends of a unidimensional construct as suggested by Hofstede (1980), a strong correlation between independent and interdependent self-construal would be expected to emerge for both the UK and TT samples.

### *2.5.6 Limitations and Future Research*

Several limitations are acknowledged within the scope of the current study. In terms of sample size, time and resource limitations restricted the recruitment of a larger number of participants. Therefore, conclusions based on the absence of cross-cultural differences in some aspects of memory and self-construal should be made with great caution given the

relatively small number of participants in each group and the associated risk of incorrectly retaining null hypotheses. Participant age was restricted to ages 18 to 30 due to convenience sampling and participant accessibility. Age has often been associated with memory characteristics including VIP (Rathbone et al., 2015) and therefore limiting the age range allows for the controlling of this potential confound. Having said that, results may lack generalizability with regard to older and younger age groups. Similarly, the limited number of males recruited from each sample restricts generalizability of findings across genders and did not allow for gender effects on VIP and self-construal to be explored.

It is possible that the UK sample was more heterogeneous than the TT sample given that UK participants were accessed through Prolific (online platform) and obtained from many different universities/geographical locations. On the other hand, the TT population was derived from a single university campus in TT. This study was also limited in terms of the sociodemographic information obtained from participants. For example, researchers have argued that ethnicity may play a role in the nature of self-construal in the TT population (Descartes, 2012; Stewart, 2004; Tidwell, 2001). Presenting participants with an unrequired open-ended response box as a means of recording their ethnicity proved futile as very little data was obtained. Further studies more effectively capturing ethnicity and other demographic variables will be important.

Given that participants were not required to describe or record their memories, memory content could not be analysed. Additionally, without a record of the memories it is unknown as to whether participants adequately engaged in the visual imagery task. A final and important limitation of the current study was the use of a single self-construal measure. While the SCS (Singelis, 1994) has been used extensively within cross-cultural research, there are ongoing debates regarding its reliability and validity (see section 1.4.2.2). This study found good levels of overall internal consistency on the SCS for the Independence and Interdependence scales (Cronbach's alphas of .74 and .79, respectively). However, including an

additional measure of self-construal will be beneficial for further assessing the reliability and validity of this scale and for more thoroughly exploring the relationship between self-construal, nationality and VIP.

## 2.6 Conclusion

The results of this study provide support for the existence of cross-cultural differences in VIP use during AM recall beyond the East-West dichotomy, such that persons from the UK more often utilize a Field VIP during AM recall compared to persons from TT. Self-construal did not emerge as a significant mediator between culture and VIP use. Some differences in self-construal were found between the UK and TT samples with lower levels of interdependent self-construal emerging from the UK sample but with no differences in levels of independent self-construal. There were mixed findings regarding the relationship between self-construal and VIP. No relationship was found between independent self-construal ratings and VIP but higher levels of interdependent self-construal ratings were associated with more of an Observer versus Field perspective. Despite findings of significant relationships between nationality and VIP, as well as interdependence ratings and VIP, multivariate analyses did not provide sufficient support to confirm interdependent self-construal as a significant predictor of VIP use. As such, there is not yet conclusive evidence of a relationship between culture, self-construal and VIP use. Further exploration is necessary given that VIP is an important phenomenological characteristic that has been shown to influence the way memories are used to regulate emotions and maintain a coherent sense of self over time. Study 2 is a refined and expanded version of Study 1 which includes a more in-depth exploration of sociodemographic factors within cultures, the opportunity to explore more than one Caribbean culture, documentation of memories from multiple lifetime periods, and the use of an additional measure of self-construal, the Twenty Statements Test (TST; Kuhn & McPartland, 1954).

# 3 Chapter 3: Culture and VIP use During the Recall of AMs From Different Life Periods

## Study 2

Consistent with expectations, results from Study 1 suggest that persons from the UK use a Field perspective more often during AM recall than persons from TT. Comparing self-construal ratings between the two cultures provided partial support for the expected patterns based on the theory and development of the SCS (Singelis, 1994). Persons from the UK rated lower levels of interdependent self-construal compared to persons from TT but the two cultures did not differ in levels of independent self-construal. Additionally, interdependent self-construal did not emerge as a significant mediator between culture and VIP. Further research is warranted for further understanding the interrelationships between culture (in terms of nationality), self-construal and VIP use.

As discussed in section 1.4, culture impacts the development of the self and one's goals (Conway et al., 2005; Markus & Kitayama, 2003). These culturally influenced self-goals in turn impact the way in which AMs are encoded and stored (Chua et al., 2005; Conway et al., 2005; Hedden et al., 2008; Jobson & O'Kearney, 2009; Masuda et al., 2008) as well as recalled (Conway & Pleydell-Pearce, 2000). Cross-cultural differences in the nature and content of memories have been reported. For example, persons from Western cultures more often recall memories that are self-focused, longer, more specific, and more positive in emotional valence compared to persons from Asian cultures (Han et al., 1998; Jobson et al., 2014; Jobson & O'Kearney, 2006; Oishi, 2002; Ross & Wang, 2010; Wang, 2001, 2013, 2016; Wang & Conway, 2004; Wang & Ross, 2005).

There is limited research examining the ways in which memories are recalled across cultures. As discussed in section 1.8.1, preliminary evidence suggests that persons from interdependently-oriented cultures more often use an Observer perspective when recalling memories compared to persons from independently-oriented cultures (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). Understanding cross-cultural differences in VIP

use during AM recall is the primary aim of this thesis. Visual imagery perspective has been shown to influence the quality and characteristics of recalled memories including memory vividness (Sutin & Robins, 2010) and strength of emotionality at recall (Berntsen & Rubin, 2006; Libby et al., 2005; Nigro & Neisser, 1983; Talarico et al., 2004). Visual imagery perspective has also been shown to play an important role in emotion regulation (Berntsen & Rubin, 2006; Libby et al., 2005; Nigro & Neisser, 1983; Talarico et al., 2004; Williams & Moulds, 2007; Wilson & Ross, 2003), emotional wellbeing (Kuyken & Moulds, 2009), and the development of a coherent sense of self over time (Libby & Eibach, 2002; Libby et al., 2005).

Study 1 was the first known study to explore VIP use beyond the East-West divide and to formally measure self-construal at the individual level. Study 2 aims to reexamine the primary research questions of Study 1 with the use of a more comprehensive study of VIP across cultures. This study allows for determining the reliability of results obtained from Study 1 and for further exploring some of the mixed and inconclusive results regarding VIP differences across cultures, self-construal differences across cultures, and the overall relationship between self-construal and VIP. The primary ways in which Study 2 differs from Study 1 are outlined in the following sections.

### 3.1 Temporal Factors

Temporal factors have been shown to influence memory phenomenology. Recent memories (compared to remote memories) are often more vivid, coherent, accessible, emotionally intense, positive, detailed, clearer in time perspective, and accompanied by a stronger sense of re-experiencing (D'Argembeau & Van der Linden, 2004; Gardner et al., 2015; Janssen et al., 2011; Luchetti & Sutin, 2018; Sutin & Robins, 2007). Additionally, the majority of research exploring the relationship between temporal factors and VIP indicates that remote memories (e.g., from childhood) are more often retrieved using an Observer perspective than recent memories (D'Argembeau & Van der Linden, 2004; Eich et al., 2012; McIsaac & Eich, 2002; Nigro & Neisser, 1983; Piolino et al., 2006; Pronin & Ross, 2006; Rice & Rubin, 2009;

Robinson & Swanson, 1993; Sutin & Robins, 2007; Verhaeghen et al., 2018). Several explanations for these findings have been offered. D'Argembeau and Van der Linden (2004) proposed that the use of an Observer perspective for remote memories may serve to distance the rememberer from past versions of their self-concept which may differ from their current self-concept. Similarly, Libby and Eibach (2002) reported that this distancing of current and past self-concepts could result in persons viewing their past self as a different person from their current selves, thus adopting a VIP that they would use when looking at another person (i.e. an Observer perspective). Pronin and Ross (2006) suggested that information about our distant selves including our thoughts and feelings at the time of previous events diminishes over time, reducing the likelihood of a Field mode of memory retrieval. The shift from a Field to Observer perspective with time has been considered evidence for the reconstructive nature of memory such that general knowledge about memories are used to reconstruct aspects of memories after visual and other sensorial details from the original event have been lost (Nigro & Neisser, 1983; Rice & Rubin, 2009). Over time, and as similar events are experienced, individual memories lose their episodic details and become more generalized and semanticized (Piolino et al., 2002; Tulving, 1985). Semanticized forms of AM are believed to play a key role in the construction and maintenance of a coherent sense of self (Conway, 2005; Conway & Pleydell-Pearce, 2000).

There is almost no available research exploring cross-cultural differences in VIP use considering temporal factors. One of the three studies which have explored cross-cultural differences in VIP to date provided some information regarding temporal factors and memory phenomenology (Sutin & Robins, 2007). However, this was limited to the finding that differences in memory phenomenology including VIP between Asians and Caucasians were observed for general self-defining memories but not for earliest childhood memories. While the impact of temporality on VIP in both cultures is explored within the current study, the primary reason for including temporal factors in the current study was to address the potential

Field bias imposed in Study 1. Temporal factors were initially controlled for in Study 1 with the recall of recent memories (within the past six months). However, this approach may have encouraged the use of a Field perspective in both cultures and potential cultural influences on VIP may have been overshadowed by memory recency effects. Participants in the current study are asked to recall memories from three different periods in their lives (childhood, adolescence, and adulthood). This facilitates a more in-depth exploration of cross-cultural differences in VIP while also providing an opportunity to explore the impact of temporality on VIP within and across cultures. Given that some researchers have found that the frequency of which memories are rehearsed can influence the shift from Field to Observer perspective over time (Butler et al., 2016; Siedlecki, 2015) memory rehearsal was also measured within this study**.** Memory rehearsal may also provide information on memory importance.

### 3.2 Measuring Self-Construal

In order to avoid self-construal assumptions based on nationality alone, Study 1 used the SCS (Singelis, 1994) to measure self-construal at the individual level. As discussed in section 1.4.2, there are ongoing debates regarding the reliability and validity of the SCS as well as the complexities involved in measuring self-construal altogether. It is therefore important to determine the consistency of SCS findings across studies as well as to compare self-construal data obtained from the SCS with other measures of self-construal. The TST (Kuhn & McPartland, 1954) is utilized as a second measure of self-construal in this study. Details regarding the development and utilization of this test are provided in section 1.4.1.2. Responses on the TST have been shown to correlate with aspects of AM. For example, Wang (2001) showed that Americans reported lengthier, more specific, more self-focused, and more emotionally elaborate memories as well as a greater number of individually-oriented self-descriptions than Chinese persons. Additionally, regardless of culture, individuals who reported more individually-focused and positive responses on the TST reported more specific

and individually-focused memories. These findings were considered support for the relationship between self-construal and AM (Wang, 2001).

As with the SCS (Singelis, 1994), there have been some inconsistent and theoretically incongruent findings when using the TST (Kuhn & McPartland, 1954) to measure self-construal in Western and Eastern cultures (Del Prado et al., 2007; Kanagawa et al., 2001; Rhee et al., 1995; Watkins & Gerong, 1997). Issues with reliability and validity are believed to be at least partially due to varying coding schemes applied to TST responses (Grace & Cramer, 2003; Smith et al., 2013; Trafimow et al., 1991). In terms of the relationship between the SCS and the TST, findings have been mixed but strong correlations between the two measures have not been found (Bresnahan et al., 2005; Grace & Cramer, 2003). For example, Grace and Cramer (2003) found a significant relationship between allocentric TST responses and SCS Interdependent scores but not between idiocentric TST responses and SCS Independent scores, suggesting issues with construct validity. However, some have argued that the lack of convergence may not be worthy of criticism given that the SCS measures stable traits while the TST measures momentary and dynamic aspects of the self (Kim & Raja, 2003). Aside from the larger goal of exploring the relationship between culture, self-construal, and VIP use during AM recall, the current study provides an opportunity to explore the relationship between the two measures of self-construal in the UK and Caribbean cultures.

### 3.3 Ethnicity and Within-Caribbean Factors

Ethnicity has been proposed to play a role in the nature of self-construal within TT given its multiethnic nature (Descartes, 2012; Stewart, 2004; Tidwell, 2001). Descartes (2012) argued that the African population in Trinidad is more individualistic and that the East Indian population is more collectivistic in nature due to the different circumstances in which these groups left their ancestral homelands and entered Trinidad. Africans arrived in Trinidad as slaves and were forced to release their collectivistic cultural identity and instead adopt a more individualist European cultural identity (Stewart, 2004). On the other hand, East Indians

arrived as indentured laborers and were able to maintain many of the collectivistic cultural practices and traditions of their homeland (Arneaud & Albada, 2013; Brathwaite, 2005; Descartes, 2012; Younger, 2010). Despite their presumed differences, both ethnic groups, as well as other ethnic minorities in TT, often partake in each other's cultural traditions and celebrations (Descartes, 2012) and Trinidad has been described as having a "central core of culture" (Hodge 1996). While some researchers argue that TT is a balance of individualism and collectivism (Descartes, 2012; Stewart, 2004; Tidwell, 2001), its current Individualism index within Hofstede's classification system (Hofstede Insights, 2021) is much lower (index of 16) than that of Western countries including United States and the UK (indices of 89 and 91, respectively) and it is considered a collectivistic society (Hofstede Insights, 2021).

Ethnicity was not successfully documented within Study 1 of this thesis. A more stringent attempt was made to obtain ethnic information in Study 2 as a means of exploring the relationships between ethnicity, self-construal, and VIP use, especially within multiethnic cultures such as TT. Additionally, the Caribbean sample in Study 2 was extended to include persons from three Caribbean countries (Trinidad and Tobago, Barbados, and Jamaica) which allowed for within-Caribbean comparisons to be made and for findings to be more generalizable across the Caribbean region.

Trinidad and Tobago, Barbados, and Jamaica are all part of the West Indies chain of islands. While unique in many respects (e.g., nature and length of colonial rule, level of economic development, and geographical location), they all share a history of colonisation, slavery, indentureship, and plantation culture (Premdas, 2011). As such, they share a combination of African, European, Asian, and other influences albeit to varying degrees (Clarke & Brereton, 2020). The ethnic composition of Jamaica and Barbados is primarily African while TT is more ethnically diverse primarily due to South Asian indentureship and the migration of other groups such as Chinese, Portuguese, Syrians, and Lebanese to Trinidad in the twentieth century (Clarke & Brereton, 2020). Based on ethnic composition alone, TT would be expected

to be more collectivistic in nature than Barbados and Jamaica. However, individualism/ collectivism and independence/interdependence is impacted by additional factors including (but not limited to) economic development (Santos et al., 2017) and geographical proximity to developed nations including the United States. Jamaica's Individualism index according to Hofstede's classification is 39 which is above that of TT (Individualism index of 16) yet still indicative of a collectivistic society (Hofstede Insights, 2021). There is currently no Hofstede-derived Individualism index for Barbados.

Aside from initial investigations of self-construal in Study 1, there are no known studies which have formally assessed self-construal at the individual level in any of these three Caribbean territories. While levels of independent and interdependent self-construal may vary to some extent among the Caribbean countries, persons from all three Caribbean countries would be expected to be more interdependent in self-construal than persons from the UK. Additionally, cross-cultural differences between the UK and Caribbean region are of greater interest within this thesis than differences among the Caribbean countries.

### 3.4 Study Aims

This study aims to explore cross-cultural differences in VIP use during the recall of memories from several life periods. Cross-cultural differences in self-reported self-construal, as measured using the SCS (Singelis, 1994) and the TST (Kuhn & McPartland, 1954) are also of interest. The role of self-construal in the relationship between culture and VIP is explored. As in Study 1, the overall relationship between self-construal and VIP (regardless of nationality) is also explored. Secondary aims of this study include the exploration of cross-cultural differences in memory characteristics, the impact of temporality on memory characteristics, ethnic considerations, the relationship between independent and interdependent self-construal, and the relationship between the two self-construal measures.

### 3.5 Research Questions and Hypotheses

The following research questions are addressed in Study 2:

1. *Are there differences in the type of VIP used during AM recall between persons from the United Kingdom and persons from the Caribbean?*

   It is hypothesised that persons from the UK will more often utilize a Field VIP when recalling AMs compared to persons from the Caribbean.

2. *What is the impact of temporal factors on VIP use in both cultures?*

   It is hypothesised that in both cultures, older memories (i.e. from childhood and adolescence) will more often be recalled using an Observer perspective than more recent memories (i.e. from adulthood) which will more often be recalled using a Field perspective.

3. *Are there differences in independent and interdependent self-construal between persons from the United Kingdom and persons from the Caribbean?*

   (c) It is hypothesised that self-construal ratings obtained from UK persons will reflect higher independence ratings and lower interdependence ratings compared to self-construal ratings obtained from Caribbean persons.

   (d) It is hypothesised that self-construal ratings obtained from UK persons will reflect higher independent than interdependent self-construal ratings relative to Caribbean persons.

4. *Is there a relationship between self-construal and VIP use during AM recall regardless of nationality?*

   It is hypothesised that regardless of nationality higher independent self-construal ratings will be associated with more frequent use of a Field VIP during AM recall while higher interdependent self-construal ratings will be associated with more frequent use of an Observer VIP during AM recall.

5. *Does self-construal mediate the relationship (if any) between nationality and VIP?*

   It is hypothesised that cultural differences (at the nationality level) lead to differences in self-construal, which in turn leads to differences in VIP. Therefore, self- construal will mediate the relationship between nationality and VIP use.

## 3.6 Method

### *3.6.1 Design*

This study employed a cross-sectional between-subjects design in which participants completed questionnaires involving memory recall, self-construal, and statements about themselves.

### *3.6.2 Participants*

Due to recruitment challenges, the recruitment goal was to obtain the maximum number of participants possible. One hundred and twenty-seven (127) participants took part in this study. As with Study 1, a sensitivity power analysis for difference between two independent means was conducted using G*Power 3.1 (Faul et al., 2007). Results indicated that with a total sample of 127 participants, the design of the current study had an 80% chance of detecting a small effect size ($d$ = 0.44).

Participants were undergraduate and postgraduate students (aged 18 through 30). Participants were either citizens of the UK or the Caribbean region including the islands of Trinidad and Tobago (TT), Barbados (BB), and Jamaica (JM). English was the first language of all participants. All participants gave informed consent after reading the online information sheet (see Appendix G) and consent form (see Appendix B). Participants were given the opportunity to withdraw from the study at any time during the survey. Research was approved by the School of Psychology and Clinical Language Sciences (University of Reading) ethics committee. Additional ethical approval from the University of the West Indies was not required.

**3.6.2.1 Caribbean Sample.** Fifty-nine participants (50 females, 9 males) were recruited from the Social Sciences department of the University of the West Indies (UWI; Trinidad and Tobago, Jamaica, and Barbados campuses). Psychology lecturers at UWI circulated an email containing basic study details (title, brief description, duration, and link to the study) within the Social Sciences departments of the three UWI campuses. Students from the Jamaica campus received course credit for their participation while participants from the Trinidad and Tobago and Barbados campuses received compensation (Amazon gift credit equivalent to £7) for participating. Participants in the Caribbean sample ranged in age from 18 to 30 years (*M* = 22.78 years, *SD* = 3.40). Demographic information for the Caribbean sample as a whole as well as the TT, BB, and JM sub samples are displayed in Table 3.1. When there were no significant differences among the three Caribbean subsamples, these groups were analysed as an overall Caribbean sample. Use of the combined sample also allowed for increased sample size given the relatively small numbers of participants in each Caribbean subsample. Data from all Caribbean participants recruited were included in the analyses for this study.

**3.6.2.2 UK Sample.** The sixty-eight (68) UK participants (51 females, 17 males) were Psychology students from the University of Reading. They were recruited through the University of Reading Sona Systems and they received course credits for participating. Their ages ranged from 18 to 30 years (*M* = 21.46 years, *SD* = 3.72). Demographic information for the UK and Caribbean samples are displayed in Table 3.1. Data from all UK participants recruited were included in the analyses for this study.

**Table 3.1**

*Demographic Characteristics of Participants*

| Characteristic | United Kingdom | Combined Caribbean | Trinidad & Tobago | Barbados | Jamaica |
|---|---|---|---|---|---|
| | n (%) | n (%) | n (%) | n (%) | n (%) |
| Gender | | | | | |
| Female | 51 (75) | 50 (85) | 15 (75) | 16 (84) | 19 (95) |
| Male | 17 (25) | 9 (15) | 5 (25) | 3 (16) | 1 (5) |
| Ethnicity | | | | | |
| Caucasian [a] | 55 (81) | 1 (2) | 0 (0) | 1 (5) | 0 (0) |
| Asian [b] | 9 (13) | 16 (27) | 11 (55) | 4 (21) | 1 (5) |
| African [c] | 4 (6) | 37 (63) | 7 (35) | 12 (63) | 18 (90) |
| Other [d] | 0 (0) | 5 (8) | 2 (10) | 2 (11) | 1 (5) |
| Mean age (SD) | 21.46 (3.72) | 22.78 (3.40) | 22.70 (3.23) | 22.89 (4.03) | 22.75 (3.08) |
| Median age (IQR) | 20.00 (5.00) | 22.00 (4.00) | 22.00 (5.00) | 22.00 (7.00) | 22.00 (3.00) |

[a] Reflects the category White/Caucasian. [b] Reflects the category Asian/East Indian/Indo Caribbean. [c] Reflects the category Black/African/Afro Caribbean. [d] Reflects the category Other Ethnic Group.

### *3.6.3 Materials and Procedure*

All participants completed a three-part online survey administered using Alchemer (https://www.alchemer.com). All parts of the survey were completed within a single sitting. Before completing part one, participants provided their age, nationality and country of residence. Part one of the survey was comprised of a visual imagery task and a visual imagery questionnaire, part two was comprised of the SCS (Singelis, 1994), and part three was comprised of the TST (Kuhn & McPartland, 1954). After completing the TST, participants provided information regarding their gender, ethnicity, religion, and educational status.

**3.6.3.1 Visual Imagery Task.** Participants were presented with the same descriptions and pictured examples of the two types of VIPs (Field/First Person and Observer/Third Person) as in Study 1 (see Appendix C). They then received the following instructions: "You will soon be asked to remember 3 events: One from your childhood, One from your adolescent years, One from your adult life. Please spend the next 15 minutes carefully thinking about (visualizing) and then briefly describing these 3 memories. Focus on one memory at a time. After briefly describing each memory and answering the questions associated with it, you should close your eyes, clear your mind and then think of another memory. Please remember that there are no correct or incorrect answers." Participants were presented with a new screen and asked to think about (visualize) their Childhood Memory. They were provided with an open textbox in which they described this memory. No time or word limits were set for this task.

Asking participants to write about each of their memories provided an opportunity for content analysis. Memories were coded according to memory focus (individual or social) and memory specificity (specific or general). Coding of these two aspects of memory content were based on the guidelines of Wang and Ross (2005). Asking participants to record their memories also ensured adequate and appropriate engagement in the memory task. Task instructions were kept simple and free of bias with regard to memory content so as not to influence the nature and content of participants' memories. Unlike Study 1, there was no request to recall a social memory in particular. This further removed recall bias while still allowing for the social and other aspects of memory to be captured via content analyses. The layout was identical for the Childhood, Adolescent and Adult memory portions of this task. Participants completed a Visual Imagery Questionnaire (described below) following each of the three visualizations. The use of different lifetime periods was primarily included to facilitate the exploration of cross-cultural differences in VIP use during the recall of memories from different ages and stages of life. Memory age has been shown to predict VIP use (Berntsen & Rubin, 2006; Nigro & Neisser, 1983; Rice & Rubin, 2009; Robinson & Swanson,

1993) as well as impact memory characteristics such as vividness and emotional intensity (Sutin & Robins, 2007; West & Bauer, 1999). Additionally, memory content has been shown to vary across cultures and reflect the goals of the self at different lifetime periods (Conway & Holmes, 2004; Rathbone et al., 2008; Wang & Conway, 2004).

**3.6.3.2 Visual Imagery Questionnaire.** As in Study 1, VIP was measured using a 7-point rating scale ranging from 1 (Entirely as an Observer) to 7 (Entirely through My Own Eyes). Most of the remaining questions about visual imagery were identical to those asked in Study 1. These included questions about vividness, the emotion felt at the time of the event, the strength of this emotion, whether or not participants saw their image from both perspective types, and whether they were unable to form a visual image of their memory at all. As in Study 1, participants were asked to report how easy or difficult it was for them to visualize their memory but instead of an open ended response, they responded using a 5-point scale ranging from 1 (Very Easy) to 5 (Very Difficult). A rating scale was used in order to more accurately quantify responses and to control for coding challenges associated with open-ended responses. A measure of rehearsal was introduced to the Visual Imagery Questionnaire of this study by asking participants how often they thought and/or talked about the memory they reported. Participants responded using a 6-point scale ranging from 1 (Never) to 6 (Very Frequently). Memory rehearsal was included given that this has been shown to impact VIP (Butler et al., 2016; Siedlecki, 2015). Although timeframes were naturally specified given the nature of the visual imagery task (recalling memories from three different life periods), participants were also asked to estimate their age at the time of their memory. See Appendix H for the items included in the Visual Imagery Questionnaire for this study.

**3.6.3.3 Self-Construal Scale (SCS; Singelis, 1994).** As in Study 1, the 30-item SCS was used as the measure of self-construal (see Appendix E). Administration and scoring procedures of the SCS were identical to those used in Study 1. Each participant received two scores: one indicating the strength of their independent self-construal and one indicating the

strength of their interdependent self-construal. Cronbach alphas ranging from the high .60s to the middle .70s have been reported using the 30-item version of the SCS. In the current study, reliability analyses revealed overall Cronbach's alphas of .78 for the independence scale and .71 for the interdependence scale. According to nationality, Cronbach's alphas for the UK sample were .80 and .79 for the independent and interdependent scales, respectively. For the Caribbean group, Cronbach's alphas were .71 and .57 for independent and interdependent scales, respectively.

**3.6.3.4 Twenty Statements Test (TST; Kuhn & McPartland, 1954).** Participants completed the TST as a second measure of self-construal. The TST has been widely used for exploring cross-cultural as well as individual-level differences in aspects of the self and identity (Jobson & O'Kearney, 2009; Rhee et al., 1995; Wang et al., 1998; Watkins & Gerong, 1999). In response to the question "Who am I?" participants completed 20 statements (beginning with "I am..."). They were asked to provide answers in the order that occurred to them and they were told not to worry about logic or importance. The instructions and layout of this task is presented in Appendix I.

The original coding scheme for the TST included two categories: consensual which relates to social roles and sub-consensual which relates to traits (Kuhn & McPartland, 1954). The TST has been demonstrated to have good interrater reliability, and adequate test-retest reliability, content validity, and concurrent validity (Kuhn & McPartland, 1954; Spitzer et al., 1971). Many TST coding systems have since been developed for quantifying responses. The TST data in this study was coded in accordance with the coding scheme used by Jobson and O'Kearney (2009) which is based on the distinctions between independence and interdependence (Trafimow et al., 1991; Triandis, 1989). This scheme was considered most appropriate for this study given that this research primarily surrounds self-construal at it relates to independence and interdependence. This coding approach also facilitates comparisons between TST-derived self-construal as well as self-construal as measured by the

SCS. Each TST response was coded as either independent or interdependent. Independent responses included references to personal qualities, attributes and beliefs that were unrelated to other persons (e.g., "I am intelligent," "I am happy") while interdependent responses were collective in nature including references to social groups and relations to others (e.g., "I am a good friend," "I am a woman," "I am British"). A second rater (a researcher who was blind to participant demographics and research hypotheses) coded a sub-sample of 10% of the TST data. Inter-rater reliability was excellent (96.4% agreement, $\kappa = 0.92$). In order obtain a TST-derived self-construal score for each participant in the study, the total number of independent responses given by each participant was divided by the total number of responses they provided. This resulted in one score per participant which reflected the proportion of their responses that were independent (as opposed to interdependent) in nature.

## 3.7 Results

### *3.7.1 Treatment of Data*

Data entry and inspection for errors and missing data was carried out as in Study 1. When data was missing, all analyses using the variable where participants had missing data were excluded. Missing data was minimal (< 1% of the entire dataset). All scale variables were assessed for normality as in Study 1. Non-parametric tests were used as appropriate including Spearman's correlations, Mann-Whitney *U* tests, Kruskal-Wallis tests, Friedman tests, Cochran Q tests, and Dunn-Bonferroni tests. In the case of regression analyses, bootstrapping was used when the residuals of the outcome variable were not normally distributed as determined following the inspection of residual diagnostic graphs. In the case of *t*-tests, when homogeneity of variance was violated, as indicated by Levene's test, Welch tests were used (Field, 2013). The results of assumption testing are reported within the following sections.

### *3.7.2 Preliminary Analyses*

**3.7.2.1 Demographic Considerations.** Normality testing revealed non-normal data distributions for age for both the UK and Caribbean samples. Age was significantly positively skewed in both instances. The UK sample (*Mdn* = 20.00, *IQR* = 5.00) was younger than the Caribbean sample (*Mdn* = 22.00, *IQR* = 4.00). A Mann-Whitney test indicated that this difference was statistically significant, $U = 2638.00$, $z = 3.08$, $p = .002$, $r = .03$. A Kruskal-Wallis test revealed that age did not differ among the TT (*Mdn* = 22.00, *IQR* = 5.00), BB (*Mdn* = 22.00, *IQR* = 7.00), and JM (*Mdn* = 22.00, *IQR* = 3.00) subsamples, $H(2) = 0.14$, $p = .931$. Correlation analyses did not reveal significant relationships between participant age and VIP for the childhood, $r_s(125) = .08$, $p = .348$, adolescent, $r_s(125) = .11$, $p = .218$, or adulthood, $r_s(125) = -.14$, $p = .124$, memories. There was a significant positive weak correlation between participant age and SCS Independence scores, $r_s(125) = .25$, $p = .005$, but no significant relationships between participant age and SCS Interdependence scores, $r_s(125) = -.05$, $p = .591$, or TST Independence proportion scores, $r_s(123) = .12$, $p = .169$. It is important to note that despite a statistically significant age difference between the UK and the Caribbean samples, the magnitude of this difference is relatively small and participants in both samples are considered to be within the same developmental stage of life (young adults in their early twenties). Nevertheless, given that participant age was significantly associated with a primary independent variable in this study (nationality) as well as one of the main dependent variables (SCS Independent score), all analyses involving nationality and/or SCS Independence were also run while controlling for age. When results differed after controlling for age, these are highlighted and reported.

As displayed in Table 3.1, both the UK and Caribbean samples were primarily comprised of females. Fisher's Exact tests confirmed that there were no gender differences between the UK and Caribbean samples ($p = .193$), as well as no gender differences among the TT, BB, and JM subsamples ($p = .212$). There were no significant relationships between gender and VIP use for

the childhood *(U* = 1247.50, *z* = −0.40, *p* = .692, *r* = *.04*), adolescent *(U* = 1112.00, *z* = −1.22, *p* = .224, *r* = .11), or adulthood memories *(U* = 1144.50, *z* = −1.04, *p* = .299, *r* = .10). There were also no significant relationships between gender and SCS Independence scores, *t*(125) = −0.30, *p* = .767, *d* = 0.06, 95% CI [−0.38, 0.28], SCS Interdependence scores, *U* = 1211.00, *z* = −0.61, *p* = .542, *r* = .05, or TST Independence proportion scores, *U* = 1051.00, *z* = −1.24, *p* = .217, *r* = .11. However, the relatively low number of males in each sample limit the utility of the above significance tests. Given that samples were primarily female and that there were not significant relationships between gender any of the primary outcome variables, gender was not considered an appropriate variable for inclusion within the analyses of this study.

The ethnic composition of all samples is displayed in Table 3.1. There is clear variability within and across samples. As expected, Fisher's Exact tests confirmed significant ethnic differences between the UK and overall Caribbean samples ($p < .001$), as well as within the TT, BB, and JM subsamples ($p = .002$). Ethnicity was not analysed as a stand-alone variable nor was it controlled for when cross-national analyses were performed. There are two main reasons for this. Firstly, ethnicity is very strongly associated with nationality and in some samples including the UK and JA, over 80 % of the sample is of a particular ethnic background. Secondly, ethnicity is a complex social construct that cannot simply be collapsed across nationalities. Persons of similar ethnic backgrounds may have very different values, beliefs and traditions having grown up in different countries. In sum, any analyses conducted involving ethnicity were run with nationality considered (i.e. within cultures). Additionally, these analyses were run without the inclusion of the Other ethnic group given the very small number of participants within this category (no persons in the UK group and only five persons in the Caribbean group).

**3.7.2.2 Ease of Imagery.** An average ease of visual imagery score was computed for the UK and Caribbean samples by combining ease of imagery ratings for the childhood, adolescent and adulthood memories. These mean ease of imagery scores were normally

distributed. An independent samples *t*-test revealed no significant difference in the ease of which participants engaged in the visual imagery task between the UK ($M$ = 1.94, $SD$ = 0.55) and Caribbean ($M$ = 1.98, $SD$ = 0.64) samples, $t(125) = 1.46$, $p = .660$, $d = 0.07$, 95% CI [−0.26, 0.16].

**3.7.2.3 Age at Event Within Each Time Point.** For the overall sample, mean participant ages at the time of the recalled events were 7.14 ($SD$ = 2.36) for the childhood memory, 14.87 ($SD$ = 1.75) for the adolescent memory, and 20.58 ($SD$ = 2.99) for the adulthood memory. Independent samples *t*-tests revealed no significant difference in age at the time of the recalled event between the UK and the Caribbean samples for the childhood, $t(111) = -0.40$, $p = .687$, $d = 0.08$, 95% CI [−1.07, 0.71], adolescent, $t(121) = 0.23$, $p = .820$, $d = 0.04$, 95% CI [−0.55, 0.70], or adulthood memories, $t(123) = -1.54$, $p = .125$, $d = 0.28$, 95% CI [−1.88, 0.23].

**3.7.2.4 Overview of Variable Relationships and Identification of Potential Confounds.** Prior to running primary and secondary analyses, bivariate correlation analyses were run for all primary and secondary variables (with the exception of emotional valence, a three-category nominal variable analysed separately) for each of the three memory time points (childhood, adolescence, and adulthood). These are displayed in Appendix J. As in Study 1, these preliminary correlations provided an overview of variable interrelationships (with relationships of interest discussed throughout the results section of this chapter) and allowed for the identification of any potentially confounding or extraneous secondary memory characteristic variables that would need to be controlled for during VIP-related analyses. The normality assumption was not met for participant age, VIP (all three time points), SCS Interdependence scores, TST Independence proportion scores, vividness (all three time points), rehearsal (adulthood memory), strength of emotionality (adolescent and adulthood memories), and ease of imagery (all three time points).

No secondary memory variables were considered potentially confounding (significantly correlated with both VIP ratings and nationality) for any of the three time points. For the childhood memory, VIP ratings were significantly correlated with ease of imagery ratings, $r_s(125) = -.22$, $p = .012$, such that higher VIP ratings (more Field) were associated with lower (easier) ease of imagery ratings. For the adolescent memory, VIP ratings were significantly correlated with vividness, $r_s(125) = .22$, $p = .012$, and strength of emotionality, $r_s(125) = .21$, $p = .017$, ratings such that higher VIP ratings (more Field) were associated with higher vividness and emotionality ratings. For the adulthood memory, VIP ratings were significantly correlated with ease of imagery, $r_s(125) = -.23$, $p = .009$, vividness, $r_s(125) = .31$, $p < .001$, and strength of emotionality, $r_s(125) = .25$, $p = .005$, ratings such that higher VIP ratings (more Field) were associated with lower (easier) ease of imagery ratings and higher vividness and emotionality ratings. Given the significant relationships between VIP use and these secondary memory variables, all analyses involving VIP were also run while controlling for these variables and any differing results are highlighted and reported.

### *3.7.3 Primary Analyses: Nationality Differences in VIP and Self-Construal*

The normality assumption was met for SCS Independence scores but not for SCS Interdependence scores (positively skewed) or TST Independence proportion scores (negatively skewed). Visual Imagery perspective scores (all time points) did not meet the normality assumption. Data was positively skewed for the childhood memory and negatively skewed for the adolescent and adulthood memories. Homogeneity of variance assumptions were met for VIP scores (all time points), SCS Independence and Interdependence scores, and TST Independence proportion scores. Table 3.2 displays descriptive statistics for the VIP scores, SCS scores, and TST Independence proportion scores for the UK and Caribbean groups. Results are presented alongside test statistics and *p* values obtained from independent samples *t*-tests or Mann-Whitney *U* tests. The combined Caribbean sample was used for all analyses given that there were no significant differences among the three Caribbean groups

(TT, BB or JA) for any of the primary variables or any of the secondary memory characteristic variables.

**Table 3.2**

*Central Tendency and Dispersion Scores of VIP and Self-Construal Measures*

| Scale | Total Sample | UK group | Caribbean group | *p (r/d)* |
|---|---|---|---|---|
| Visual Imagery Perspective 1[a] | | | | |
| Mean (SD) | 3.85 (2.19) | 3.81 (2.13) | 3.90 (2.28) | |
| Median (IQR) | 4.00 (4.00) | 3.50 (4.00) | 4.00 (6.00) | .827 (*r* = .02) |
| Visual Imagery Perspective 2[b] | | | | |
| Mean (SD) | 4.31 (2.02) | 4.35 (1.92) | 4.25 (2.15) | |
| Median (IQR) | 4.00 (3.00) | 4.00 (3.00) | 4.00 (3.00) | .843 *(r* = .02) |
| Visual Imagery Perspective 3[c] | | | | |
| Mean (SD) | 4.94 (2.12) | 4.91 (2.06) | 4.98 (2.22) | |
| Median (IQR) | 5.00 (3.00) | 5.00 (3.00) | 6.00 (3.00) | .683 *(r* = .04) |
| SCS Independence | | | | |
| Mean (SD) | 4.81 (0.76) | 4.59 (0.75) | 5.05 (0.70) | .001 (*d* = 0.63) |
| Median (IQR) | 4.80 (1.00) | 4.60 (1.01) | 5.13 (0.93) | |
| SCS Interdependence | | | | |
| Mean (SD) | 4.69 (0.64) | 4.68 (0.71) | 4.71 (0.56) | |
| Median (IQR) | 4.73 (0.73) | 4.73 (0.89) | 4.73 (0.73) | .690 *(r* = .04) |
| TST Independence Proportion | | | | |
| Mean (SD) | 0.79 (0.20) | 0.77 (0.20) | 0.81 (0.19) | |
| Median (IQR) | 0.85 (0.27) | 0.85 (0.25) | 0.90 (0.25) | .182 *(r* = .12) |

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. SCS = Singelis Self-Construal Scale; TST = Twenty Statements Test. *N* = 68 for the UK group and 59 for the Caribbean group.

[a] Reflects visual imagery perspective for the childhood memory. [b] Reflects visual imagery perspective for the adolescent memory. [c] Reflects visual imagery perspective for the adulthood memory.

#### 3.7.3.1 Research Question 1: Are There Differences in the Type of VIP Used During AM Recall Between Persons From the United Kingdom and Persons From the Caribbean?.

As displayed in Table 3.2, the overall mean and median VIP ratings for the total sample were above 3.50 (the midpoint of the 7-point VIP rating scale) at all time points. This indicates a general preference (of varying degrees) for Field perspective use. One-sample Wilcoxon Signed Rank tests revealed that VIP ratings for both cultures were significantly above 3.50 for the adolescent (UK, $z = 3.26$, $p = .001$; Caribbean, $z = 2.57$, $p = .010$) and adulthood memories (UK, $z = 4.73$, $p < .001$; Caribbean, $z = 4.54$, $p < .001$), but not for the childhood memories (UK, $z = 1.17$, $p = .240$; Caribbean, $z = 1.44$, $p = .150$).

When participants were asked in a separate question whether or not they saw their memories from both perspective types 88.2% of persons from the UK and 86.4% of persons from the Caribbean reported seeing at least one of their memories from both perspectives as opposed to exclusively from one perspective. Additionally, 26.5% of the UK sample and 25.4% of the Caribbean sample saw all three of their memories from both perspectives.

As displayed in Table 3.2, Mann-Whitney *U* tests did not reveal significant differences in VIP ratings between the UK and the Caribbean group for the childhood *(U* = 2050.50, $z = 0.22$, $p = .827$, $r = .02$), adolescent *(U* = 1965.50, $z = -0.20$, $p = .843$, $r = .02$), or adulthood *(U* = 2088.00, $z = 0.41$, $p = .683$, $r = .04$) memories. Inconsistent with the hypothesis, there were no differences in Field versus Observer perspective use between the two cultures.

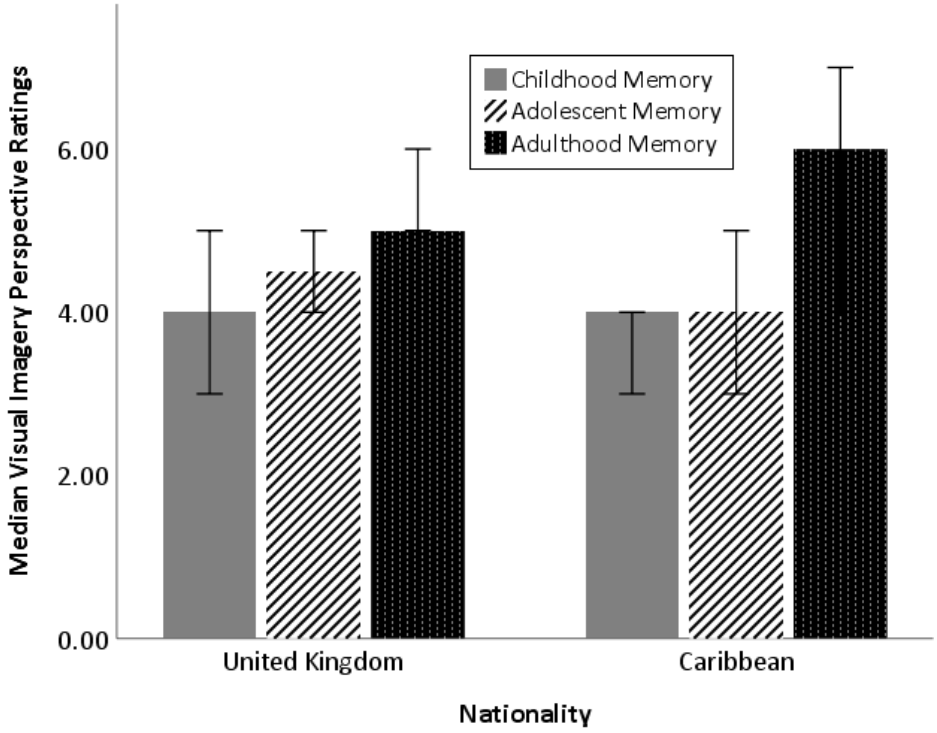
#### 3.7.3.2 Research Question 2: What is the Impact of Temporal Factors on VIP use in Both Cultures?.

Figure 3.1 displays VIP ratings according to time point, and nationality. In order to explore the impact of temporal factors on VIP in both cultures, Friedman tests were run followed by Dunn-Bonferroni pairwise comparisons (using Bonferroni-adjusted significance values). Results indicated significant differences in VIP use across the three time points for both the UK, $\chi^2_F(2) = 10.63$, $p = .005$, and the Caribbean, $\chi^2_F(2) = 9.17$, $p = .010$, samples. For the UK sample, VIP did not significantly differ between the childhood (*Mdn* =

3.50, *IQR* = 4.00) and adolescent (*Mdn* = 4.00, *IQR* = 3.00) memories ($z = -1.63$, $p = .310$) or between the adolescent (*Mdn* = 4.00, *IQR* = 3.00) and adulthood (*Mdn* = 5.00, *IQR* = 3.00) memories ($z = -1.37$, $p = .510$). Visual imagery perspective scores were significantly higher (more Field/Own Eyes) for the adulthood memory compared to the childhood memory ($z = -3.00$, $p = .008$). As with the UK sample, VIP scores for the Caribbean sample did not significantly differ between the childhood (*Mdn* = 4.00, *IQR* = 6.00) and adolescent (*Mdn* = 4.00, *IQR* = 3.00) memories ($z = -0.46$, $p > .999$) or between the adolescent (*Mdn* = 4.00, *IQR* = 3.00) and adulthood (*Mdn* = 6.00, *IQR* = 3.00) memories ($z = -1.98$, $p = .143$). Visual imagery perspective scores were significantly higher (more Field/Own Eyes) for the adulthood memory compared to the childhood memory ($z = -2.44$, $p = .044$). In summary, persons from both the UK and the Caribbean more often used a Field perspective when recalling memories from adulthood versus memories from childhood.

**Figure 3.1**

*VIP Ratings According to Time Point and Nationality*



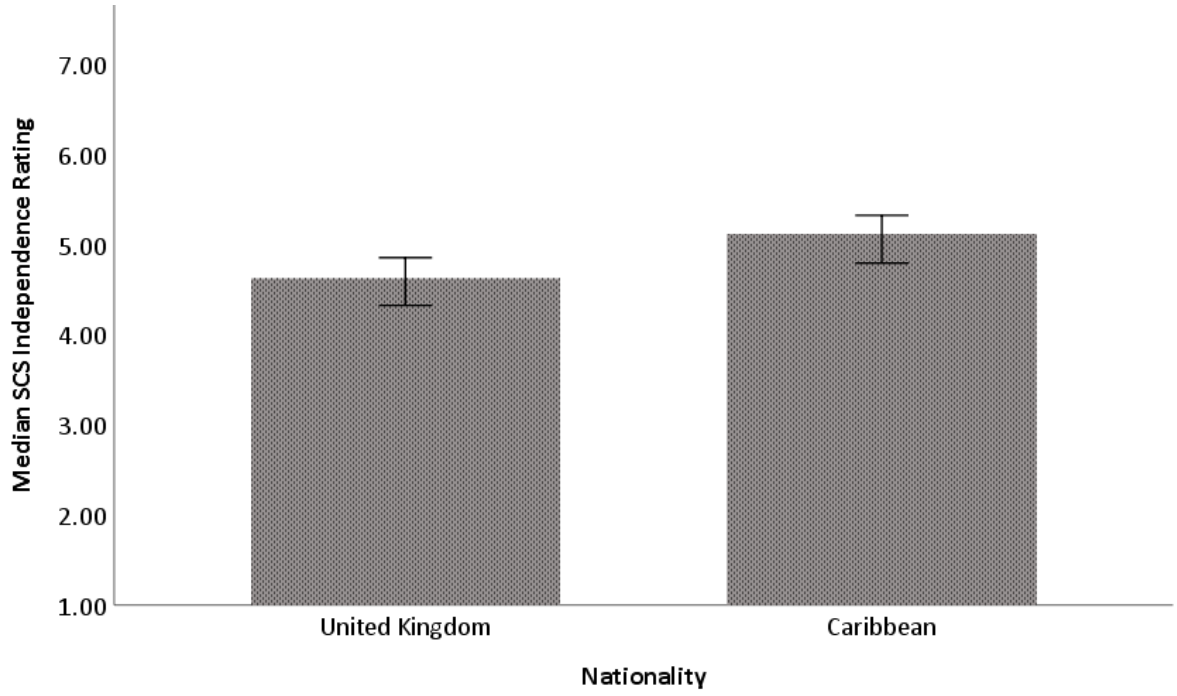

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Error bars represent 95% Confidence Intervals.

#### 3.7.3.3 Research Question 3: Are There Differences in Self-Construal Between Persons From the United Kingdom and Persons From the Caribbean?.

Inconsistent with the hypothesis, there was no significant difference in TST Independence proportion scores between the UK (*Mdn* = 0.85, *IQR* = 0.25) and Caribbean (*Mdn* = 0.90, *IQR* = 0.25) samples, *U* = 2215.50, *z* = 1.34, *p* = .182, *r* = .12. In contrast with predictions, an independent samples *t*-test revealed that UK participants (*M* = 4.59, *SD* = 0.75) had significantly lower SCS Independence scores than Caribbean participants (*M* = 5.05, *SD* = 0.70), *t*(125) = −3.56, *p* = .001, *d* = 0.63, 95% CI [−0.72, −0.20] (see Figure 3.2). In terms of SCS Interdependence scores, a Mann-Whitney *U* test did not reveal significant differences between the UK (*Mdn* = 4.73, *IQR* = 0.89) and the Caribbean (*Mdn* = 4.73, *IQR* = 0.73) groups, *U* = 2088.50, *z* = 0.40, *p* = .690, *r* = .04.

**Figure 3.2**

*SCS Independence Ratings According to Nationality*




*Note.* SCS = Singelis Self-Construal Scale. Error bars represent 95% Confidence Intervals

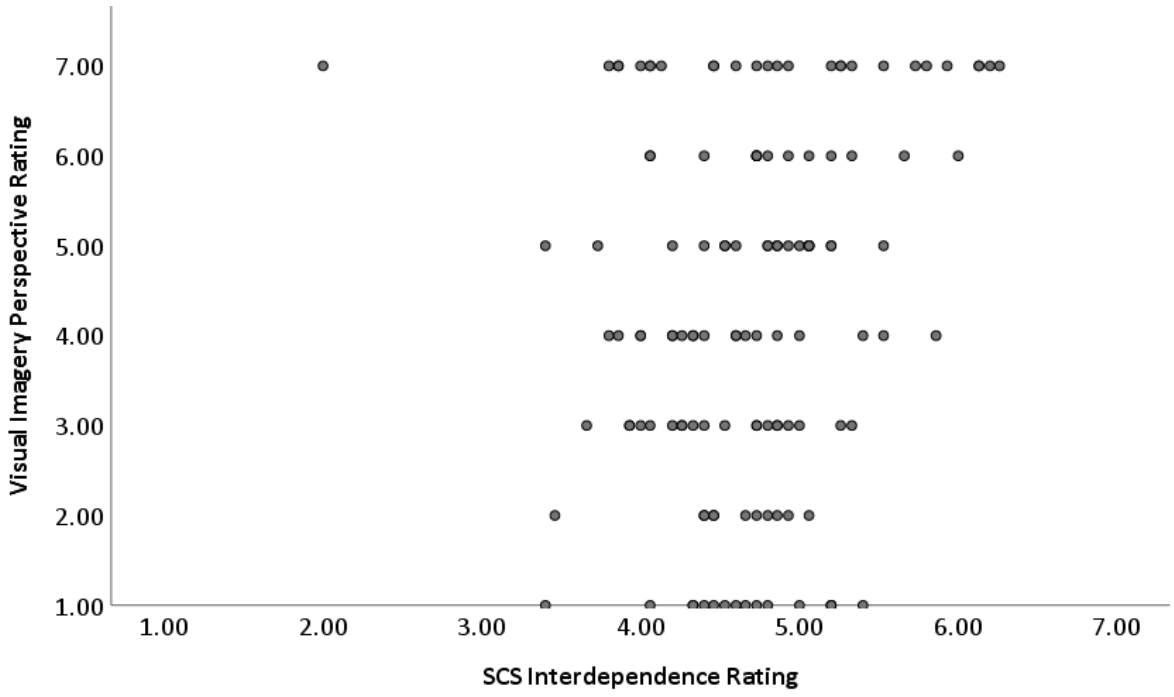
For the purpose of exploring whether UK persons reported higher independent than interdependent SCS self-construal relative to Caribbean persons (Research Question 2b), SCS discrepancy scores were calculated by subtracting each participant's SCS Interdependent score from their SCS Independent score. There was a significant difference in SCS discrepancy scores between the UK (*Mdn* = −0.04, *IQR* = 1.32) and Caribbean (*Mdn* = 0.46, *IQR* = 1.06) samples, *U* = 2618.00, *z* = 2.96, *p* = .003, *r* = .26. However, the UK sample did not reflect higher independent than interdependent SCS self-construal ratings relative to the Caribbean sample. Instead, the opposite pattern was observed in which the Caribbean sample had significantly more discrepant SCS scores in favour of independent versus interdependent self-construal.

**3.7.3.4 Research Question 4: Is There a Relationship Between Self-Construal and VIP use During AM Recall Regardless of Nationality?.** Correlation analyses were performed between the three self-construal scores (SCS Independence, SCS Interdependence, and TST

Independence proportion) and VIP ratings at each time point (see Appendix J). Inconsistent with hypotheses, there was no significant relationship between SCS Independence scores and VIP use for the childhood, $r_s(125) = .16$, $p = .081$, adolescent, $r_s(125) = .07$, $p = .442$, or adulthood, $r_s(125) = .07$, $p = .441$, memories. There was also no significant relationship between SCS Interdependence scores and VIP use for the childhood, $r_s(125) = -.04$, $p = .684$, or adulthood, $r_s(125) = .04$, $p = .397$, memories. In further contrast to expectations, there was a significant weak positive relationship between SCS Interdependence scores and VIP for the adolescent memory, $r_s(125) = .18$, $p = .039$. This relationship is displayed in Figure 3.3 below.

**Figure 3.3**

*Association Between SCS Interdependence Ratings and VIP for the Adolescent Memory*

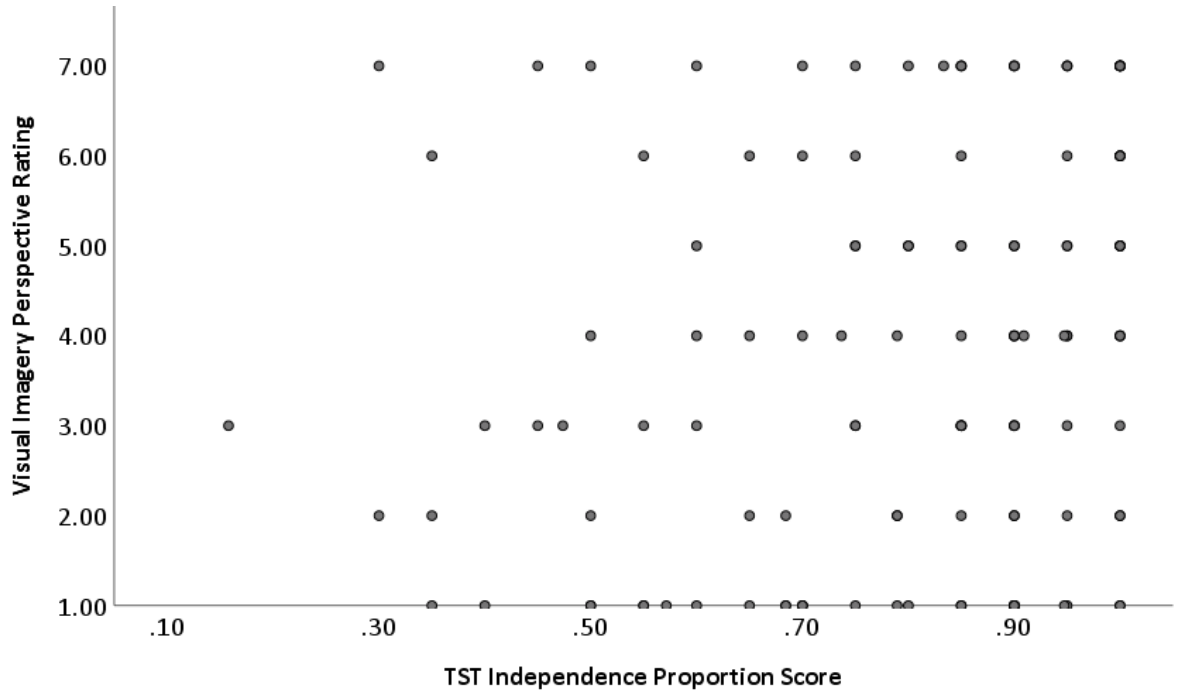



*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. SCS = Singelis Self-Construal Scale.

On the other hand, in line with expectations, there was a significant weak positive relationship between TST Independence proportion scores and VIP for the childhood memory, $r_s(123) = .24$, $p = .007$. This relationship is displayed in Figure 3.4 below. However, TST Independence proportion scores were not significantly correlated with VIP for the adolescent, $r_s(123) = .13$, $p = .142$, or adulthood, $r_s(123) = -.04$, $p = .673$, memories.

**Figure 3.4**

*Association Between TST Independence Proportion Scores and VIP for the Childhood Memory*




*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. TST = Twenty Statements Test.

In order to explore the independent effects of SCS Independence, SCS Interdependence, and TST Independence proportion scores on VIP use, these variables were entered into simultaneous multiple linear regression analyses predicting VIP ratings for each time point. Multicollinearity between the three predictors was ruled out (SCS Independence, Tolerance = .93, VIF = 1.08; SCS Interdependence, Tolerance = .99, VIF = 1.01; TST Independence proportion, Tolerance = .93, VIF = 1.08). Results of the regression analysis for

the childhood memory indicated that the three self-construal predictors explained 5% of the variance in VIP and the model was not significant, $R^2$ =.05, $F(3, 121) = 2.05$, $p$ = .110. In terms of individual predictors, neither SCS Independence scores, $\beta$= .07, $t(121) = 0.74$, $p$ = .461, nor SCS Interdependence scores, $\beta$= −.06, $t(121) = -0.63$, $p$ = .529, predicted VIP ratings for the childhood memory. However, TST Independence proportion score was a significant positive predictor of VIP ratings for the childhood memory, $\beta$= .19, $t(121) = 2.05$, $p$ = .042. Higher TST Independence proportion score predicted higher VIP scores (more Field/Own Eyes).

For the adolescent memory, the regression analysis indicated that the three self-construal predictors explained 6% of the variance in VIP and the model was significant, $R^2$ =.06, $F(3, 121) = 2.71$, $p$ = .048. In terms of individual predictors, neither SCS Independence scores, $\beta$= −.01, $t(121) = -0.15$, $p$ = .879, nor TST Independence proportion score, $\beta$= .11, $t(121)$ = 1.22, $p$ = .223, predicted VIP ratings. However, SCS Interdependence score was a significant positive predictor of VIP ratings for the childhood memory, $\beta$= .22, $t(121) = 2.49$, $p$ = .014. Higher SCS Interdependence scores predicted higher VIP scores (more Field/Own Eyes).

Bootstrapping was used for the regression analysis of the adulthood memory given that the distribution of the residuals for the VIP score was negatively skewed. The regression analysis for the adulthood memory indicated that three self-construal predictors explained 2% of the variance in VIP and the model was not significant, $R^2$ =.02, $F(3, 121) = 0.76$, $p$ = .518. In terms of individual predictors, none of the measures of self-construal including SCS Independence scores, $\beta$= .02, $t(121) = 0.20$, $p$ = .881, SCS Interdependence scores, $\beta$= .13, $t(121) = 1.47$, $p$ = .144, or TST Independence proportion scores, $\beta$= −.03, $t(121) = -0.37$, $p$ = .705, predicted VIP.

### *3.7.4 Secondary Analyses*

**3.7.4.1 Cross-Cultural Differences in Additional Memory Characteristics**. Descriptive statistics for all memory variables according to nationality and time point are presented in Table 3.3. Mann-Whitney *U* tests did not reveal significant differences in ease of imagery ratings between the UK and the Caribbean groups for the childhood (*U* = 1646.00, *z* = −1.87, *p* = .062, *r* = .17), adolescent *(U* = 2188.00, *z* = 0.94, *p* = .350, *r* = .08), or adulthood *(U* = 2108.00, *z* = 0.56, *p* = .573, *r* = .05) memories. There were also no significant differences in strength of emotionality ratings between the UK and the Caribbean group for the childhood (*U* = 1950.50, *z* = −0.28, *p* = .782, *r* = .02), adolescent *(U* = 1797.00, *z* = −1.04, *p* = .300, *r* = .09), or adulthood *(U* = 2312.00, *z* = 1.60, *p* = .109, *r* = .14) memories.

In terms of vividness, persons from the Caribbean (*Mdn* = 6.00, *IQR* = 1.00) rated significantly more vivid childhood memories than persons from the UK (*Mdn* = 5.00, *IQR* = 2.00), *U* = 2565.00, *z* = 2.78, *p* = .005, *r* = .25. However, when a multiple linear regression analysis was run in order to control for participant age, nationality no longer significantly predicted memory vividness, $\beta$ = −.17, *t*(124) = −1.96, *p* = .053. Mann-Whitney *U* tests did not reveal significant differences in vividness ratings between the UK and the Caribbean group for the adolescent *(U* = 2268.50, *z* = 1.30, *p* = .193, *r* = .12) or adulthood *(U* = 2111.00, *z* = 0.55, *p* = .581, *r* = .05) memories.

An independent samples *t*-test revealed no significant difference in rehearsal ratings between UK and Caribbean participants for the childhood memory, *t*(125) = 0.13, *p* = .895, *d* = −0.03, 95% CI [−0.35, 0.40]. Adolescent memories were significantly more rehearsed for the UK sample (*M* = 3.40, *SD* = 1.32) than the Caribbean sample (*M* = 2.85, *SD* = 1.23), *t*(125) = 2.42, *p* = .017, *d* = −0.43, 95% CI [0.10, 1.00]. A Mann-Whitney *U* test did not reveal significant differences in rehearsal ratings between UK and Caribbean participants for the adulthood memory*, U* = 1846.50, *z* = −0.80, *p* = .424, *r* = .07. A Fisher's Exact test revealed no significant

differences in emotional valence between the UK and the Caribbean groups for the childhood ($p$ = .335), adolescent ($p$ = .532), or adulthood memories ($p$ = .503).

Regarding memory content, Fisher's Exact tests revealed no significant differences in memory focus (individual versus social) between the UK and the Caribbean groups for the childhood ($p$ = .421), adolescent ($p$ = .679), or adulthood ($p$ = .440) memories. There were also no significant differences in memory specificity (specific versus general) between the UK and the Caribbean groups for the childhood ($p$ = .344), adolescent ($p$ = .143), or adulthood ($p$ = .185) memories. It is important to note that most memories reported were specific and statistical analyses involving memory specificity must therefore be reviewed with great caution.

**Table 3.3**

*Descriptive Statistics for Memory Variables According to Time Point*

| Scale | Childhood | | Adolescent | | Adulthood | |
|---|---|---|---|---|---|---|
| | UK | Caribbean | UK | Caribbean | UK | Caribbean |
| Visual Imagery Perspective (VIP) | | | | | | |
| Mean (SD) | 3.81 (2.13) | 3.90 (2.28) | 4.35 (1.92) | 4.25 (2.15) | 4.91 (2.06) | 4.98 (2.22) |
| Median (IQR) | 3.50 (4.00) | 4.00 (6.00) | 4.00 (3.00) | 4.00 (3.00) | 5.00 (3.00) | 6.00 (3.00) |
| Vividness | | | | | | |
| Mean (SD) | 4.91 (1.19) | 5.44 (1.41) | 5.15 (1.34) | 5.39 (1.60) | 6.00 (1.39) | 6.19 (1.09) |
| Median (IQR) | 5.00 (2.00) | 6.00 (1.00) | 5.00 (2.00) | 6.00 (2.00) | 6.50 (2.00) | 7.00 (1.00) |
| Ease of Imagery | | | | | | |
| Mean (SD) | 2.19 (0.82) | 1.98 (1.03) | 2.10 (0.81) | 2.31 (1.02) | 1.51 (0.78) | 1.66 (0.98) |
| Median (IQR) | 2.00 (1.00) | 2.00 (1.00) | 2.00 (1.00) | 2.00 (1.00) | 1.00 (1.00) | 1.00 (1.00) |
| Strength of Emotionality | | | | | | |
| Mean (SD) | 5.43 (1.04) | 5.31 (1.45) | 5.47 (1.22) | 5.20 (1.40) | 5.93 (1.21) | 6.25 (1.03) |
| Median (IQR) | 5.00 (1.00) | 5.00 (3.00) | 6.00 (1.00) | 5.00 (2.00) | 6.00 (2.00) | 7.00 (2.00) |
| Rehearsal | | | | | | |
| Mean (SD) | 3.28 (1.12) | 3.25 (1.01) | 3.40 (1.32) | 2.85 (1.23) | 4.15 (1.35) | 3.97 (1.35) |
| Median (IQR) | 3.00 (1.75) | 3.00 (2.00) | 3.00 (1.00) | 3.00 (2.00) | 4.00 (1.00) | 4.00 (2.00) |

| | Childhood | | Adolescent | | Adulthood | |
|---|---|---|---|---|---|---|
| Focus | | | | | | |
| % Individual: Social | 22:78 | 29:71 | 22:78 | 26:74 | 27:73 | 34:66 |
| Specificity | | | | | | |
| % Specific: General | 87:13 | 80:20 | 97:3 | 90:10 | 98:2 | 93:7 |
| Emotional Valence | | | | | | |
| % Positive: Negative: Neutral | 50:40:10 | 51:30:19 | 49:29:22 | 41:39:20 | 55:32:13 | 48:42:10 |

*Note*. Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Higher numbers for Ease of Imagery indicate greater difficulty visualizing the memory. *N* = 68 for the UK group and 59 for the Caribbean group.

**3.7.4.2 Temporality and Memory Characteristics.** A Friedman test indicated significant differences in vividness ratings across the three time points, $\chi^2_F(2) = 55.90$, $p < .001$. Dunn-Bonferroni pairwise comparisons (using Bonferroni-adjusted significance values) showed that vividness ratings did not significantly differ between the childhood (*Mdn* = 5.00, *IQR* = 2.00) and adolescent (*Mdn* = 5.00, *IQR* = 1.00) memories ($z = -1.44$, $p = .447$). However, vividness ratings were significantly higher for the adulthood memory (*Mdn* = 7.00, *IQR* = 2.00) than both the childhood ($z = -6.18$, $p < .001$) and adolescent ($z = -4.74$, $p < .001$) memories.

In terms of ease of imagery, there were significant differences in ratings across the three time points, $\chi^2_F(2) = 47.17$, $p < .001$. Dunn-Bonferroni pairwise comparisons (using Bonferroni-adjusted significance values) showed that ease of imagery did not significantly differ between the childhood (*Mdn* = 2.00, *IQR* = 2.00) and adolescent (*Mdn* = 2.00, *IQR* = 1.00) memories, $z = -0.47$, $p > .999$. However, memories were more easily visualized for the adulthood memory (*Mdn* = 1.00, *IQR* = 1.00) than both the childhood ($z = 4.71$, $p < .001$) and adolescent ($z = 5.18$, $p < .001$) memories.

A Friedman test indicated significant differences in memory rehearsal ratings across the three time points, $\chi^2_F(2) = 45.29$, $p < .001$. Dunn-Bonferroni pairwise comparisons (using Bonferroni-adjusted significance values) showed that memory rehearsal did not significantly differ between the childhood (*Mdn* = 3.00, *IQR* = 2.00) and adolescent (*Mdn* = 3.00, *IQR* = 2.00) memories, $z = 0.22$, $p > .999$. However, memories from adulthood (*Mdn* = 4.00, *IQR* = 2.00) were more often rehearsed than memories from childhood ($z = -5.02$, $p < .001$) and adolescence ($z = -5.24$, $p < .001$).

There were significant differences in strength of emotionality at the time of the recalled event across the three time points, $\chi^2_F(2) = 32.87$, $p < .001$. Dunn-Bonferroni pairwise comparisons (using Bonferroni-adjusted significance values) showed that strength of emotionality did not significantly differ between the childhood (*Mdn* = 5.00, *IQR* = 1.00) and adolescent (*Mdn* = 5.00, *IQR* = 2.00) memories ($z = -0.25$, $p > .999$). However, memories from

adulthood (*Mdn* = 7.00, *IQR* = 2.00) were stronger in emotionality than memories from childhood ($z = -4.36$, $p < .001$) and adolescence ($z = -4.11$, $p < .001$). Fisher's Exact tests revealed no significant differences in emotional valence between the childhood and adolescent memories ($p = .538$), the childhood and adulthood memories ($p = .538$), or the adolescent and adulthood memories ($p = .334$).

Regarding memory content, Cochran's Q tests revealed no significant differences in memory focus (individual versus social) across the three time points, $\chi^2(2) = 1.83$, $p = .402$. There were differences in memory specificity across the three time points, $\chi^2(2) = 18.08$, $p < .001$. Dunn-Bonferroni pairwise comparisons (using Bonferroni-adjusted significance values showed that memories were significantly less specific for the childhood compared to the adolescent ($z = -3.25$, $p = .003$) and adulthood ($z = -4.00$, $p < .001$) memories. However, analyses involving memory specificity must be reviewed with great caution given that most memories reported were specific.

**3.7.4.3 Ethnic Considerations.** As discussed in section 3.7.2.1, ethnicity was not considered an appropriate standalone variable within the current study. Within-culture investigations of the relationship between ethnicity, self-construal, and VIP are presented in this section for the UK and TT samples only given that these samples had at least two ethnic groups comprised of at least five participants per group (see Table 3.1). However, the usefulness of the following analyses is limited given the highly unbalanced ethnic proportions within and across cultures coupled with the very small sample sizes of some ethnic groups.

For the UK sample, ethnic group comparisons include the Caucasian and the Asian groups. An independent samples *t*-test revealed that within the UK sample, persons of Caucasian ethnic background ($M = 4.50$, $SD = 0.71$) rated significantly lower SCS Independence scores than persons of Asian ($M = 5.27$, $SD = 0.50$) ethnic background, $t(62) = -3.14$, $p = .001$, $d = 1.25$, 95% CI [−1.27, −0.28]. Mann-Whitney *U* tests did not reveal significant differences in SCS Interdependence ratings between Caucasian (*Mdn* = 4.53, *IQR* = 0.76) and Asian (*Mdn* =

4.20, *IQR* = 0.90) participants from the UK, *U* = 327.00, *z* = 1.54, *p* = .124, *r* =.19. In terms of TST Independence proportion ratings, persons of Caucasian ethnic background (*Mdn* = 0.79, *IQR* = 0.30) rated significantly lower TST Independence scores than persons of Asian (*Mdn* = 1.00, *IQR* = 0.10) ethnic background, *U* = 406.50, *z* = 3.38, *p* = .001, *r* =.43. Mann-Whitney *U* tests did not reveal significant differences in VIP ratings between Caucasian and Asian participants from the UK for the childhood (*U* = 244.00, *z* = −0.07, *p* = .945, *r* = .01) or adolescent *(U* = 227.50, *z* = −0.39, *p* = .696, *r* = .05) memories. However, for the adulthood memory, persons of Caucasian ethnic background (*Mdn* = 6.00, *IQR* = 3.00) rated significantly higher VIP scores than persons of Asian ethnic background (*Mdn* = 3.00, *IQR* = 3.00), *U* = 128.00, *z* = −2.36, *p* = .018, *r* = .30. In summary, persons of Caucasian ethnic background in the UK rated significantly lower SCS Independence scores and TST Independence proportion scores compared to persons of Asian ethnic background. Additionally, persons of Caucasian ethnic background in the UK more often used a Field perspective when recalling memories from adulthood compared to persons of Asian ethnic background.

For the TT sample, ethnic group comparisons included the Asian and African ethnic groups. An independent samples *t*-test did not reveal significant differences in SCS Independence ratings between persons from Asian (*M* = 4.92, *SD* = 0.83) and African (*M* = 5.36, *SD* = 0.38) ethnic backgrounds, *t*(16) = −1.30, *p* = .212, *d* = 0.68, 95% CI [−1.15, 0.28]. Mann-Whitney *U* tests did not reveal significant differences in SCS Interdependence ratings between Asian (*Mdn* = 5.06, *IQR* = 1.07) and African (*Mdn* = 4.73, *IQR* = 0.40) participants from TT, *U* = 28.50, *z* = −0.91, *p* = .363, *r* = .21. There were also no significant differences in TST Independence proportion scores between Asian (*Mdn* = 0.75, *IQR* = 0.45) and African (*Mdn* = 0.85, *IQR* = 0.50) participants, *U* = 38.00, *z* = −0.05, *p* = .963, *r* = .01. Mann-Whitney *U* tests did not reveal significant differences in VIP ratings between Asian and African participants from TT for the childhood (*U* = 40.50, *z* = 0.19, *p* = .852, *r* = .04), adolescent *(U* = 40.50, *z* = 0.19, *p* = .853, *r* = .04), or adulthood *(U* = 47.50, *z* = 0.84, *p* = .402, *r* = .20) memories. In summary, no

differences in self-construal or VIP use were found between persons of African and Asian ethnic background from TT.

**3.7.4.4 Relationship Between SCS Independent and Interdependent Self-Construal Ratings.** Correlation analyses (see Appendix J) did not reveal a significant relationship between SCS Independence and SCS Interdependence self-construal ratings for the sample as a whole, $r_s(125) = .11$, $p = .232$, or within the UK, $r_s(66) = .09$, $p = .462$, or Caribbean, $r_s(57) = .07$, $p = .600$, samples.

**3.7.4.5 Relationship Between Self-Construal Measures.** As displayed in Appendix J, correlation analyses between SCS-derived self-construal scores (Independence and Interdependence) and TST-derived self-construal proportion scores revealed a significant moderate positive relationship between SCS Independence scores and TST Independence proportion scores, $r_s(123) = .32$, $p < .001$. Considering nationality, both the UK and the Caribbean groups displayed significant moderate positive correlations, $r_s(64) = .30$, $p = .013$, and $r_s(57) = .32$, $p = .013$, respectively. Data distributions for this relationship are displayed in Appendix K. There was no significant relationship between SCS Interdependence scores and TST Independence proportion scores, $r_s(123) = .07$, $p = .429$. This was true for both the UK, $r_s(64) = .07$, $p = .595$, and the Caribbean, $r_s(57) = .07$, $p = .585$, groups.

## 3.8 Discussion

### *3.8.1 VIP in the UK and the Caribbean*

The hypothesis that persons from the UK would more often utilize a Field perspective during AM recall compared to persons from the Caribbean was not supported. There were no significant differences in Field versus Observer perspective use between the two cultures for memories from any time point. In fact, these differences were far from reaching significance and their effect sizes were very small (r <.05). This finding is not consistent with previous findings that persons from more individualistic cultures more frequently use a Field perspective than persons from more collectivistic cultures (Cohen & Gunz, 2002; Martin &

Jones, 2012; Sutin & Robins, 2007). Findings of the present study do not support a general difference in VIP use between the UK and Caribbean cultures. If differences in VIP exist between the UK and the Caribbean, these are likely to be circumstantial; for example, for certain types of memories including those in which persons are at the centre of attention in their memories (Cohen & Gunz, 2002). The examination of cross-cultural differences in VIP use for particular types of memories is conducted in Study 4.

Both cultural groups showed a preference for using a Field versus Observer perspective when recalling memories (though this was only statistically significant for the adolescent and adulthood memories). The overall preference for a Field perspective despite differences in the relative use of these perspectives has been previously found (Martin & Jones, 2012; Sutin & Robins, 2007) especially when participants are not specifically told to remember events in which they were the centre of attention (as in Cohen & Gunz, 2002). It is also important to note that regardless of imagery preference, the majority of persons in both cultural groups reported seeing at least one of their memories from both perspective types and approximately one quarter of persons saw all three of their memories from both perspectives. This is consistent with the results of Study 1 as well as previous findings that most people can experience memories from both perspectives and that persons can shift between perspectives during a single retrieval event (Huebner & Fredrickson, 1999; Nigro & Neisser, 1983; Rice & Rubin, 2009; Robinson & Swanson, 1993).

Despite an overall Field preference, the hypothesis that older memories would more often be recalled using an Observer perspective than more recent memories was supported and there was a significant impact of temporality on VIP in both cultures. Participants more often used a Field perspective when recalling memories from adulthood versus memories from childhood. This is consistent with research indicating the transition from Field to Observer VIP with time (D'Argembeau & Van der Linden, 2004; McIsaac & Eich, 2002; Nigro &

Neisser, 1983; Piolino et al., 2006; Pronin & Ross, 2006; Rice & Rubin, 2009; Robinson & Swanson, 1993).

### *3.8.2 Self-Construal in the UK and the Caribbean*

Bivariate analyses did not support the hypothesis that self-construal ratings obtained from UK persons would reflect higher independence ratings and lower interdependence ratings compared to self-construal ratings obtained from Caribbean persons. There were no differences in self-construal as measured by the TST. Self-construal scores obtained from the SCS indicated similar levels of interdependent self-construal between the two cultures. This differs from the results of Study 1 which revealed that persons from the UK had significantly lower SCS Interdependence scores than persons from TT. Contrary to expectations and the results of Study 1, the results of the current study indicated significantly lower levels of independent self-construal for UK participants compared to Caribbean participants. This finding is not consistent with the theoretically expected patterns put forth by Singelis (1994) that persons from relatively individualistic cultures rate higher independence ratings and lower interdependence ratings compared to persons from relatively more collectivistic cultures. While unexpected, our study is one of several studies that have found theoretically incongruent differences in self-construal using the SCS (e.g., Kleinknecht et al., 1997; Krull et al., 1999; Levine et al., 2003; Matsumoto, 1999; Sato & Cameron, 1999).

The hypothesis that self-construal ratings obtained from UK persons would reflect higher independent than interdependent self-construal ratings relative to Caribbean persons was not supported by SCS self-construal data. In fact, SCS scores revealed the opposite effect such that the Caribbean sample had significantly more discrepant SCS scores in favor of independent versus interdependent self-construal compared to the UK sample. This differs from the similar relative differences between SCS independence and interdependence observed between the two cultures in Study 1.

Overall, results regarding differences in self-construal between the two cultures are variable. Two of the three self-construal scores (SCS Interdependence and TST Independence proportion) did not differ between the two cultures and the third (SCS Independence) revealed an unexpected pattern of findings such that the Caribbean sample was more independent than the UK sample. Self-construal scores obtained from TST responses indicated greater independent than interdependent self-construal in both cultures while SCS difference scores indicated greater independent than interdependent self-construal patterns for the Caribbean group only.

The variable findings within the current study, coupled with inconsistencies between the results of the current study and those obtained from Study 1, do not yet allow for conclusions to be drawn regarding differences in self-construal between and within the UK and Caribbean cultures. It is possible that the inconsistent self-construal patterns observed could be related to the fact that the two cultures may in fact be less dissimilar in self-construal than expected based on available aggregate-level individualism estimates such as those provided by the Hofstede classification system (Hofstede Insights, 2021) and despite historical differences between the two cultures. However, inconsistent self-construal findings may also be related to challenges associated with measuring abstract constructs such as the self and self-construal (see section 1.4.2.2).

Despite the unexpected results as well as contradictory results between the two studies, the differential relationship between nationality and SCS Independent versus SCS Interdependent scores in both Study 1 and Study 2 provides support for previous findings indicating that the concepts of independence and interdependence are separate constructs as opposed to two ends of a single dimension (Singelis, 1994).

### *3.8.3 VIP and Self-Construal*

Results of this study only minimally supported the hypothesis that regardless of nationality, higher independent self-construal ratings would be associated with more frequent use of a Field VIP during AM recall. Consistent with the results of Study 1, independent self-construal as measured by the SCS did not significantly correlate with VIP for any of the three memories. Independence proportion scores obtained via the TST weakly correlated with VIP for the childhood memory only, such that higher TST Independence scores were associated with more Field perspective use. Results of this study did not support the hypothesis that higher interdependent self-construal ratings would be associated with more frequent use of an Observer VIP during AM recall. In fact, interdependent self-construal as measured by the SCS was only significantly correlated with VIP for the adolescent memory and in the opposite pattern expected (higher interdependent scores were associated with more Field perspective use). This finding is inconsistent with the results of Study 1 which showed that persons with higher interdependent self-construal ratings more often used an Observer versus a Field perspective.

Ultimately, the results of the current study do not provide clarity regarding the relationship between self-construal and VIP use and they cannot be used to support previous findings that persons from cultures considered to be collectivistic more often use an Observer perspective compared to persons from cultures considered to be individualistic (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007).

### *3.8.4 Supplementary Findings*

**3.8.4.1 Culture and Secondary Memory Characteristics.** Secondary analyses did not reveal cross-cultural differences (as measured via nationality) in ease of imagery, emotional valence of memories, strength of emotionality at the time of recalled events, or memory content (focus and specificity). Despite initial findings of higher vividness ratings for the childhood memory from persons from the Caribbean compared to persons from the UK, this

finding was no longer significant after controlling for participant age. In terms of memory rehearsal, cross-cultural differences were only observed for the adolescent memories indicating more rehearsed memories for the UK versus the Caribbean sample.

The largely lacking findings of cross-cultural differences in memory characteristics is consistent with the results of Study 1 yet inconsistent with reports of cross-cultural differences in memory vividness (Christian et al., 2013; Sutin & Robins, 2007), emotional valence (Oishi, 2002; Sutin & Robins, 2007), and strength of emotionality (Sutin & Robins, 2007; Wang & Conway, 2004) between persons from individualistic and collectivistic cultures. However, consistent differences in self-construal between the UK and the Caribbean groups have not yet been demonstrated based on the results of Study 1 and Study 2 and it is possible that the two cultures maybe more similar than available aggregate-level individualism estimates (e.g., Hofstede Insights, 2021) would suggest.

**3.8.4.2 Temporality and Memory Characteristics.** Participants from both the UK and the Caribbean more often used a Field perspective when recalling memories from adulthood versus memories from childhood. This is consistent with research indicating the transition from Field to Observer VIP with time (D'Argembeau & Van der Linden, 2004; McIsaac & Eich, 2002; Nigro & Neisser, 1983; Piolino et al., 2006; Pronin & Ross, 2006; Rice & Rubin, 2009; Robinson & Swanson, 1993). Temporality (i.e. the life phase in which events occurred) also had an impact on vividness ratings, ease of imagery ratings, memory rehearsal, and strength of emotionality, all of which were higher for the adulthood memory compared to the childhood and adolescent memories. These findings are consistent with previous findings that memories that are more recent (versus more remote) tend to be more vivid, accessible, and emotionally intense (D'Argembeau & Van der Linden, 2004; Gardner et al., 2015; Janssen et al., 2011; Luchetti & Sutin, 2018; Sutin & Robins, 2007). Emotional valence was not found to be significantly related to temporality despite previous reports that recent events are more likely to be positive in valence than remote events (Sutin & Robins, 2007). Statistical analyses

exploring the impact of temporality on memory content was limited given that most memories reported were individually (versus socially) focused and specific (versus general). Nevertheless, memory focus did not differ according to temporality while participants rated less specific memories for more remote memories (from childhood) than more recent memories (from adulthood). The more specific recent versus remote memories observed within this study is consistent with the theory that specific memories lose their episodic details and become more generalized and semanticized over time (Piolino et al., 2002; Tulving, 1985).

**3.8.4.3 Ethnic and Demographic Considerations.** Ethnicity was considered in this study given its proposed role in the nature of self-construal, especially within TT (Descartes, 2012; Stewart, 2004; Tidwell, 2001). Ethnicity was strongly associated with nationality and within-culture analyses were limited due to highly unbalanced ethnic proportions and very small sample sizes within some ethnic groups. While persons of Asian ethnic background in the UK (nine persons) rated higher levels of independent self-construal than persons of Caucasian ethnic background (55 persons), Caucasian participants more often used a Field perspective when recalling memories from adulthood. Despite ethnic differences, all UK participants within this study were born in the UK and continue to live in the UK. It is not possible to make assumptions regarding the reasons behind cross-ethnic differences in self-construal and VIP without having more information regarding participants' cultural backgrounds. For example, it would be important to know whether participants' parents were also born and raised in the UK. In any case, the uneven sample sizes in this study warrant cautious review of the results regarding cross-ethnic differences. No differences in self-construal or VIP use were found between persons of African (seven persons) and Asian (11 persons) ethnic backgrounds from TT. While this does not support the suggestion that the African population in Trinidad is more individualistic and that the East Indian population is more collectivist in nature (Descartes, 2012; Stewart, 2004) the very small sample sizes increase the risk of incorrectly retaining null hypotheses and restrict any conclusions regarding the lack of differences found.

The Caribbean sample within this study was comprised of persons from three Caribbean countries (Trinidad and Tobago, Barbados, and Jamaica). No differences were found among the three countries for any of the primary or secondary variables. Based on ethnic composition alone, TT would be expected to be more collectivistic/interdependent in nature than Barbados and Jamaica, however ethnicity alone would not be expected to explain the nature of self-construal in these countries. Additionally, the relatively small sample sizes in each Caribbean subgroup must be considered. Exploring within-Caribbean differences in self-construal and VIP is not a primary aim of this thesis and further research would be required in order for conclusions to be made. However, the lack of significant within-Caribbean differences observed in this Study may highlight the similarities among the Trinidadian, Barbadians, and Jamaican cultures, all of which share a history of colonisation, slavery, and indentureship (Premdas, 2011).

#### 3.8.4.4 Relationship Between SCS Independence and SCS Interdependence.

Consistent with Study 1, there are several findings from the current study that support the notion that independence and interdependence, and individualism and collectivism, are separate constructs versus two ends of a single dimension (Freeman, 1997; Markus & Kitayama, 1991; Singelis, 1994; Triandis, 1995). This includes the fact that SCS Independent but not SCS Interdependent self-construal ratings differed between the two cultures (albeit in the opposite pattern observed in Study 1) as well as the fact that differential relationships emerged between independent versus interdependent self-construal and memory characteristics including VIP for some memories. Additionally, SCS Independent and Interdependent scores were not significantly correlated for either the UK or the Caribbean cultures. While this lack of significant correlation was found for the UK sample in Study 1, a moderate correlation was found within the TT sample of Study 1. The inconsistencies within Study 1 coupled with the lack of correlation within the current study do not support the idea that individualism and collectivism are two ends of a unidimensional construct as suggested by

Hofstede (1980). If this were the case, a strong correlation between independent and interdependent self-construal would be expected to emerge for both the UK and Caribbean samples.

**3.8.4.5 Relationship Between Measures of Self-Construal.** Although the SCS (Singelis, 1994) and the TST (Kuhn & McPartland, 1954) are commonly used to measure self-construal, they have not been shown to be strongly or consistently correlated (Bresnahan et al., 2005; Grace & Cramer, 2003). This study did not reveal a significant relationship between SCS Interdependence scores and TST Independence proportion scores. However, there was a moderate positive correlation between SCS Independence scores and TST Independence proportion scores for both the UK and the Caribbean samples. Some degree of convergent validity was also observed considering the relationship between self-construal and nationality. Significant differences in SCS Independence but not TST Independence scores were observed between the two cultures. However, significance aside, the difference observed using both measures was in the same direction (reflecting higher independent self-construal in the Caribbean versus the UK). Overall, the current study provides mixed evidence regarding the validity of the SCS and TST measures of self-construal and there is insufficient information to confirm the accuracy of these measures or to support the use of one scale over the other. Variable findings may be related to the fact that self-construal is difficult to accurately and consistently capture via self-report measures (Markus & Kitayama, 2010). Self-construal measures including the SCS and the TST have been argued to have a multidimensional structure that does not simply capture independence and interdependence (Guo et al., 2008; Hardin, 2006; Hardin et al., 2004; Levine et al., 2003; Somech, 2000). Several researchers have disputed the dichotomous view of self-construal altogether, arguing that the concept of the self and self-construal is complex and multidimensional (Grace & Cramer, 2003; Hardin et al., 2004; Levine et al., 2003) and that both independent and interdependence are multidimensional concepts in and of themselves (Gabriel & Gardner, 1999; Harb & Smith,

2008; Kagitcibasi, 2005; Kashima & Hardie, 2000). An outline of the controversies and debates surrounding the nature and measurement of self-construal is provided in section 1.4.2. While this study provided an opportunity to explore the relationship between the SCS and the TST in the UK and Caribbean cultures, in-depth investigations and cross examinations involving self-construal measures is beyond the scope of the current thesis.

### *3.8.5 Limitations and Future Research*

As in Study 1, time and resource limitations restricted the recruitment of a larger number of participants, especially within each Caribbean group. Therefore, conclusions based on the absence of cross-cultural differences in some aspects of memory and self-construal should be made with caution. In terms of gender, both the UK and Caribbean samples were primarily comprised of females which restricts generalizability of findings across genders and did not allow for gender effects on VIP and self-construal to be explored. It is possible that the Caribbean sample was more heterogeneous than the UK sample in this study given that Caribbean participants were obtained from three different countries. However, the lack of differences found among the three countries for all primary and secondary variables minimizes this concern. While ethnic information was obtained from participants in this study, the relatively small sample sizes within some ethnic groups limited the usefulness of statistical analyses involving ethnicity.

The challenges associated with measuring self-construal have been outlined in section 1.4.2.2. Good levels of internal consistency were observed for both the SCS Independence and Interdependence scales in Study 1. However, it is important to highlight the relatively low Cronbach alpha (.57) for the SCS Interdependence scale within the Caribbean sample of the current study. Re-use of this scale in additional Caribbean samples is necessary for determining its appropriateness for use within this population.

### 3.9 Conclusion

Results of this study did not reveal cultural differences in VIP during AM recall between persons from the UK and persons from the Caribbean. As expected, temporality impacted both cultures such that older memories were more often recalled using an Observer perspective compared to recent memories. Regarding self-construal, participants from the UK and the Caribbean rated similar levels of interdependent self-construal as measured by the SCS as well as similar levels of independent self-construal as measured by the TST. However, the Caribbean sample rated higher levels of independent self-construal (as measured by the SCS) compared to the UK sample which is inconsistent with the findings of Study 1 as well as theoretical expectations. The variable findings within the current study, coupled with inconsistencies between the results of the current study and those obtained from Study 1, do not yet allow for conclusions to be drawn regarding differences in self-construal between the UK and Caribbean cultures. Additionally, inconsistent findings regarding the relationship between self-construal and VIP use do not yet provide sufficient evidence in support of a relationship. The self is often described as multifaceted, dynamic and context dependent. In Study 3, an attempt is made to manipulate the salience of interdependent and independent self-construal in persons from the UK and the Caribbean via priming in order to observe the impact on both VIP as well as self-reported self-construal in these two cultures.

# 4 Chapter 4: The Impact of Self-Construal Priming on VIP use and Self-Construal Ratings

## Study 3

Previous research suggests that persons from interdependently-oriented cultures more often use an Observer perspective when recalling memories compared to persons from independently-oriented cultures (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). However, these studies assume differences in self-construal based on nationality alone or national aggregates of individualism. Studies 1 and 2 of this thesis attempted to formally measure self-construal at the individual level using the SCS (Singelis, 1994) in order to determine the role of self-construal in the relationship between culture and VIP. The results of Studies 1 and 2 do not provide sufficient evidence to confirm differences in either self-construal or VIP use between persons from the UK and persons from the Caribbean, or to confirm that self-construal mediates the relationship between culture/nationality and VIP use.

Self-construal is most commonly categorized according to the concepts of independence and interdependence (Markus & Kitayama, 1991). Persons can have both independent and interdependent aspects of themselves but culture tends to impact which orientation is more dominant (Conway & Jobson, 2012; Singelis, 1994; Wang & Ross, 2005). Several researchers have disputed the largely dichotomous view of self-construal, arguing that the concept of the self and self-construal is complex and multidimensional (Grace & Cramer, 2003; Hardin et al., 2004; Levine et al., 2003; Vignoles et al., 2016) and that both independence and interdependence are multidimensional concepts in and of themselves (Gabriel & Gardner, 1999; Harb & Smith, 2008; Kagitcibasi, 2005; Kashima & Hardie, 2000). The complexity of the self and self-construal may explain some of the inconsistent findings regarding self-construal observed in Studies 1 and 2. The self is often described as multifaceted, dynamic and context dependent (Grace & Cramer, 2003; Hardin et al., 2004; Levine et al., 2003; Vignoles et al., 2016). In fact, many researchers have shown that self-

construal can be induced or manipulated by contextual and environmental factors through a process called priming (e.g., Lee et al., 2000; Oyserman & Lee, 2008; Trafimow et al., 1991).

### 4.1 Priming Self-Construal

A range of self-construal priming techniques have been used to manipulate the salience of independent/individual aspects of the self and interdependent/collectivistic aspects of the self. Some of these techniques include asking participants to think about similarities/differences between themselves and others (Holland et al., 2004; Kühnen et al., 2001; Trafimow et al., 1991; Ybarra & Trafimow, 1998), having participants circle either singular or plural pronouns (e.g., "I" versus "We") while reading stories (Brewer & Gardner, 1996; Gardner et al., 1999; Kemmelmeier, 2003; Kühnen & Oyserman, 2002; Trafimow et al., 1991; Vohs & Heatherton, 2001), having participants read scenarios about individual versus team goals (Lee et al., 2000), having participants scramble sentences containing independent (e.g., unique, individual) versus interdependent (e.g., together, cooperate) themed words (Kühnen & Hannover, 2000), and asking participants to read the Sumerian Warrior Story and judge a general's choice of a commander based on his individual talents or his family connections (Gardner et al., 2002; Gardner et al., 1999; Mandel, 2003; Trafimow et al., 1991).

Temporary activation of particular self-construals via priming has been associated with changes in value endorsement. For example, interdependent versus independent self-construal priming has been linked to increased collectivistic value endorsement, sensitivity to interpersonal cues, and increased relationship seeking (e.g., Brewer & Gardner, 1996; Gardner et al., 2002; Gardner et al., 1999; Kühnen & Hannover, 2000; Mandel, 2003). However, the effects of priming across studies are variable, possibly due to the range of priming methods and cultural groups used, as well as different outcome variables and psychological processes investigated (Oyserman & Lee, 2008; Wang & Ross, 2005). Additionally, when self-construal measures such as the TST (Kuhn & McPartland, 1954) and the SCS (Singelis, 1994) have been used to measure the effects of priming, the effects have often been small and heterogeneous

(for reviews see Levine et al., 2003; Oyserman & Lee, 2008). With respect to the variable and often weak impact of self-construal priming on formal measures of self-construal, Levine et al. (2003) suggested that formal self-construal scales including the SCS measure stable trait-like constructs which are insensitive to priming effects. They reported issues with the construct validity of self-construal scales, especially when measuring interdependent self-construal which is often theoretically defined as context-dependent and flexible, and should therefore be especially sensitive to priming (Cross et al., 2011; Levine et al., 2003; Singelis, 1994). However, others have argued that despite the fact that interdependent self-construal is defined as more situational and context-dependent than independent self-construal, priming effects would not necessarily be expected to be strong enough to significantly impact one's fundamental level of interdependent self-construal which formal self-construal measures are designed to capture (Gudykunst & Lee, 2003; Kim & Raja, 2003). Further discussions surrounding the validity of self-construal measures is provided in section 1.4.2.2.

### 4.2 Self-Construal Priming and AM

Few studies have explored the impact of self-construal priming on aspects of AM recall. Using bicultural Asian-American participants, Wang (2008) showed that participants primed to focus on their American self-concept recalled more self-focused personal memories compared to participants primed to focus on their Asian self-concept. Language has also been used as a self-construal prime in bicultural/bilingual persons. Persons spoken to in languages associated with individualist cultures report more detailed and individualistic-themed memory narratives while persons spoken to in languages associated with collectivistic cultures report more relationship-based and collectivistic-themed narratives (Marian & Kaushanskaya, 2004; Wang et al., 2010).

Wang and Ross (2005) devised a priming task using "I am" statements geared towards priming private/independent or collective/interdependent aspects of the self in a group of European-American students as well as a group of Asian students. Persons primed to focus on

independent aspects of themselves recalled more self-focused memories and persons primed to focus on interdependent aspects of themselves recalled more socially-focused memories. Therefore, the activation of particular selves impacted the nature and content of recalled memories. However, European-Americans recalled more self-focused memories than Asians regardless of priming. In other words, main effects of both culture as well as priming condition on AM content were observed.

### 4.3 Self-Construal Priming, VIP, and Context Sensitivity

There are no known studies exploring the impact of self-construal priming on VIP use during AM recall. However, in a related study, Cohen et al. (2007) primed self-construal in European-Americans and Asian-Americans before they underwent a pain endurance task. Participants were either asked to bring a picture of themselves with their family and write about what it means to be a good son or daughter (interdependent prime), or to bring a picture of themselves alone and write about unique aspects of themselves. Immediately after completing the pain task that required impulse control, participants completed a Cognitive Coping Strategy Inventory (Butler et al., 1989) which included questions related to third-person distancing (e.g., ‘‘I might attempt to imagine myself leaving my body and observing my pain in an impartial, detached manner” and, “I might attend to the pain in much the same way that a sports announcer or reporter would describe an event”). Results indicated that Asian-Americans who were interdependently primed made the most use of third-person distancing coping. Asian-Americans less often used this strategy when they were independently primed or when they were not primed at all. Cohen et al. (2007) argued that the use of third-person view of the self by Asian persons is primarily observed when other persons are made salient. The impact of self-construal priming was not significant for European American participants. This was considered consistent with findings of an increased use of an Observer VIP in persons of Asian cultural background when they are the centre of attention in their AMs (e.g., Cohen & Gunz, 2002).

Although not specific to AM or VIP use, cross-cultural differences have been found in terms of the degree to which persons attend to context. Persons from interdependently-oriented cultures including parts of East Asia have been shown to more often attend to contextual details of a visual scene compared to persons from independently-oriented cultures such as parts of North America (e.g., Chua et al., 2005; Masuda & Nisbett, 2001; Nisbett et al., 2001). Furthermore, Lewis et al. (2008) revealed that neural activation differences in the responses to target objects versus contextual aspects of a display differed between European American and Asian Americans, and that these differences were mediated by interdependent self-construal as measured by the Triandis (1995) Individualism and Collectivism Attitude Scale (IND/COL). Consistent with the above, researchers have found that priming self-construal can alter the focus of stimuli processing (Haberstroh et al., 2002; Kühnen et al., 2001; Kühnen & Oyserman, 2002). Using a range of priming techniques across different cultural groups, researchers have found that priming interdependent self-construal enhances contextual/global versus focal/local processing of visual arrays (see Oyserman et al., 2009).

In summary, the studies outlined in this introduction including those demonstrating self-construal priming effects on AM content, third-person distancing, and visual attention to context, could be taken to indicate that priming self-construal should have an impact on VIP use during AM recall. The impact of interdependent priming in particular would be expected to be strongest based on trends in previous research (e.g., Chua et al., 2005; Cohen et al., 2007; Lewis et al., 2008; Masuda & Nisbett, 2001; Nisbett et al., 2001; Oyserman et al., 2009) coupled with the fact that interdependent self-construal is often theoretically defined as context-dependent and flexible (Cross et al., 2011; Levine et al., 2003; Singelis, 1994).

### 4.4 Study Aims

Studies 1 and 2 aimed to explore the relationships between nationality, self-construal, and VIP use during AM recall using UK and Caribbean samples. The results of these studies have not provided sufficient evidence to confirm cross-cultural differences in VIP use between these two cultures, or to support a mediating role of self-construal in the relationship between culture and VIP use. The current exploratory study further examines the relationship between self-construal and VIP use in a UK and Caribbean (TT) sample using a self-construal priming technique. It seeks to determine whether VIP use varies when the salience of independent and interdependent self-construal changes. It is also possible that by manipulating the salience of person's levels of independent and interdependent self-construal, cross-cultural differences in VIP use may emerge.

There are no clear expectations with respect to whether there will be a differential impact of priming on VIP use (as well as self-reported self-construal) depending on nationality. It is plausible that an interaction between priming condition and nationality on VIP use may emerge considering the findings of Cohen et al. (2007). These researchers reported that interdependent (but not independent) priming impacted Asians but not European Asians during a pain coping task such that Asians more often used a third-person distancing coping mechanism when other persons were made salient (i.e., via the interdependent prime). In this sense, persons from TT (largely assumed to be collectivistic based on national aggregates of individualism) should more often use an Observer VIP during AM recall when they are interdependently primed compared to persons from the UK for which priming may not have a significant effect. Having said that, Studies 1 and 2 of this thesis have not provided sufficient evidence to confirm differences in self-construal between UK and TT persons. If these two cultures do not in fact differ in terms of self-construal, then self-construal priming would not be expected to differentially impact VIP use in these cultures. Given the absence of a basis for

specific predictions, the potential differential impact of self-construal priming on VIP use in TT and UK persons is explored without accompanying hypotheses.

In summary, this study aims to manipulate the salience of interdependent and independent self-construal (via priming) before persons engage in AM recall in order to observe the impact of priming on both VIP use as well as self-reported self-construal in these cultures.

### 4.5 Research Questions and Hypotheses

The following research questions are addressed in Study 3:

1. *What is the impact of self-construal priming on VIP use?*
    (a) It is hypothesized that persons whose independent self-construals have been primed will more often use a Field perspective during AM recall compared to persons whose interdependent self-construals have been primed and persons whose self-construal has not been primed.
    (b) It is hypothesized that persons whose interdependent self-construals have been primed will more often use an Observer perspective during AM recall compared to persons whose independent self-construals have been primed and persons whose self-construal has not been primed.
2. *What is the impact of self-construal priming on self-construal ratings?*
    (a) It is hypothesized that persons whose independent self-construals have been primed will rate higher levels of independent self-construal on the SCS compared to persons whose interdependent self-construals have been primed and persons whose self-construal has not been primed.
    (b) It is hypothesized that persons whose interdependent self-construals have been primed will rate higher levels of interdependent self-construal on the SCS compared to persons whose independent self-construals have been primed and persons whose self-construal has not been primed.

## 4.6 Method

### *4.6.1 Design*

This study employed a 2 (nationality) x 3 (priming condition) between-subjects design in which participants completed a self-construal priming task followed by questionnaires involving memory recall and self-construal.

### *4.6.2 Participants*

Due to recruitment challenges, the recruitment goal was to obtain the maximum number of participants possible. Sixty-nine (69) undergraduate students took part in this study. A sensitivity power analysis for fixed, special, main effects and interactions in for a 2 x 3 ANOVA was conducted using G*Power 3.1 (Faul et al., 2007). Results indicated that with a total sample of 69 participants, the design of the current study had an 80% chance of detecting a main effect of $f = 0.24$ ($\eta^2 = 0.05$) for nationality, a main effect of $f = 0.38$ ($\eta^2 = 0.13$) for priming condition, and an interaction effect of $f = 0.38$ ($\eta^2 = 0.13$).

Participants were either citizens of the UK ($N = 32$) or TT ($N = 37$). Their ages ranged from 18 to 21 years. English was the first language of all participants. All participants gave informed consent after reading the online information sheet (see Appendix L) and consent form (see Appendix B). Participants were given the opportunity to withdraw from the study at any time during the survey. Research was approved by the School of Psychology and Clinical Language Sciences (University of Reading) ethics committee. Additional ethical approval from the University of the West Indies was not required.

**4.6.2.1 TT Sample.** Thirty-seven participants (23 females, 14 males) were recruited from the Social Sciences department of the University of the West Indies (UWI, TT campus) via email circulation of basic study details. Participants received compensation (Amazon gift credit equivalent to £7) for participating. Demographic information for the TT sample is displayed in Table 4.1. Data from all TT participants recruited were included in the analyses for this study.

**4.6.2.2 UK Sample.** The thirty-two (32) UK participants (29 females, 3 males) were Psychology students from the University of Reading. They were recruited through the University of Reading Sona Systems and they received course credits for participating. Data from all UK participants recruited were included in the analyses for this study. Demographic information for the UK and TT samples are displayed in Table 4.1 below.

**Table 4.1**

*Demographic Characteristics of Participants*

| Characteristic | United Kingdom | Trinidad & Tobago |
|---|---|---|
| | n (%) | n (%) |
| Gender | | |
| Female | 29 (91) | 23 (62) |
| Male | 3 (9) | 14 (38) |
| Ethnicity | | |
| Caucasian [a] | 24 (75) | 0 (0) |
| Asian [b] | 8 (25) | 20 (54) |
| African [c] | 0 (0) | 17 (46) |
| Mean age (SD) | 19.31 (0.69) | 19.65 (0.89) |

[a] Reflects the category White/Caucasian. [b] Reflects the category Asian/East Indian/Indo Caribbean. [c] Reflects the category Black/African/Afro Caribbean.

### *4.6.3 Materials and Procedure*

All participants completed a three-part online survey administered using Gorilla Experiment Builder (https://gorilla.sc). All parts of the survey were completed within a single sitting. Before completing part one, participants provided their age, nationality and country of residence. Part one of the survey was comprised of a self-construal priming task, part two involved a visual imagery task and a visual imagery questionnaire, and part three was comprised of the SCS (Singelis, 1994). After completing the SCS, participants provided information regarding their gender, ethnicity, religion, and educational status.

**4.6.3.1 Priming Phase.** The priming task developed by Wang and Ross (2005) was used in this study. Participants were randomly assigned to one of three conditions. For the independent self-construal priming condition, participants were asked: “How would you define yourself as a unique individual? List 10 personal qualities, attributes, beliefs or behaviours that do not relate to others and make you unique. For example, "I am smart" and "I am honest." For the interdependent self-construal priming condition, participants were asked: “How would you define yourself as a member of a social group? List 10 memberships of social groups with which you are likely to be experiencing a "common fate". For example, "I am a Catholic" (membership in a religious group) and "I am a daughter" (membership in a family group)." In the control condition, participants were asked: “Please complete 10 statements about Nature. For example, "The tree is ___" and "The sky is ___" (Wang & Ross, 2005).

**4.6.3.2 Visual Imagery Task.** Participants were presented with the same visual imagery task as in Study 2 which included the recall of memories from childhood, adolescence, and adulthood. Participants were also provided with the same visual imagery questionnaire as in Study 2 (see Appendix H) though VIP ratings were the focus of analyses in the current study.[2] Unlike Study 2, an average VIP rating was calculated for each participant. This was derived from the three VIP ratings provided by each participant per time point (childhood, adolescence, and adulthood). An average VIP score was considered appropriate for use within the current study given that Study 2 revealed no significant differences in the impact of temporal factors on VIP between UK and Caribbean persons.

***4.6.3.3*** **Self-Construal Scale (SCS; Singelis, 1994).** As in Studies 1 and 2, the 30-item SCS was used as the measure of self-construal (see Appendix E). Although the TST (Kuhn & McPartland, 1954) could be argued to be a more suitable measure of self-construal since it

[2] No secondary memory variables including memory vividness, ease of imagery, rehearsal, strength of emotionality at the time of the recalled event, or emotional valence differed between the two cultures nor did any of these variables significantly correlate with VIP ratings.

may be more sensitive to state self-construal than the SCS (Kim & Raja, 2003), it was not considered appropriate for use in this study given its close similarity to the priming task. Administration and scoring procedures of the SCS were identical to those used in Studies 1 and 2. Each participant received two scores: one indicating the strength of their independent self-construal and one indicating the strength of their interdependent self-construal. In the current study, reliability analyses revealed overall Cronbach's alphas of .75 for the independence scale and .65 for the interdependence scale. According to nationality, Cronbach's alphas for the UK sample were .66 and .54 for the independent and interdependent scales, respectively. For the TT group, Cronbach's alphas were .71 and .72 for independent and interdependent scales, respectively.

## 4.7 Results

### *4.7.1 Treatment of Data*

Data entry and inspection for errors and missing data was carried out as in Studies 1 and 2. When data was missing, all analyses using the variable where participants had missing data were excluded. Missing data was minimal (< 1% of the entire dataset). All scale variables were assessed for normality as in Studies 1 and 2. The normality assumption was met for all scale variables so no non-parametric tests were utilized. In the case of *t*-tests, homogeneity of variance was assessed using Levene's tests and no variables violated this assumption.

### *4.7.2 Preliminary Analyses: Demographic Considerations*

An independent samples *t*-test revealed that participant age did not differ between the UK ($M$ = 19.31, $SD$ = 0.69) and TT ($M$ = 19.65, $SD$ = 0.89) samples, $t(67) = -1.73$, $p = .088$, $d = 0.43$, 95% CI [−0.72, 0.51]. A one-way ANOVA revealed that age did not differ among the three priming conditions, $F(2, 66) = 0.38$, $p = .686$, partial $\eta^2 = .01$. Correlation analyses revealed no significant relationship between age and average VIP, $r(67) = -.02$, $p = .859$. There was a significant positive weak correlation between participant age and SCS Independence scores, $r(67) = .26$, $p = .031$, but no significant relationship between participant age and SCS

Interdependence scores, $r(67) = -.01$, $p = .947$. Given that participant age was significantly associated with one of the main secondary dependent variables (SCS Independence score), all analyses involving SCS Independence were also run while controlling for age. When results differ after controlling for age, these are highlighted and reported.

As displayed in Table 4.1, there were more females than males in both the UK and TT samples and the TT sample was primarily comprised of females. As expected, a Fisher's Exact test confirmed that there were gender differences between the UK and TT samples ($p = .006$). Gender did not significantly differ among the three priming conditions ($p = .186$). There was no significant relationship between gender and VIP, $t(67) = -0.20$, $p = .841$, $d = 0.06$, 95% CI [−0.84, 0.69]. However, there was a significant relationship between gender and SCS Independence scores such that males ($M = 5.22$, $SD = 0.69$) rated significantly higher SCS Independence scores than females ($M = 4.74$, $SD = 0.69$), $t(67) = 2.52$, $p = .014$, $d = 0.70$, 95% CI [0.10, 0.87]. There was no significant relationship between gender and SCS Interdependence scores, $t(67) = 0.11$, $p = .915$, $d = 0.03$, 95% CI [−0.32, 0.35]. Given that gender was significantly associated with SCS Independence score, all analyses involving SCS Independence were also run while controlling for gender. When results differed after controlling for gender, these are highlighted and reported.

The ethnic composition of the UK and TT samples are displayed in Table 4.1. There is clear variability between samples. As expected, a Fisher's Exact test confirmed significant ethnic differences between the UK and the TT samples ($p < .001$). Ethnicity did not significantly differ among the three priming conditions ($p = .894$). As discussed in previous studies, ethnicity will not be analysed separately or controlled for when cross-national analyses are performed. This is due to the fact that ethnicity is very strongly associated with nationality as well as the fact that ethnicity is a complex social construct that cannot simply be collapsed across nationalities.

### *4.7.3 Primary Analyses: The Impact of Self-Construal Priming on VIP use and Self-Construal Ratings*

**Table 4.2**

*Descriptive Statistics of Outcome Variables According to Priming Condition*

| Variable | Independent Prime | Interdependent Prime | Control |
|---|---|---|---|
| | Mean (SD) | Mean (SD) | Mean (SD) |
| Visual Imagery Perspective (VIP) | | | |
| Overall sample | 4.71 (1.15) | 4.21 (1.60) | 4.20 (1.34) |
| United Kingdom | 4.58 (1.20) | 4.80 (0.97) | 4.24 (1.69) |
| Trinidad and Tobago | 4.80 (1.14) | 3.67 (1.89) | 4.15 (0.95) |
| SCS Independence | | | |
| Overall sample | 4.85 (0.80) | 4.95 (0.69) | 4.78 (0.66) |
| United Kingdom | 4.22 (0.60) | 4.71 (0.59) | 4.64 (0.55) |
| Trinidad and Tobago | 5.31 (0.58) | 5.16 (0.72) | 4.93 (0.76) |
| SCS Interdependence | | | |
| Overall sample | 4.68 (0.57) | 4.77 (0.69) | 4.73 (0.56) |
| United Kingdom | 4.91 (0.27) | 4.53 (0.59) | 4.85 (0.56) |
| Trinidad and Tobago | 4.51 (0.67) | 4.99 (0.72) | 4.62 (0.57) |

*Note.* SCS = Singelis Self-Construal Scale. Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings; *N* = 32 for the UK group and 37 for the TT group.

#### 4.7.3.1 Research Question 1: What is the Impact of Self-Construal Priming on VIP use?.

The means and standard deviations for VIP ratings according to priming condition are presented in Table 4.2. A two-way between-subjects ANOVA was conducted in order to address the first research question. This explored the effects of self-construal priming and nationality on VIP ratings while also exploring whether the effect of priming may be contingent on nationality. The interaction between priming condition and nationality on VIP ratings was not significant, $F(2, 63) = 1.55$, $p = .221$, partial $\eta^2 = .05$. There were no significant

main effects of either priming, $F(2, 63) = 0.99$, $p = .378$, partial $\eta^2 = .03$, or nationality, $F(1, 63) = 1.04$, $p = .312$, partial $\eta^2 = .02$, on VIP ratings. These results indicate that self-construal priming did not significantly impact VIP use nor was there a differential impact of priming on VIP use depending on nationality.

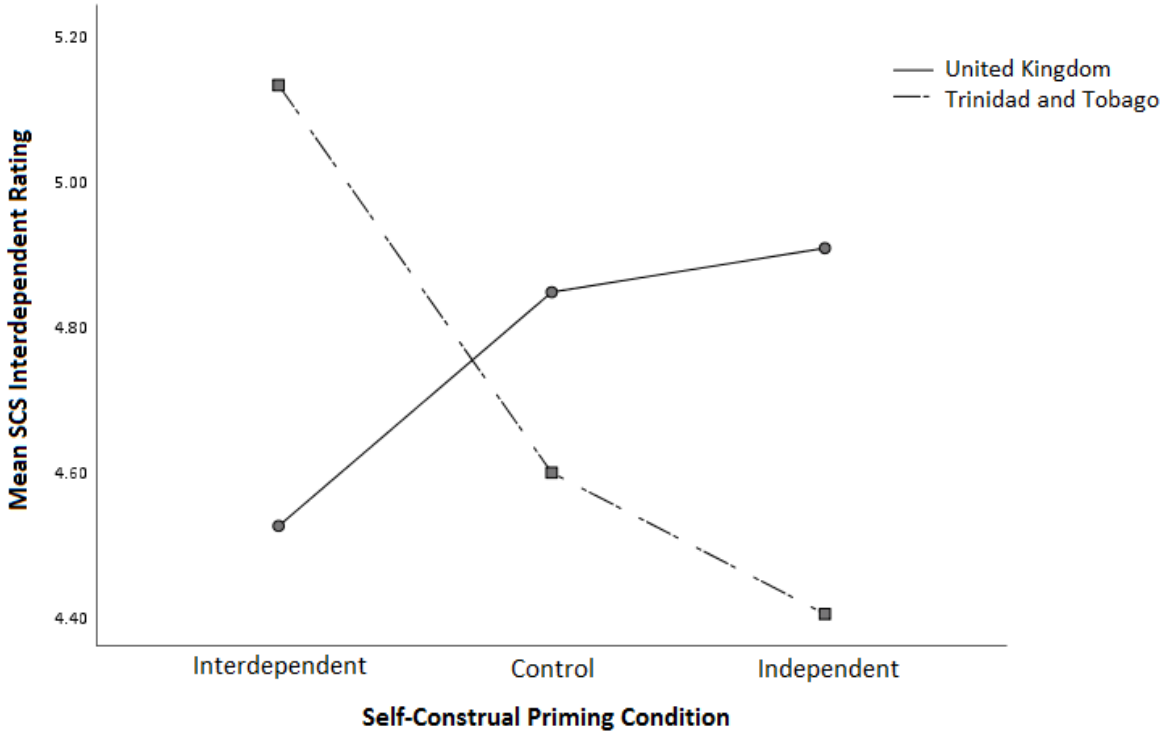
**4.7.3.3 Research Question 2: What is the Impact of Self-Construal Priming on Self-Construal Ratings?.** The means and standard deviations for self-construal according to priming condition are presented in Table 4.2. Two-way ANOVAs were conducted in order to address the second research question. This explored the effects of self-construal priming and nationality on self-construal ratings while also exploring whether the effects of priming may be contingent on nationality. A two-way between-subjects ANOVA was conducted to examine the effects of self-construal priming and nationality on SCS Independence ratings. The interaction between the priming condition and nationality on SCS Independence ratings was not significant, $F(2, 63) = 2.69$, $p = .076$, partial $\eta^2 = .08$. There was no significant main effect of priming condition on SCS Independence ratings, $F(2, 63) = 0.48$, $p = .624$, partial $\eta^2 = .02$. However, there was a significant main effect of nationality on SCS Independence ratings such that persons from the UK ($M = 4.52$, $SD = 0.60$) rated significantly lower SCS Independence ratings compared to persons from TT ($M = 5.15$, $SD = 0.68$), $F(1, 63) = 15.54$, $p < .001$, partial $\eta^2 = .20$.

A two-way between-subjects ANOVA exploring the effects of self-construal priming and nationality on SCS Interdependence ratings revealed a significant interaction between priming condition and nationality, $F(2, 63) = 3.33$, $p = .042$, partial $\eta^2 = .10$ (see Figure 4.1). Estimated Marginal Means analysis revealed that persons from TT who were interdependently primed rated significantly higher levels of SCS Interdependence ($EMM = 4.99$, $SE = 0.18$) than persons who were independently primed ($EMM = 4.51$, $SE = 0.15$), $p = .045$, but not compared to persons in the unprimed control condition ($EMM = 4.62$, $SE = 0.18$), $p = .648$. For the UK sample, there was no significant difference in SCS Interdependence ratings between persons

who were interdependently primed (*EMM* = 4.53, *SE* = 0.19) and persons who were independently primed (*EMM* = 4.91, *SE* = 0.18), *p* = .141, or persons in the unprimed control condition *(EMM* = 4.85, *SD* = 0.18), *p* = .810. There were no significant main effects of priming condition, *F*(2, 63) = 0.04, *p* = .964, partial $\eta^2$ = .00, or nationality, *F*(1, 63) = 0.15, *p* = .698, partial $\eta^2$ = .00, on SCS Interdependence ratings.

**Figure 4.1**

*Interaction Between Nationality and Self-Construal Priming on SCS Interdependence Ratings*




*Note.* SCS = Singelis Self-Construal Scale.

## 4.8 Discussion

### *4.8.1 The Impact of Self-Construal Priming on VIP use*

The hypothesis that self-construal priming would impact VIP use during AM recall was not supported. In other words, priming independent self-construal did not increase the use of a Field perspective and priming interdependent self-construal did not increase the use of an Observer perspective. This is inconsistent with expectations based on the fact that studies

have demonstrated self-construal priming effects on AM content (Wang, 2008; Wang & Ross, 2005), third-person distancing (Cohen et al., 2007), and attention to contextual details of a visual scene (Haberstroh et al., 2002; Kühnen et al., 2001; Kühnen & Oyserman, 2002). While the current study differed in the type of priming tasks used by most of these studies, it was identical to that used by Wang and Ross (2005). It is therefore possible that despite the fact that "what" persons remember (i.e. memory content) may vary according to the activation of particular self-construals, "how" they recall their memories (i.e. VIP use) may not vary as easily. Having said that, the sample size used by Wang and Ross (2005) was substantially larger than that used within the current study and also included different cultural groups (North Americans and Asians).

It could be argued that the lack of a significant priming effect on VIP use is related to the fact that the priming procedure used in this study did not sufficiently manipulate self-construal to the extent that it would change VIP use. The nature and degree to which the priming task activated the intended independent and interdependent self-construals is also unknown. Ratings from the SCS showed minimal impacts of priming which can be used to support this explanation but concerns regarding self-construal measurement must be noted (see section 1.4.2.2). Having said that, even when the SCS did reflect significant priming effects (i.e. within the TT sample) this did not correspond with significant changes in VIP use. These findings do not provide sufficient evidence to support the mediating role of self-construal in the relationship between culture (in terms of nationality) and VIP use as suggested by previous researchers (see Cohen & Gunz, 2002). However, this mediating theory emerged from research in which being the focus of attention within memories was a critical determinant of cross-cultural differences in VIP use (Cohen & Gunz, 2002). This factor was not explored within the current study (but is explored in Study 4) and it is possible that even when interdependently primed, persons within the current study may have had less of a need to adjust VIP (e.g., to adopt more of an Observer perspective) for purposes such as monitoring

and regulating their behaviours in accordance with collectivistic/interdependent cultural expectations.

### *4.8.2 The Impact of Self-Construal Priming on Self-Construal Ratings*

The hypothesis that self-construal priming (regardless of nationality) would impact self-reported levels of independent and interdependent self-construal (as measured by the SCS) was not supported. While multiple researchers have found that self-construal priming impacts value endorsement, sensitivity to interpersonal cues, and relationship seeking (e.g., Brewer & Gardner, 1996; Gardner et al., 2002; Gardner et al., 1999; Kühnen & Hannover, 2000; Mandel, 2003), priming effects on formal ratings of self-construal including the SCS have been variable (for reviews see Levine et al., 2003; Oyserman & Lee, 2008). It has been argued that scales such as the SCS measure stable trait-like constructs which may not be sensitive to priming effects (see Levine et al., 2003).

While the lack of an overall priming effect on self-construal ratings may be related to the nature of self-construal scales and measurement issues, a significant and interesting interaction between priming and nationality on interdependent self-construal ratings was found. For the TT group, the impact of priming on SCS Interdependence ratings was in the expected direction such that persons whose interdependent self-construal was primed rated significantly higher levels of interdependent self-construal compared to persons whose independent self-construal was primed. This finding indicates that priming can in fact impact self-construal ratings, and it also demonstrates the ability of the SCS to capture priming effects, at least at the level of interdependence. The fact that priming effects were only observed for interdependence ratings (and not for independence ratings) also supports the theoretical definition that interdependent self-construal is more context-dependent and flexible (Cross et al., 2011; Levine et al., 2003; Singelis, 1994). Having said that, interdependent ratings did not significantly differ according to priming condition within the UK group.

The lack of a significant priming effect for the UK group is unexpected given the number of studies which have reported priming effects in persons from both Western and Eastern cultures (e.g., Brewer & Gardner, 1996; Gardner et al., 1999; Kühnen & Hannover, 2000; Trafimow et al., 1991; Wang & Ross, 2005; Ybarra & Trafimow, 1998). Having said that, none of these studies explored the differential effects of priming between cultures using formal self-construal such as the SCS (Singelis, 1994). It is also possible that the relatively low reliability indices of the SCS scale for the UK group (Cronbach alphas of .66 and .54 for independence and interdependence, respectively) may have contributed towards the lack of priming effects observed. Furthermore, it could be argued that persons from Western cultures including the UK (assumed to be largely independent in nature) have a self-concept which is more stable and consistent across conditions and thus less susceptible to situational factors (i.e. priming) compared to persons from cultures assumed to be more interdependent (e.g., TT). Greater variability in self-descriptions across different situations has previously been reported in persons from Japan compared to persons from America (Kanagawa et al., 2001). However, assuming that the SCS accurately captured self-construal in both cultures, persons from the UK rated themselves as similarly interdependent, and significantly less independent than persons from TT, regardless of priming condition. While the current study does not indicate that persons from the UK are more independent or less interdependent in terms of their self-concept compared to persons from TT, there may still be cultural differences between the TT and the UK groups that allow interdependent self-construal to be more easily activated in persons from TT than persons from the UK. Future priming studies using larger numbers of participants and additional measures of self-construal will be important for establishing the consistency of the current findings and determining the extent of their importance. At the very least, the current results indicate that self-construal priming cannot be assumed to impact persons from different cultures in the same way, regardless of their self-reported patterns of self-construal.

While priming effects are of primary interest within this study, the main effect of nationality on independent self-construal warrants further discussion. Persons from the UK rated significantly lower SCS Independence ratings compared to persons from TT. This unexpected finding was also observed in Study 2 (but not in Study 1) and is not consistent with the theoretically expected patterns put forth by Singelis (1994) that persons from relatively individualistic cultures rate higher independence ratings and lower interdependence ratings compared to persons from relatively more collectivistic cultures. Several other studies have reported theoretically incongruent differences in self-construal using the SCS (e.g., Kleinknecht et al., 1997; Krull et al., 1999; Matsumoto, 1999; Sato & Cameron, 1999). There are ongoing debates regarding the validity of self-construal scales including the SCS (see section 1.4.2.2) and the unexpected and variable results observed within this thesis may be related to problems accurately and consistently measuring complex concepts such as the self (Grace & Cramer, 2003; Hardin et al., 2004; Levine et al., 2003; Vignoles et al., 2016). However, given that this unexpected pattern was observed in both Studies 1 and 2, it should not simply be overlooked. One potential alternative explanation for this finding may be related to what Peng et al. (1997) described as the deprivation effect. While not specifically speaking to self-construal, they suggested that unexpected cross-cultural differences in value endorsement may reflect the fact that people value what they feel deprived of (Peng et al., 1997). Based on this theory, it could be that persons from TT value independent goals more strongly than persons from the UK, resulting in greater independent self-construal endorsement. While possible, this study does not provide sufficient information to support this explanation. Additional research using alternative measures of self-construal in UK and Caribbean samples is needed in order to determine the stability and importance of the theoretically incongruent self-construal patterns observed.

### *4.8.3 Self-Construal Measurement Considerations*

There is a great deal of controversy regarding the measurement of self-construal (see section 1.4.2.2). Results from Studies 1 through 3 provide some inconsistent and unexpected patterns regarding cross-cultural differences in self-construal between the UK and Caribbean samples. Variability of self-construal findings have been observed with the use of the SCS as well as when compared to patterns obtained from other self-construal measures such as the TST (Study 2). It is also important to highlight the variable reliability quotients obtained from the SCS across Studies 1 through 3. Cronbach alphas for the SCS Independence scale ranged from .67 to .80 across UK samples and from .69 to.71 across Caribbean samples. For the SCS Interdependence scale, Cronbach alphas ranged from .54 to .82 across UK samples and from .57 to.76 across Caribbean samples. The more variable reliabilities of the SCS Interdependence scale in particular raises concern regarding the ability of the SCS to reliably measure self-construal, especially interdependent self-construal in both UK and Caribbean samples. Although the SCS continues to be widely used in self-construal research, researchers continue to strive towards developing tools that more accurately measure self-construal.

### *4.8.4 Limitations and Future Research*

Conclusions based on the minimal priming effects observed within this study need to be considered with caution given the relatively small sample size utilized within this study and the associated risk of incorrectly retaining null hypotheses. Particular non-significant trends (e.g., higher VIP ratings for the TT group when independent versus interdependent self-construal was primed, yet lower VIP ratings for the UK group when independent versus interdependent self-construal was primed) warrant larger and more powerful studies before the consistency and importance of these patterns can be determined. Future studies also comprised of more balanced proportions of males and females as well as ethnic groups will be important for strengthening confidence in the current results as well as increasing the generalizability of findings. Additionally, the current study is the first known study to explore

the impact of priming on VIP use as well as the first to use the Wang and Ross (2005) priming technique in accordance with the SCS (Singelis, 1994). Re-use of this technique as well as the use of additional priming techniques and alternative self-construal measures will also be important for establishing consistency of findings.

### 4.9 Conclusion

Results of the current study show that manipulating the salience of interdependent and independent self-construal impacted interdependent self-construal ratings for the TT group only, and did not significantly impact VIP use overall, for either cultural group. These findings do not provide sufficient evidence to support the mediating role of self-construal in the relationship between culture and VIP use as suggested by previous researchers (see Cohen & Gunz, 2002). However, this mediation theory emerged from research in which the focus of attention within memories was a critical determinant of cross-cultural differences in VIP use. Although Studies 1 through 3 do not provide sufficient evidence to indicate a general difference in the way in which memories are recalled between the UK and Caribbean samples, the potential importance of considering whether or not persons are at the centre of attention in their recalled memories has not yet been explored. Study 4 focuses on this specific circumstance as a final investigation of the cross-cultural differences in VIP use between persons from the UK and persons from TT. Study 4 also utilizes the CIRN-SCS-3 (Vignoles et al., 2016), a relatively new tool that measures self-construal along eight different dimensions and is based on the premise that self-construal is multidimensional.

# 5 Chapter 5: Culture and the Focus of Attention on the Self in AMs

## Study 4

A primary aim of the research reported in this thesis is to determine whether VIP use during AM recall differs between persons from the UK and persons from the Caribbean. This research was driven by previous findings that persons from interdependently-oriented cultures including parts of East Asia more frequently use an Observer (third-person) perspective when recalling memories than persons from independently-oriented cultures such as Europe and North America (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). The findings obtained from Studies 1 through 3 have not provided consistent evidence to confirm overall cross-cultural differences in VIP use between persons from the UK and persons from the Caribbean, or to support a mediating role of self-construal in the relationship between culture and VIP use.

### 5.1 Attention on the Self in Memories

One important consideration of VIP use that remains to be explored is the possibility that cross-cultural differences in VIP use may be observed in particular contexts. Of the three studies known to have explored cross-cultural differences in VIP use during AM recall, the strongest effect has been found when researchers considered whether or not persons were at the centre of attention in their memories (Cohen & Gunz, 2002). As has been described in section 1.8.1, Cohen and Gunz (2002) asked North American and Asian university students to recall memories associated with situations in which they were at the centre of attention (e.g., giving an individual presentation or being embarrassed) as well as memories associated with situations in which they were not at the centre of attention (e.g., watching the news on television or being in a group performance). Results indicated that memory type (centre of attention or not) had a differential impact on VIP use for North Americans and Asians. For North Americans, VIP use did not differ according to memory type. On the other hand, Asian participants more often used an Observer versus a Field perspective when they were at the

centre of attention than when they were not at the centre of attention. Additionally, Asian participants more often used an Observer perspective when they were at the centre of attention compared to North American participants and they more often used a Field perspective when they were not at the centre of attention compared to North Americans. The latter finding is somewhat surprising and could be seen as potentially contradictory to the findings of additional studies that have revealed an overall tendency for persons from collectivistic cultures to more often use an Observer VIP compared to persons from individualistic cultures (e.g., Martin & Jones, 2012; Sutin & Robins, 2007). Overall, Cohen and Gunz's (2002) study suggests that memory type (centre of attention or not) impacts VIP use in collectivistic/interdependent cultures but not in individualistic/independent cultures.

In explaining their findings, Cohen and Gunz (2002) suggested that when at the centre of attention, persons from Eastern cultures more often experience themselves through the eyes of a "generalized other" (Triandis, 1989) compared to persons from Western cultures. Using an "external frame of reference" (Heine et al., 1999) increases the salience of one's audience and allows persons to reflect on themselves in a social context, and regulate their behaviours to ensure that these are in accordance with cultural expectations (Cohen & Gunz, 2002; Heine et al., 1999; Libby & Eibach, 2013; Weber, 1951). In terms of VIP use during AM recall specifically, the Observer perspective facilitates this external frame of reference when there is an increased risk of standing out and opposing collectivist cultural values and expectations (Cohen & Gunz, 2002). The use of an Observer VIP in collectivistic cultures is less important for reflection and behaviour regulation when persons are not in situations of potential scrutiny (Cohen & Gunz, 2002). The fact that Asian participants more often used a Field perspective when they were not at the centre of attention in their memories compared to North Americans, suggested that when not under scrutiny, persons from collectivistic countries may be more likely to lose self-consciousness than persons from individualist cultures (Cohen & Gunz, 2002; Weber, 1951).

## 5.2 Measuring Self-Construal

The primary goal of this thesis is to determine whether cross-cultural differences in VIP use exist beyond the East-West dichotomy, specifically between persons from the UK and persons from the Caribbean. Given that cross-cultural differences in VIP found to date have been attributed to self-construal differences (Cohen & Gunz, 2002), an attempt to measure self-construal at the individual level is important as opposed to relying on available aggregate-level individualism estimates. Studies 1 through 3 utilized two individual-level measures of self-construal including the SCS (Singelis, 1994) and the TST (Kuhn & McPartland, 1954). Self-construal explorations from Studies 1 through 3 have revealed some inconsistent and theoretically incongruent findings which may indicate challenges associated with measuring self-construal (see section 1.4.2.2). In a final attempt to explore self-construal within the UK and TT, the current study utilizes a relatively new self-construal tool, the CIRN-SCS-3 (Vignoles et al., 2016), which measures self-construal along eight different dimensions (see section 5.5.3.3) and is based on the premise that self-construal is multidimensional. Using this scale, Vignoles et al. (2016) found that different cultures value being independent and interdependent in a range of different ways. Cross-culturally, self-construal differed between persons from Western world regions and persons from Southern/Eastern world regions in the expected direction (based on the conventional expectations of West-East cultural differences) for two of the self-construal dimensions (Difference vs. Similarity and Self-Expression vs. Harmony) while differences were not significant for the remaining dimensions (Vignoles et al., 2016). The CIRN-SCS-3 has not yet been used to measure self-construal within the Caribbean region. The current study is the first to provide CIRN-SCS-3 data from this region as a means of enhancing cross-cultural analyses between TT and the UK.

## 5.3 Study Aims

This study is a final attempt at determining whether VIP differences exist between persons from the UK and persons from TT by considering the focus on the self in recalled memories. In terms of measuring self-construal, this study utilizes the CIRN-SCS-3, a relatively new and more multifaceted self-construal scale, with the aim of gaining a deeper understanding of the nature of self-construal in the UK and TT. Given the absence of Caribbean data using this scale along with findings that different cultures value being independent and interdependent in a range of different ways (Vignoles et al., 2016), no specific predictions are made with respect to which of the eight dimensions would differ between the UK and TT cultures. This exploratory study also seeks to determine which (if any) aspects of self-construal mediate the relationship between culture (in terms of nationality) and VIP use.

## 5.4 Research Questions and Hypotheses

The following research questions are addressed in Study 4:

1. *Is there a differential impact of memory type (COA versus NCOA) on VIP use depending on nationality?*

   There will be a significant interaction between memory type and nationality. For the UK group, VIP use will not differ according to memory type. However, the TT group will more often use an Observer perspective when recalling COA memories compared to NCOA memories.

2. *Are there differences in self-construal between persons from the United Kingdom and persons from Trinidad and Tobago?*

   It is hypothesised that self-construal ratings (as captured by the dimensions of the CIRN-SCS-3) obtained from UK persons will reflect higher levels of independence compared to self-construal ratings obtained from TT persons.

3. *If there is a relationship between nationality and VIP use, is this mediated by self-construal?*

   It is hypothesised that cultural differences (at the nationality level) lead to differences in self-construal, which in turn leads to differences in VIP use. Therefore, self-construal (as captured by the dimensions of the CIRN-SCS-3) will mediate the relationship between nationality and VIP.

4. *Is there a differential impact of memory type (COA versus NCOA) on VIP use depending on self-construal?*

   It is hypothesised that the effect of remembering COA rather than NCOA memories on VIP use will be greater for persons whose self-construal ratings reflect lower levels of independence.

## 5.5 Method

### *5.5.1 Design*

This study employed a 2 (nationality) x 2 (memory type) mixed design in which participants completed visual imagery recall tasks, answered questions about their memories, and completed a self-construal questionnaire.

### *5.5.2 Participants*

As with all studies of this thesis, the recruitment goal was to obtain the maximum number of participants possible. However, given the methodological similarities between the current study and that of Cohen and Gunz (2002), a power analysis was conducted for repeated measures, within-between interaction for a 2 x 2 ANOVA based on an effect size of $d = 0.62$ ($\eta^2 = 0.09$). This effect size was calculated by the current researcher using the sample size (195) and interaction statistics provided by Cohen and Gunz (2002). The power calculation was run based on an α-level of .05 and power of .80. Results indicated that a sample size of 24 would be sufficient.

One hundred and one (101) undergraduate and postgraduate students took part in this study. Participants were either citizens of the UK (*N* = 49) or TT (*N* = 52). English was the first language of all participants. All participants gave informed consent after reading the online information sheet (see Appendix M) and consent form (see Appendix B). Participants were given the opportunity to withdraw from the study at any time during the survey. Research was approved by the School of Psychology and Clinical Language Sciences (University of Reading) ethics committee. Additional ethical approval from the University of the West Indies was not required.

**5.5.2.1 TT Sample.** Fifty-two participants (36 females, 16 males) were recruited from the Social Sciences department of the University of the West Indies (UWI, TT campus) via email circulation of basic study details. Participants received compensation (Amazon gift credit equivalent to £7) for participating. Participants in the TT sample ranged in age from 18 to 30 years (*M* = 23.15 years, *SD* = 3.82). Demographic information for the TT sample is displayed in Table 5.1. Data from all TT participants recruited were included in the analyses for this study.

**5.5.2.2 UK Sample.** The forty-nine (49) UK participants (35 females, 14 males) were Psychology students from the University of Reading. They were recruited through the University of Reading Sona Systems and they received course credits for participating. Their ages ranged from 18 to 30 years (*M* = 21.86 years, *SD* = 3.59). Data from all UK participants recruited were included in the analyses for this study. Demographic information for the UK and TT samples are displayed in Table 5.1. Data from all UK participants recruited were included in the analyses for this study.

**Table 5.1**

*Demographic Characteristics of Participants*

| Characteristic | United Kingdom | Trinidad & Tobago |
|---|---|---|
| | n (%) | n (%) |
| Gender | | |
| Female | 35 (71) | 36 (69) |
| Male | 14 (29) | 16 (31) |
| Primary Ethnicity | | |
| Caucasian [a] | 44 (90) | 0 (0) |
| Asian [b] | 1 (2) | 32 (62) |
| African [c] | 4 (8) | 20 (38) |
| Mean age (SD) | 21.86 (3.59) | 23.15 (3.82) |
| Median age (IQR) | 21.00 (5.00) | 23.00 (6.00) |

[a] Reflects the category White/Caucasian. [b] Reflects the category Asian/East Indian/Indo Caribbean. [c] Reflects the category Black/African/Afro Caribbean.

### *5.5.3 Materials and Procedure*

All participants completed a two-part online survey administered using Gorilla Experiment Builder (https://gorilla.sc). Both parts of the survey were completed within a single sitting. Before completing part one, participants provided their age, nationality and country of residence. Part one of the survey was comprised of visual imagery tasks and visual imagery questionnaires, and part two was comprised of the CIRN-SCS-3 (Vignoles et al., 2016). After completing the CIRN-SCS-3, participants provided information regarding their gender, ethnicity, religion, and educational status.

**5.5.3.1 Visual Imagery Tasks.** Participants were presented with the same descriptions And pictured examples of the two types of VIPs (Field/First Person and Observer/Third Person) as in Studies 1 through 3 (see Appendix C). Participants completed two memory visualizations, one involving a situation in which they were at the centre of attention (COA) in their

memories, and one involving a situation in which they were not at the centre of attention (NCOA) in their memories. The order of presentation of the COA and NCOA memory tasks was counterbalanced in order to avoid order effects. For the COA memories, participants were asked to visualize a memory in which they were in one of five presented situations. These situations were obtained from Cohen and Gunz's (2002) study and included: "Being in an accident or near-accident," "Demonstrating a skilled act to a child or friend," "Giving an individual presentation," "Being embarrassed," or "Having a conversation with a friend." For the NCOA memories, participants were asked to visualize a memory in which they were in one of the following situations: "Watching a horror movie," "Watching the news on television," "Running for exercise," "Walking or running from a threatening situation," "or "Being in a group performance." Participants were also asked to briefly describe these memories in an open textbox in order to ensure adequate and appropriate engagement in the task. Participants completed a Visual Imagery Questionnaire (described below) following each of the two memory visualizations.

**5.5.3.2 Visual Imagery Questionnaire.** Questions asked were identical to those presented in Studies 1 through 3. The primary variable of interest was VIP which was measured using a 7-point rating scale ranging from 1 (Entirely as an Observer) to 7 (Entirely through My Own Eyes). While VIP ratings were the focus of analyses in the current study participants also answered questions regarding vividness of their memory images, the emotion felt at the time of the event, the strength of this emotion, how easy it was for them to visualize their memory, how often they thought and/or talked about the memory, and their estimated age at the time of their memory. See Appendix H for the items included in the Visual Imagery Questionnaire.

**5.5.3.3 Culture and Identity Research Network Self Construal Scale Version 3 (CIRN-SCS-3; Vignoles et al., 2016).** The eight-dimension version of the CIRN-SCS-3 (Vignoles et al., 2016) was included as a measure of self-construal. The CIRN-SCS-3 is comprised of 48 items

separated into eight subscales including items related to looking after oneself (Self-reliance vs. Dependence on others), experiencing oneself (Self-containment vs. Connectedness to others), defining oneself (Difference vs. Similarity to others), dealing with conflict (Self-interest vs. Commitment to others), changing with context (Consistency vs. Variability), decision-making (Self-direction vs. Reception to influence), expressing oneself (Self-expression vs. Harmony with others), and defining oneself in terms of context (Decontextualized vs. Contextualized self). Each subscale contains a number of items related to the independent aspects of the self and a number of items related to the interdependent aspects of the self. For example, an independent item within the Difference vs. Similarity domain is "You like being different from other people" while an interdependent item within this domain is "You like being similar to other people." Participants rate each item using a 9-point scale, with responses ranging from 1 (*doesn't describe me at all*) to 5 (*describes me exactly*) with half-point ratings in between (1 ½, 2 ½, 3 ½,4 ½). See Appendix N for instructions and questionnaire items. In order to obtain a domain score for each self-construal dimension, interdependent items were reverse-coded and the mean of each subscale was computed so that higher domain scores indicate a more independent self-construal style and lower domain scores indicate a more interdependent self-construal style. Reliability analyses revealed Cronbach's alphas above .65 for all self-construal domains (see Table 5.2).

**Table 5.2**

*Cronbach's Alpha Values for Each Self-Construal Domain of the* CIRN-SCS-3 *According to Nationality*

| Self-Construal Domain | *Cronbach's Alpha* | |
|---|---|---|
| | United Kingdom | Trinidad & Tobago |
| Self-reliance (vs. Dependence) | .91 | .84 |
| Self-containment (vs. Connectedness) | .76 | .69 |
| Difference (vs. Similarity) | .79 | .81 |
| Self-interest (vs. Commitment) | .65 | .67 |
| Consistency (vs. Variability) | .93 | .84 |
| Self-direction (vs. Reception to influence) | .79 | .81 |
| Self-expression (vs. Harmony) | .87 | .84 |
| Decontextualized (vs. Contextualized) self | .73 | .70 |

*Note. N* = 49 for the UK group and 52 for the TT group.

## 5.6 Results

### *5.6.1 Treatment of Data*

Data entry and inspection for errors and missing data was carried out as in Studies 1 through 3. When data was missing, all analyses using the variable where participants had missing data were excluded. Missing data was minimal (< 1% of the entire dataset). All scale variables were assessed for normality as in Studies 1 through 3. Non-parametric tests were used as appropriate including Spearman's correlations, Mann-Whitney U tests, Wilcoxon Signed-ranks tests, and Kruskal-Wallis tests. In the case of regression analyses, bootstrapping was used when the residuals of the outcome variable were not normally distributed as determined following the inspection of residual diagnostic graphs. In the case of *t*-tests, when homogeneity of variance was violated, as indicated by Levene's test, Welch tests were used (Field, 2013). The results of assumption testing are reported within the following sections.

### *5.6.2 Preliminary Analyses*

**5.6.2.1 Demographic Considerations.** Normality testing revealed a non-normal data distribution for participant age for the UK sample (positively skewed). A Mann-Whitney *U* test revealed that age did not significantly differ between the UK (*Mdn* = 21.00, *IQR* = 5.00) and TT (*Mdn* = 23.00, *IQR* = 6.00) samples, *U* = 1531.50, *z* = 1.76, *p* = .078, *r* =.18. Correlation analyses revealed no significant relationship between age and VIP use for either the COA memories, $r_s(99) = -.02$, *p* = .854, or the NCOA memories, $r_s(99) = -.03$, *p* = .775. Age did not significantly correlate with any of the self-construal dimensions including Self-Reliance versus Dependence, $r_s(99) = .12$, *p* = .216, Self-Containment versus Connectedness, $r_s(99) = .03$, *p* = .732, Difference versus Similarity, $r_s(99) = -.00$, *p* = .973, Self-Interest versus Commitment, $r_s(99) = -.06$, *p* = .578, Consistency versus Variability, $r_s(99) = .07$, *p* = .491, Self-Direction versus Reception to Influence, $r_s(99) = .06$, *p* = .551, Self-Expression versus Harmony, $r_s(99) = .03$, *p* = .776, or Decontextualized versus Contextualized self, $r_s(99) = .08$, *p* = .429. Overall, there was no need to control for age within the primary analyses.

As displayed in 5.1, there were more females than males in both the UK and TT samples. As expected, a Fisher's Exact test revealed no significant gender differences between the UK and TT samples (*p* = .831). A Mann-Whitney *U* test revealed no significant relationship between gender and VIP use during COA memory recall, *U* = 933.00, *z* = −1.00, *p* = .318, *r* =.10, or NCOA memory recall, *U* = 1000.00, *z* = −0.39, *p* = .700, *r* =.04. There were no significant relationships between gender and most self-construal dimensions including Self-Reliance versus Dependence, *U* = 968.50, *z* = −0.72, *p* = .473, *r* = .07, Difference versus Similarity, $t(99) = 0.12$, *p* = .906, *d* = 0.03, 95% CI [−0.28, 0.32], Self-Interest versus Commitment, $t(99) = 1.27$, *p* = .206, *d* = 0.27, 95% CI [−0.10, 0.43], Consistency versus Variability, $t(99) = -0.38$, *p* = .704, *d* = 0.12, 95% CI [−0.50, 0.34], Self-Direction versus Reception to Influence, $t(99) = 0.30$, *p* = .768, *d* = 0.07, 95% CI [−0.27, 0.36], Self-Expression versus Harmony, $t(99) = -0.23$, *p* = .820, *d* = 0.05, 95% CI [−0.42, 0.34], or Decontextualized versus Contextualized self, *U* = 1188.50, *z* = 0.92, *p* =

.358, *r* = .09. For the Self-Containment versus Connectedness dimension, ratings were significantly higher for males (*Mdn* = 2.79, *IQR* = 1.19) than females (*Mdn* = 2.25, *IQR* = 1.00), *U* = 650.50, *z* = −3.08, *p* = .002, *r* = .31. As a result, all analyses involving this dimension of self-construal were also run while controlling for gender. When results differed after controlling for gender, these are highlighted and reported.

The ethnic composition of the UK and TT samples are displayed in Table 5.1. There is clear variability between samples. As expected, a Fisher's Exact test confirmed significant ethnic differences between the UK and the TT samples ($p < .001$). As in Studies 2 and 3, ethnicity was not analysed separately due to the fact that ethnicity was very strongly associated with nationality as well as the fact that ethnicity is a complex social construct that cannot simply be collapsed across nationalities. Any analyses conducted involving ethnicity were run with nationality considered (i.e. within cultures).

#### 5.6.2.2 Overview of Variable Relationships and Identification of Potential Confounds.

Prior to running primary and secondary analyses, bivariate correlation analyses were run for all primary and secondary variables (with the exception of emotional valence, a three-category nominal variable analysed separately) for each memory type (COA and NCOA). These preliminary correlations (see Appendix O) were primarily run in order to identify any potentially confounding or extraneous secondary memory characteristic variables within this study that would need to be controlled for during cross-cultural analyses. No secondary memory variables were considered potentially confounding (significantly correlated with both VIP ratings and nationality). Most secondary memory variables including age at the time of the recalled memory, ease of imagery, strength of emotionality at the time of the recalled event, and frequency of memory rehearsal were not significantly correlated with either nationality or VIP ratings. No secondary memory variables were significantly correlated with nationality. In terms of secondary memory variables correlated with VIP ratings, significant weak positive correlations were observed between memory vividness and VIP ratings for both COA, $r_s(99)$ =

.29, $p$ = .004, and NCOA memories, $r_s(98)$ = .27, $p$ = .006. Higher Field perspective ratings were associated with higher vividness ratings.

Fisher's Exact tests revealed no difference in emotional valence (of both COA and NCOA memories) between persons from the UK and persons from TT ($p$ > .999). A Kruskal-Wallis test revealed no significant relationship between VIP ratings and emotional valence of the COA memory, $H(2)$ = 1.13, $p$ = .568. However, for the NCOA memory, there was a significant difference in VIP ratings according to emotional valence, $H(2)$ = 7.48, $p$ = .024. Post-hoc Mann-Whitney tests using Bonferroni-adjusted significance values were used for pairwise comparisons. Negative memories (*Mdn* = 6.00, *IQR* = 3.00) were more often recalled using a Field perspective than mixed/neutral (*Mdn* = 5.00, *IQR* = 3.00). There was no significant difference in VIP ratings between negative and positive (*Mdn* = 5.00, *IQR* = 3.00) memories ($p$ = .136, $r$ = .20) or positive and mixed/neutral memories ($p$ > .999, $r$ = .05).

Given that vividness ratings were significantly associated with VIP ratings for both COA and NCOA memories, all analyses involving VIP ratings were also run (using regression analyses with bootstrapping) while controlling for vividness. Additionally, given that emotional valence was significantly associated with VIP ratings for the NCOA memories, analyses involving VIP ratings for NCOA memories were also run while controlling for emotional valence. When results differed after controlling for vividness and emotional valence these are highlighted and reported.

### *5.6.3 Primary Analyses*

The normality assumption was not met for both COA and NCOA memory types for the memory variables of VIP, vividness, strength of emotionality, and ease of imagery. In terms of self-construal dimensions, the normality assumption was not met for the dimensions of Self-Reliance versus Dependence, Self-Containment versus Connectedness, and Decontextualized versus Contextualized self. Homogeneity of variance assumptions were met for VIP scores and self-construal scores.

The central tendency and dispersion scores for VIP ratings according to memory type and nationality are presented in Table 5.3. A one-sample Wilcoxon Signed Rank test revealed that VIP ratings for both COA and NCOA memories were significantly above 3.50 (the midpoint of the 7-point VIP rating scale) for both the UK (COA, $z = 2.81$, $p = .005$; NCOA, $z = 4.86$, $p < .001$) and the TT samples (COA, $z = 2.46$, $p = .014$; NCOA, $z = 3.48$, $p = .001$). This indicates a general preference for Field perspective use in both cultures, regardless of memory type.

**Table 5.3**

*Central Tendency and Dispersion Scores of Memory Variables*

| Scale | UK group | | TT group | | Total Sample | |
|---|---|---|---|---|---|---|
| | NCOA | COA | NCOA | COA | NCOA | COA |
| Visual Imagery Perspective (VIP) | | | | | | |
| Mean (SD) | 5.25 (1.80) | 4.42 (2.38) | 4.63 (2.15) | 4.23 (2.19) | 4.93 (2.01) | 4.32 (2.27) |
| Median (IQR) | 5.50 (3.00) | 4.00 (5.00) | 5.00 (4.00) | 5.00 (4.00) | 5.00 (4.00) | 4.50 (5.00) |
| Age at Memory | | | | | | |
| Mean (SD) | 18.73 (4.13) | 17.63 (4.75) | 18.75 (5.31) | 17.60 (5.90) | 18.74 (4.76) | 17.61 (5.35) |
| Median (IQR) | 19.00 (5.00) | 18.00 (6.00) | 18.50 (7.00) | 18.00 (7.00) | 19.00 (5.00) | 18.00 (6.00) |
| Vividness | | | | | | |
| Mean (SD) | 5.42 (1.50) | 6.00 (0.88) | 5.83 (1.20) | 5.71 (1.27) | 5.63 (1.36) | 5.85 (1.10) |
| Median (IQR) | 6.00 (2.00) | 6.00 (1.00) | 6.00 (2.00) | 6.00 (2.00) | 6.00 (2.00) | 6.00 (2.00) |
| Ease of Imagery | | | | | | |
| Mean (SD) | 1.96 (0.90) | 1.60 (0.71) | 1.87 (0.82) | 1.90 (0.87) | 1.91 (0.85) | 1.76 (0.81) |
| Median (IQR) | 2.00 (1.75) | 1.50 (1.00) | 2.00 (1.00) | 2.00 (1.00) | 2.00 (1.00) | 2.00 (1.00) |
| Strength of Emotionality | | | | | | |
| Mean (SD) | 5.44 (1.43) | 5.85 (1.07) | 5.67 (1.28) | 5.77 (1.32) | 5.56 (1.35) | 5.81 (1.20) |
| Median (IQR) | 6.00 (1.00) | 6.00 (2.00) | 6.00 (2.00) | 6.00 (2.00) | 6.00 (2.00) | 6.00 (2.00) |
| Rehearsal | | | | | | |
| Mean (SD) | 2.77 (1.28) | 3.38 (1.23) | 3.23 (1.28) | 3.33 (1.00) | 3.01 (1.29) | 3.35 (1.11) |
| Median (IQR) | 3.00 (2.00) | 4.00 (1.75) | 3.00 (2.00) | 3.00 (1.00) | 3.00 (2.00) | 3.50 (1.00) |

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Higher numbers for Ease of Imagery indicate greater difficulty visualizing the memory. COA = Memories for which participants were at the centre of attention; NCOA = Memories for which participants were not at the centre of attention. *N* = 49 for the UK group and 52 for the TT group.

#### 5.6.3.1 Research Question 1: Is There a Differential Impact of Memory Type (COA Versus NCOA) on VIP use Depending on Nationality?.

For the purpose of exploring whether the memory type (COA and NCOA) had a significant differential impact on VIP use depending on nationality, VIP discrepancy scores were calculated by subtracting each participant's VIP rating for their NCOA memories from their VIP rating for their COA memories. An independent samples *t*-test conducted using these discrepancy scores did not reveal a significant difference in VIP discrepancy scores between the UK ($M$ = −0.83, $SD$ = 3.01) and TT ($M$ = −0.40, $SD$ = 2.53) samples, $t(92) = -0.77$, $p = .443$, $d = 0.16$, 95% CI [−1.54, 0.68].

Discrepancy scores were used to explore the differential impact of memory type on VIP use due to the fact that the normality assumption was not met for VIP ratings for both the COA and NCOA memory types. However, given that the research question refers to an interaction-type relationship, a two-way mixed ANOVA was also run to further explore the interaction between nationality (between-subjects factor) and memory type (within-subjects factor). Given the non-normal distribution of the VIP ratings, results must be considered with caution. The results of this ANOVA also did not support the presence of a significant interaction between nationality and memory type on VIP ratings, $F(1, 98) = 0.60$, $p = .440$, partial $\eta^2 = .01$. There was no significant main effect of nationality on VIP ratings, $F(1, 98) = 1.50$, $p = .224$, partial $\eta^2 = .02$. However, there was a significant main effect of memory type such that VIP ratings were significantly higher (more Field perspective) for NCOA memories ($Mdn$ = 5.00, $IQR$ = 4.00) than COA memories ($Mdn$ = 4.50, $IQR$ = 5.00).

In summary, the relative use of Field versus Observer perspectives did not significantly differ between the two cultures according to memory type. However, nationality aside, persons more often used a Field perspective when recalling NCOA memories than when recalling COA memories.

The relative use of Field versus Observer perspectives was of primary interest in this study. However, it is notable that despite VIP preference, 69.4% of persons from the UK saw their COA memories from both perspectives as opposed to exclusively from one perspective and 63.2% saw their NCOA memories from both perspectives. For the TT group, 67.2% of persons saw their COA memories from both perspectives and 60.2% saw their NCOA memories from both perspectives.

#### 5.6.3.2 Research Question 2: Are There Differences in Self-Construal Between Persons From the United Kingdom and Persons from Trinidad and Tobago?.

Table 5.4 displays descriptive statistics for the self-construal dimension scores for the UK and TT groups. Results are presented alongside test statistics and *p* values obtained from independent samples *t*-tests or Mann-Whitney *U* tests. Given that eight analyses were run, results were tested against a Bonferroni-adjusted alpha level of 0.006 (0.05/8). There were no significant differences in self-construal ratings between the UK and the TT groups for Self-Reliance versus Dependence, $U = 1557.00$, $z = 1.93$, $p = .054$, $r = .19$, Self-Containment versus Connectedness, $U = 1149.00$, $z = -0.85$, $p = .395$, $r = .08$, Difference versus Similarity, $t(99) = -0.74$, $p = .460$, $d = 0.14$, 95% CI [−0.38, 0.17], Self-Interest versus Commitment, $t(99) = -1.97$, $p = .052$, $d = 0.40$, 95% CI [−0.48, 0.00], Consistency versus Variability, $t(92) = -0.37$, $p = .716$, $d = 0.07$, 95% CI [−0.46, 0.32], Self-Direction versus Reception to Influence, $t(99) = -1.10$, $p = .721$, $d = 0.22$, 95% CI [−0.44, 0.13], or Self-Expression versus Harmony, $t(99) = 0.83$, $p = .890$, $d = 0.17$, 95% CI [−0.20, 0.49]. For the self-construal dimension of Decontextualized versus Contextualized self, ratings were significantly higher (indicating a more Decontextualized/Independent self) for UK persons compared to TT persons, $U = 868.50$, $z = -2.76$, $p = .006$, $r = .27$.

**Table 5.4**

*Central Tendency and Dispersion Scores of Self-Construal Dimensions According to Nationality*

| Self-Construal Dimension | Total Sample | UK group | TT group | *p (r/d)* |
|---|---|---|---|---|
| Self-reliance (vs. Dependence) | | | | |
| Mean (SD) | 3.54 (0.83) | 3.37 (0.84) | 3.69 (0.80) | |
| Median (IQR) | 3.42 (1.38) | 3.17 (1.42) | 3.67 (1.56) | .054 *(r* = .19) |
| Self-containment (vs. Connectedness) | | | | |
| Mean (SD) | 2.44 (0.73) | 2.51 (0.75) | 2.37 (0.72) | .395 (*r* = 0.08) |
| Median (IQR) | 2.33 (1.08) | 2.42 (1.17) | 2.29 (1.04) | |
| Difference (vs. Similarity) | | | | |
| Mean (SD) | 3.60 (0.69) | 3.55 (0.66) | 3.65 (0.73) | |
| Median (IQR) | 3.67 (1.13) | 3.58 (0.96) | 3.83 (1.21) | .460 *(d* = .14) |
| Self-interest vs. Commitment | | | | |
| Mean (SD) | 2.89 (0.62) | 2.76 (0.59) | 3.00 (0.62) | |
| Median (IQR) | 2.83 (0.92) | 2.58 (0.75) | 3.04 (0.96) | .052 *(d* = .40) |
| Consistency (vs. Variability) | | | | |
| Mean (SD) | 2.93 (0.97) | 2.90 (1.08) | 2.97 (0.87) | |
| Median (IQR) | 3.00 (1.50) | 2.83 (1.83) | 3.00 (1.31) | .716 *(d* = .07) |
| Self-direction (vs. Reception) | | | | |
| Mean (SD) | 3.37 (0.72) | 3.29 (0.70) | 3.45 (0.74) | |
| Median (IQR) | 3.42 (1.12) | 3.25 (1.21) | 3.42 (1.19) | .721 *(d* = .22) |
| Self-expression (vs. Harmony) | | | | |
| Mean (SD) | 2.96 (0.87) | 3.04 (0.88) | 2.89 (0.87) | |
| Median (IQR) | 3.00 (1.54) | 3.00 (1.58) | 2.92 (1.46) | .890 *(d* = .17) |
| Decontextualized (vs. Contextualized) | | | | |
| Mean (SD) | 3.52 (0.70) | 3.72 (0.61) | 3.34 (0.73) | |
| Median (IQR) | 3.50 (0.92) | 3.75 (0.96) | 3.33 (0.81) | .006 *(r* = .27) |

*Note.* Higher numbers for self-construal dimensions indicate self-construal ratings that are more independent in nature. *N* = 49 for the UK group and 52 for the TT group.

#### 5.6.3.3 Research Question 4: Is There a Differential Impact of Memory Type (COA Versus NCOA) on VIP use Depending on Self-Construal?.

In order to explore whether self-construal predicts the differential impact of COA versus NCOA memories on VIP ratings, each self-construal dimension score was entered into simultaneous multiple linear regression analyses predicting the difference in VIP ratings for COA versus NCOA memories (i.e. using VIP discrepancy scores as in section 5.6.3.1). Multicollinearity between the eight predictors was ruled out (Tolerance < .50, VIF < 2.00 for all variables). Results of the regression analysis indicated that the eight self-construal predictors explained 8% of the variance in VIP and the model was not significant, $R^2$ =.08, $F(8, 91) = 0.92$, $p = .507$. In terms of individual predictors, no self-construal dimensions predicted VIP discrepancy scores. These included the dimensions of Self-Reliance versus Dependence, $\beta = .03$, $t(91) = 0.23$, $p = .816$, Self-Containment versus Connectedness, $\beta = .04$, $t(91) = 0.39$, $p = .698$, Difference versus Similarity, $\beta = -.07$, $t(91) = -0.58$, $p = .565$, Self-Interest versus Commitment, $\beta = .12$, $t(91) = 0.99$, $p = .325$, Consistency versus Variability, $\beta = .08$, $t(91) = 0.65$, $p = .518$, Self-Direction versus Reception to Influence, $\beta = .04$, $t(91) = 0.27$, $p = .787$, Self-Expression versus Harmony, $\beta = .08$, $t(91) = 0.60$, $p = .552$, and Decontextualized versus Contextualized self, $\beta = .13$, $t(91) = 1.20$, $p = .235$. Overall, the differential effect of remembering COA versus NCOA memories on VIP use was not predicted by self-construal ratings.

### *5.6.4 Secondary Analyses*

#### 5.6.4.1 Cross-Cultural Differences in Additional Memory Characteristics.

The majority of statistical analyses reported in this section are based on the descriptive statistics presented in Table 5.3. For COA memories, independent samples *t*-tests revealed no significant cross-cultural differences in age at the time of the recalled memory, $t(99) = -0.16$, $p = .877$, $d = 0.03$, 95% CI [−2.31, 1.98], or the frequency of memory rehearsal, $t(99) = 0.18$, $p =$

.856, *d* = 0.04, 95% CI [−0.40, 0.48]. Additionally, Mann-Whitney tests revealed no significant cross-cultural differences in memory vividness (*U* = 1161.00, *z* = −0.81, *p* = .419, *r* = .08.), ease of imagery (*U* = 1513.00, *z* = 1.78, *p* = .076, *r* = .18.), or strength of emotionality at the time of the recalled event (*U* = 1278.50, *z* = 0.03, *p* = .974, *r* = .00). A Fisher's Exact test revealed no cross-cultural difference in emotional valence (*p* > .999).

Statistical analyses yielded similar patterns of results for NCOA memories. Independent samples *t*-tests revealed no significant cross-cultural differences in age at the time of the recalled memory, *t*(98) = −0.02, *p* = .983, *d* = 0.00, 95% CI [−1.92, 1.88], or the frequency of memory rehearsal, *t*(98) = 1.80, *p* = .075, *d* = 0.36, 95% CI [−0.97, 0.05]. Additionally, Mann-Whitney tests revealed no significant cross-cultural differences in memory vividness (*U* = 1433.50, *z* = 1.33, *p* = .184, *r* = .13), ease of imagery (*U* = 1188.00, *z* = −0.44, *p* = .658, *r* = .04), or strength of emotionality at the time of the recalled event (*U* = 1363.50, *z* = 0.82, *p* = .410, *r* = .08). A Fisher's Exact test revealed no cross-cultural difference in emotional valence (*p* = .902).

**5.6.4.2 Ethnic Considerations.** As previously established, ethnicity was not considered an appropriate standalone variable within the current study. Within-culture investigations of the relationship between ethnicity and VIP are presented in this section for the TT sample only given that this sample had at least two ethnic groups comprised of a substantial number of participants per group (see Table 5.1). These groups included persons of Asian ethnic background and persons of African ethnic background. Mann-Whitney *U* tests did not reveal significant differences in VIP ratings between Asian (*Mdn* = 5.00, *IQR* = 4.00) and African (*Mdn* = 4.50, *IQR* = 4.75) participants for the COA memory, *U* = 331.50, *z* = 0.22, *p* = .826, *r* = .03. There was also no significant difference in VIP ratings between Asian (*Mdn* = 5.50, *IQR* = 4.00)

and African (*Mdn* = 5.00, *IQR* = 3.75) participants for the NCOA memory, *U* = 273.50, *z* = −0.89, *p* = .373, *r* = .12.

Persons of Asian and African ethnic background did not significantly differ in their ratings of most self-construal dimensions including Self-Reliance versus Dependence, *U* = 387.00, *z* = 1.26, *p* = .207, *r* = .17, Self-Containment versus Connectedness, *U* = 264.50, *z* = −1.05, *p* = .296, *r* = .15, Self-Interest versus Commitment, *t*(50) = −1.37, *p* = .177, *d* = 0.39, 95% CI [−0.60, 0.11], Consistency versus Variability, *t*(31) = −0.06, *p* = .955, *d* = 0.02, 95% CI [−0.57, 0.54], Self-Direction versus Reception to Influence, *t*(50) = −1.08, *p* = .285, *d* = 0.31, 95% CI [−0.65, 0.19], Self-Expression versus Harmony, *t*(50) = −0.76, *p* = .448, *d* = 0.21, 95% CI [−0.69, 0.31], or Decontextualized versus Contextualized self, *U* = 294.00, *z* = −0.49, *p* = .624, *r* = .07. For the self-construal dimension of Difference versus Similarity, ratings were significantly higher (indicating more Difference/Independence) for the African group (*M* = 4.05, *SD* = 0.58) than the Asian group (*M* = 3.41, *SD* = 0.71), *t*(50) = −3.39, *p* = .001, *d* = 0.99, 95% CI [−1.03, −0.26].

## 5.7 Discussion

### *5.7.1 Nationality Differences in VIP According to Memory Type*

The current study does not support the proposition made by Cohen and Gunz (2002) that being at the centre of attention (or not) in one's memories has a differential impact on persons from collectivistic versus individualistic cultures. This theory proposes that culture impacts self-construal which in turn impacts VIP use. Cohen and Gunz (2002) explained that persons from cultures assumed to be collectivist/interdependent in nature more often experience themselves through the eyes of others when they are in situations of potential scrutiny and at increased risk of standing out and opposing collectivist cultural values and expectations. While the current results do not appear to support this theory, being at the

centre of attention did emerge as a significant predictor of VIP use for the sample as a whole. Regardless of culture, persons more often used an Observer perspective when they were at the centre of attention in their memories compared to when they were not at the centre of attention in their memories. These results suggest that the tendency to become more self-conscious and socially aware when at the centre of attention may be more of a global (as opposed to a culture-specific) trend. In fact, several studies involving participants from Western regions of the world have found an association between the use of an Observer perspective and memories that involve situations that induce self-awareness or self-conscious emotions (e.g., embarrassment or shame) such as giving a public presentation or running from a threatening situation (D'Argembeau & Van der Linden, 2008; Nigro & Neisser, 1983; Rice & Rubin, 2011). An increased use of an Observer perspective has also been demonstrated in persons with high levels of trait self-consciousness (Robinson & Swanson, 1993) and social anxiety (D'Argembeau et al., 2006; McIsaac & Eich, 2004; Wells et al., 1998). Centre of attention aside, this study also did not reveal a main effect of nationality on VIP use which is consistent with the findings of Studies 1 through 3 of this thesis but inconsistent with previous findings of East-West differences in VIP use (Cohen & Gunz, 2002; Sutin & Robins, 2007).

It is important to note that neither of the cultures included within the current study were explored by Cohen and Gunz (2002). Nevertheless, based on national aggregates of individualism (Hofstede Insights, 2021), it would be expected that the cross-cultural differences observed by Cohen and Gunz (2002) would also be seen within the current study since the UK individualism index is similar to that of the US individualism index (89 and 91, respectively). Additionally, the TT individualism index (16) is similar to that of Asian groups such as China (20), South Korea (18) and Taiwan (17). The discrepant findings of Cohen and Gunz (2002) and the current study not only challenge the centre of attention theory but also

bring into question the accuracy of assuming self-construal based on national aggregates of culture (further discussed in section 5.7.2).

Overall, the current study does not provide support for a general difference in VIP use between persons from the UK and persons from TT nor does it provide support for the centre of attention being a critical determinant of cross-cultural differences. Nevertheless, this research adds to the literature base on cross-cultural differences in VIP use during AM recall and highlights the importance of further explorations in this field. Additional research involving both West-East cultural comparisons as well as including Caribbean cultures will be necessary for establishing the stability of the current results and for determining whether previous findings based on the East-West dichotomy are generalizable. Additionally, the finding that being at the centre of attention in one's memory predicted VIP use for the sample as a whole opposes the culture-specific patterns reported by Cohen and Gunz (2002) and highlights the need for research replication and future studies involving different cultural groups. The discussions regarding culture and VIP use in this section have not considered the self-construal data obtained from this study. Results and analyses involving individual-level self-construal data are discussed in the following section.

### *5.7.2 Nationality Differences in Self-Construal and the Relationship Between Self-Construal and VIP use*

The hypothesis that self-construal ratings obtained from UK persons would reflect higher levels of independence compared to self-construal ratings obtained from TT persons was partially supported as the two cultures only differed on one of the eight dimensions of self-construal. This dimension (Decontextualized versus Contextualized self) relates to whether or not persons believe that in order to be understood, others need to know information related to the context of their lives such as which social groups they belong to,

their place of origin, their social standing, where they live, and so on. In this sense, the self is defined as decontextualized or contextualized. Within the current study, UK persons rated more of a decontextualized self (indicating greater independence on this dimension) than TT persons. This dimension of self-construal is a relatively new dimension which was added to the initial seven-dimension CIRN-SCS-3 measure (Vignoles et al., 2016). It was included following Owe et al.'s (2013) proposal of contextualism as an important aspect of cultural collectivism and findings that contextualism (at least at the national level) predicted social behaviours such as in-group favoritism, differentiated trust, and corruption (Owe et al., 2013). The cross-cultural differences in contextualism found using the CIRN-SCS-3 within the current study are in the theoretically expected direction.

Despite the cross-cultural finding on the contextualism dimension, the UK and TT groups did not differ across the remaining aspects of self-construal including those related to looking after oneself (Self-reliance vs. Dependence on others), experiencing oneself (Self-containment vs. Connectedness to others), defining oneself (Difference vs. Similarity to others), dealing with conflict (Self-interest vs. Commitment to others), changing with context (Consistency vs. Variability), decision-making (Self-direction vs. Reception to influence), and expressing oneself (Self-expression vs. Harmony with others). As Vignoles et al. (2016) demonstrated, different cultures have different ways of being independent and interdependent and cross-cultural differences in all aspects of self-construal would not be expected. In the case of UK-TT comparisons, this study is considered preliminary evidence for self-construal differences specifically along the dimension of contextualism. Future replication using the CIRN-SCS-3 in larger samples will be important.

The self-construal patterns obtained within this study are important for several reasons. Firstly, the current findings, together with the inconsistent and incongruent findings

obtained using other measures of self-construal in Studies 1 through 3, highlight the danger in assuming self-construal at the individual level based on national aggregates of individualism (e.g., Hofstede Insights, 2021). Based on these aggregates, the TT and the UK cultures would be expected to be quite different in terms of self-construal. However, the findings from Studies 1 through 4 indicate that the TT and UK cultures may in fact be more similar than these aggregates would indicate. This is concerning given that cross-cultural research is often conducted under assumptions of self-construal based on nationality alone. In fact, all three of the previous studies exploring cultural differences in VIP use during AM recall (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007) have interpreted findings in relation to the concepts of individualism/collectivist and independent/interdependent self-construal without attempting to measure these concepts at the individual level. Secondly, the current findings support the idea that cross-cultural differences in self-construal may apply to specific aspects of self-construal that extend beyond the broader concepts of independence and interdependence (Vignoles et al., 2016). This supports the idea that self-construal is complex and multidimensional (Grace & Cramer, 2003; Hardin et al., 2004; Levine et al., 2003; Vignoles et al., 2016) and that both independence and interdependence are multidimensional concepts in and of themselves (Gabriel & Gardner, 1999; Harb & Smith, 2008; Kagitcibasi, 2005; Kashima & Hardie, 2000).

The current study did not reveal cross-cultural differences in VIP use nor were they consistent with expectations based on Cohen and Gunz's (2002) centre of attention theory. In mediation terms, this may be related to the fact that the TT and UK groups do not sufficiently differ in self-construal to the extent that this would impact VIP use during AM recall. In other words, the cultures explored within the current studies may be more similar in self-construal than the cultures previously explored within AM research (mainly North America and Asia).

While the current study did not provide an opportunity to formally test the mediation hypothesis (given that cross-cultural differences in VIP use were not found), the results of Studies 1 through 3 did not provide support for a mediating role of self-construal in the relationship between culture and VIP use. Additionally, self-construal ratings within this study did not predict the differential effect of remembering COA versus NCOA memories on VIP use. These findings indicate that self-construal (at least as measured by self-report questionnaires) had minimal effects on VIP use.

### *5.7.3 Supplemental Findings*

**5.7.3.1 Cross-Cultural Differences in Additional Memory Characteristics**. No cross-cultural differences in any additional memory characteristics including age at the time of the recalled memory, frequency of memory rehearsal, memory vividness, ease of imagery, strength of emotionality, or emotional valence were found within the current study. This is consistent with the largely lacking findings of cross-cultural differences in memory characteristics found in Studies 1 and 2 yet inconsistent with previous studies showing differences between cultures assumed to be predominantly individualistic and collectivistic such as North America and East Asia, respectively (e.g., Christian et al., 2013; Oishi, 2002; Sutin & Robins, 2007; Wang & Conway, 2004). The lack of significant cross-cultural differences in memory characteristics coupled with the limited differences in VIP use and self-construal, seems to indicate the multiple levels upon which the UK and TT cultures are unexpectedly similar.

**5.7.3.2 Ethnic Considerations.** As in Studies 2 and 3 of this thesis, ethnicity was strongly associated with nationality within the current study. Only the TT group was comprised of substantial portions of more than one ethnic group. Consistent with the results of Study 2, no differences in VIP use were found between persons of African and Asian ethnic

backgrounds from TT. Descartes (2012) argued that the African population in Trinidad is more individualistic and that the East Indian population is more collectivistic in nature due to the different circumstances in which these groups entered Trinidad. Within the current study, persons of Asian and African ethnic background did not differ on seven of the eight dimensions of self-construal. For one self-construal dimension, Difference versus Similarity, persons of African ethnic background rated higher levels of independent self-construal (i.e. more Difference) than persons of Asian ethnic background. This means that persons of African ethnic background more often defined themselves as unique individuals (versus being similar to others or wanting to fit in with others) compared to persons of Asian ethnic background. No ethnic differences in self-construal were found for the TT sample using the SCS (Singelis, 1994) or TST (Kuhn & McPartland, 1954) in Study 2. However, the current study indicates that there may be some differences (even if minimal/very specific) in the nature of self-construal within these ethnic groups. It is possible that this difference is related to historical issues including the fact that Africans arrived in Trinidad as slaves and were forced to adopt a more individualistic European cultural identity (Stewart, 2004) while East Indians arrived as indentured laborers and were able to maintain their collectivistic cultural practices and traditions (Arneaud & Albada, 2013; Brathwaite, 2005; Descartes, 2012; Younger, 2010). Nevertheless, the single self-construal difference found coupled with the lack of ethnic differences on all other self-construal dimensions, and the lack of ethnic differences found in Study 2, do not provide sufficient evidence to confidently confirm ethnic differences in self-construal within TT. It remains possible that TT has more of a "central core of culture" (Hodge 1996). Additional studies employing various self-construal measures (including those used in Studies 1 through 4) and larger sample sizes will be necessary for better understanding ethnic differences (if any) in self-construal within TT and the larger Caribbean region.

### *5.7.4 Limitations and Future Research*

Power analyses based on Cohen and Gunz's (2002) study indicated that the current study was sufficiently powered. However, conclusions based on the limited findings of cross-cultural differences in VIP use, memory characteristics, and self-construal should be made with caution pending future research and replication, especially using Caribbean samples. While the current study involved a larger proportion of male participants than in Studies 1 through 3, it was still majority female which restricts generalizability of findings across genders. Although ethnic information was obtained from participants in this study, the relatively small sample sizes within some ethnic groups limited the usefulness of statistical analyses involving ethnicity. Future studies comprised of more balanced proportions of males and females as well as ethnic groups will be important for strengthening confidence in the current results as well as increasing the generalizability of findings. Another potential limitation of the current study relates to exploring the impact of being at the centre of attention in one's memory on VIP use across cultures without controlling for potential individual differences in the way persons feel about being at the centre of attention. Future studies should consider including measures of self-awareness, self-consciousness and/or social anxiety in order to allow for these individual differences to be controlled for within cross-cultural analyses. Finally, the current study is the first known study to have used the CIRN-SCS-3 within the Caribbean region. Therefore, future research including larger samples of Caribbean participants will be necessary for establishing consistency in the current findings and for determining their generalizability.

## 5.8 Conclusion

The current study does not provide support for an overall difference in VIP use between persons from the UK and persons from TT nor does it provide support for the centre of attention being a critical determinant of cross-cultural differences in VIP use. Additionally, regardless of culture, persons more often used an Observer perspective for COA memories than for NCOA memories, indicating a general tendency for persons to be more self-conscious and socially aware when at the centre of attention in their memories. In terms of self-construal, the UK and TT groups only differed on one of the eight dimensions of self-construal (Decontextualized vs. Contextualized self) as measured by the CIRN-SCS-3 and there was not a differential impact of memory type (COA versus NCOA) on VIP use depending on self-construal.

# 6 Chapter 6: General Discussion

## 6.1 Overview

The central goal of this thesis was to explore and better understand the influence of culture on VIP use during AM recall. This is important given that research has shown that VIP can impact the quality and characteristics of recalled memories (e.g., Berntsen & Rubin, 2006; Libby et al., 2005; McIsaac & Eich, 2002; Nigro & Neisser, 1983; Robinson & Swanson, 1993; Sutin & Robins, 2010; Talarico et al., 2004) and VIP use has been found to play important roles in emotion regulation (Berntsen & Rubin, 2006; Libby et al., 2005; Nigro & Neisser, 1983; Talarico et al., 2004; Williams & Moulds, 2007; Wilson & Ross, 2003), emotional wellbeing (Kuyken & Moulds, 2009), and the development of a coherent sense of self and identity (Libby & Eibach, 2002; Libby et al., 2005). Very little is known about the nature of VIP in non-Western cultures. The three prior studies conducted in this area have indicated that persons from interdependently-oriented cultures such as East Asia more frequently use an Observer perspective when recalling memories compared to persons from independently-oriented cultures such as Europe and North America (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). However, these studies utilized varying methodological approaches and none explored VIP use outside of Western-Asian comparisons. Additionally, while all three of these studies found a relationship between culture and VIP use, the results of the studies were not entirely consistent with one another in the sense that the observed relationship depended on particular situations (Cohen & Gunz, 2002) or the content of the memories (Sutin & Robins, 2007). Four empirical studies were conducted as part of this thesis in order to further explore VIP use beyond the East-West divide, and to more fully understand the interrelationships between nationality (UK versus Caribbean), self-construal, and VIP use. The findings of these

studies are discussed in the following sections. Reference is made to the previous literature and clinical implications, limitations of this research, and future directions are also presented.

## 6.2 VIP use in the UK and the Caribbean

### *6.2.1 Cross-National Comparisons*

Initial investigations of culture and VIP use (Study 1) provided support for the existence of cross-cultural differences in VIP use during AM recall beyond the East-West dichotomy, such that persons from the UK more often utilized a Field VIP during AM recall compared to persons from TT. This is consistent with previous findings that persons from more individualistic/independent cultures more frequently use a Field perspective than persons from more collectivistic/interdependent cultures (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). However, this finding was not replicated by any additional studies within this thesis and there is insufficient support for a general difference in VIP use between the UK and Caribbean cultures. This is somewhat unexpected given that commonly used indicators of culture such as Hofstede's classification system (Hofstede Insights, 2021) characterize the Caribbean countries explored as collectivistic with Individualism values that are highly discrepant from the UK culture and similar to those of Asian countries such as China, South Korea, and Taiwan (Hofstede Insights, 2021). The lack of cultural differences in VIP use found, together with the self-construal patterns observed throughout the studies of this thesis (discussed in section 6.3) are extremely important findings that demonstrate the danger in prematurely assuming the nature of culture based on nationality as well as generalizing Western-Asian cultural findings to wider areas of the globe.

**6.2.1.1 The Focus of Attention on the Self in Memories**. Of the three studies known to have explored cross-cultural differences in VIP use during AM recall, the strongest effect has been found when researchers considered the focus on the self in one's memories (Cohen

& Gunz, 2002). Cohen and Gunz (2002) suggested that memory type (whether persons were at the centre of attention or not in their memories) impacts VIP use in collectivistic/ interdependent cultures because persons from these culture tend to experience themselves through the eyes of a "generalized other" (Triandis, 1989) when they are in situations of potential scrutiny and at increased risk of standing out and opposing collectivist cultural values and expectations. Despite using very similar approaches to that of Cohen and Gunz (2002), the results of Study 4 did not reveal a differential impact of memory type (centre of attention or not) on persons from the UK and persons from TT. Instead, Study 4 revealed that regardless of culture, persons more often used a Field perspective when recalling memories in which they were not at the centre of attention compared to memories in which they were at the centre of attention. While future research involving cultures from across the globe is necessary, the results of this thesis suggest that the tendency to become more self-conscious and socially aware when at the centre of attention may be more of a global (as opposed to a culture-specific) trend. In fact, several studies involving participants from Western cultures have found an association between the use of an Observer perspective and memories that involve situations that induce self-awareness or self-conscious emotions (D'Argembeau & Van der Linden, 2008; Nigro & Neisser, 1983; Rice & Rubin, 2011) and for persons with high levels of trait self-consciousness (Robinson & Swanson, 1993) and social anxiety (D'Argembeau et al., 2006; McIsaac & Eich, 2004; Wells et al., 1998).

### *6.2.2 Field Dominance and Multiple Perspectives*

All studies within this thesis revealed a preference for persons to use a Field versus an Observer perspective during AM recall, and in most studies (aside from Study 1), VIP ratings were significantly above 3.50 on the 7-point VIP rating scale for both cultural groups. This Field preference has been found by previous researchers even when differences in the relative use

of these perspectives across cultures was observed (Martin & Jones, 2012; Sutin & Robins, 2007). Cohen and Gunz (2002) were the only researchers to report an overall Observer perspective within their Asian cultural group and this finding specifically emerged when memories involved situations in which participants were at the centre of attention. The current research did not reveal an Observer preference for persons from the Caribbean even when they were at the centre of attention in their memories. It is possible that the nature of culture in the Caribbean may be less similar to that of the Asian culture explored by Cohen and Gunz (2002), despite their similar ratings on national Individualism indices such as Hofstede's classification system (Hofstede Insights, 2021). The overall Field preference observed within the studies of this thesis was not attributable to the recall of recent memories (suspected to be an issue in Study 1). Age of memory has often been shown to significantly predict VIP with older memories more often recalled from an Observer perspective (D'Argembeau & Van der Linden, 2004; McIsaac & Eich, 2002; Nigro & Neisser, 1983; Piolino et al., 2006; Pronin & Ross, 2006; Rice & Rubin, 2009; Robinson & Swanson, 1993). However, Study 2 was specifically designed to deal with this issue via the inclusion of memories from different lifetime periods. Having said that, the Field preference was statistically significant for the adolescent and adulthood memories but not for the childhood memories.

Regardless of VIP preference, the majority of persons from the UK and the Caribbean samples in Studies 1 and 4 reported seeing their memories from both perspective types. Additionally, in Study 2, the majority of persons in both cultural groups reported seeing at least one of their three memories from both perspective types and approximately one quarter of persons saw all three of their memories from both perspectives. These findings support previous research indicating that most people can experience memories from both perspectives and that persons can shift between perspectives even during a single retrieval

event (e.g., Huebner & Fredrickson, 1999; Nigro & Neisser, 1983; Rice & Rubin, 2009; Robinson & Swanson, 1993).

### *6.2.3 Interim Summary*

The findings of this thesis provide very little evidence to support cross-cultural differences in VIP use beyond the East-West divide. This highlights the importance of conducting widespread global research before assuming the generalizability of patterns. Potential explanations for the limited cross-cultural differences in VIP use revealed by the studies of this theses include the fact that the UK and TT cultures may be more culturally similar than is typically assumed. This is further discussed in section 6.3.2, following discussions regarding the nature of self-construal within the UK and the Caribbean regions.

## 6.3 The Nature of Culture and Self-Construal in the UK and the Caribbean

The studies of this thesis are the first to use individual-level measures of self-construal to compare UK and Caribbean samples. This was considered important given that research has shown that cultural groups are not homogenous and that there is often great within-country variability in self-construal (e.g., Green et al., 2005; Matsumoto, 1999; Oyserman et al., 2002; Singelis, 1994). Having said that, based on the theory and development of the SCS (Singelis, 1994) as well as national aggregates if Individualism (Hofstede Insights, 2021), it was expected that self-construal ratings from UK samples would reflect higher levels of independence and lower levels of interdependence compared to ratings obtained from Caribbean samples. No studies within this thesis provided sufficient evidence to support the expected trends. Study 1 provided partial support for the expected patterns using the SCS such that persons from the UK did rate lower levels of interdependence compared to persons from TT but they did not rate higher levels of independence. Study 4 also provided partial support using the CIRN-3 (Vignoles et al., 2016) such that the two cultures only differed on one of the eight dimensions

of self-construal. This dimension (Decontextualized versus Contextualized self) relates to whether or not persons believe that in order to be understood, others need to know information related to the context of their lives such as which social groups they belong to, their place of origin, their social standing, where they live, and so on. In this sense, UK persons rated more of a decontextualized self (indicating greater independence) than TT persons. The UK and TT groups did not differ across any other aspects of self-construal.

While two of the four studies within this thesis provided some degree of support for the expected self-construal patterns, the remaining two studies (Studies 2 and 3) did not support these expectations. There were no differences in self-construal between the two cultures using the TST (Kuhn & McPartland, 1954). There were also no differences in interdependent self-construal as measured by the SCS (Singelis, 1994). However, the SCS revealed significantly lower levels of independent self-construal for UK participants compared to Caribbean participants. These findings oppose the theoretical expectations put forth by Singelis (1994). Several previous studies have also found no differences or theoretically incongruent differences in self-construal using the SCS (e.g., Kleinknecht et al., 1997; Krull et al., 1999; Levine et al., 2003; Matsumoto, 1999; Sato & Cameron, 1999) and the TST (e.g., Del Prado et al., 2007; Kanagawa et al., 2001; Rhee et al., 1995; Santamaria et al., 2010; Watkins & Gerong, 1997). One potential explanation for the incongruent patterns may be related to Peng et al.'s (1997) deprivation theory which suggests that unexpected cross-cultural differences in value endorsement could reflect the fact that people value what they feel deprived of. In this sense, persons from the Caribbean may value independent goals more strongly than persons from the UK, resulting in greater independent self-construal endorsement. While possible, this pattern was not consistently observed throughout the studies of this thesis and there are other potential explanations which more likely explain the unexpected results. These include

the challenges associated with conceptualizing and measuring abstract constructs such as the self and self-construal, as well as the fact that the UK and Caribbean cultures may be more similar than we expected. These issues are further discussed in the following section. Taken together, the self-construal patterns revealed by the studies of this thesis are insufficient for confirming differences in self-construal between the UK and Caribbean cultures.

### *6.3.1 Conceptualizing and Measuring Self-Construal*

There is a great deal of controversy regarding the conceptualization and measurement of self-construal (see section 1.4.2). This thesis did not aim to determine which theoretical or methodological approaches are most useful or most accurate. However, it provides support for the complex nature of these constructs and highlights some of the challenges associated with attempting to capture self-construal within empirical research.

Within cross-cultural research, country-level cultural estimates are often used to assume individual level values. However, even proponents of these estimates have acknowledged that country-level characteristics may not reflect an individual's values and cultural orientation (Hofstede, 1980; Hofstede & Minkov, 2010) which the findings of this thesis clearly indicate. The self is complex and many researchers have developed tools in an attempt to formally measure culture at the individual level. Most measures, including the SCS (Singelis, 1994), have built upon the two-dimensional model proposed by Markus and Kitayama (1991) which distinguishes between independent and interdependent self-construal. This thesis provides several lines of evidence to support the differentiation between independence and interdependence as separate constructs as opposed to two ends of a single dimension (Freeman, 1997; Markus & Kitayama, 1991; Singelis, 1994; Triandis, 1995). Firstly, cultural differences emerged for one aspect of self-construal but not the other in both Studies 1 and 2 (albeit with differing patterns). Secondly, differential relationships emerged between

independent versus interdependent self-construal and memory characteristics including VIP use (Studies 1 and 2). Thirdly, SCS Independent and Interdependent scores were not significantly correlated for any of the UK samples used. While there was no significant correlation between SCS Independence and SCS Interdependence scores for the Caribbean sample of Study 2, a moderate correlation was found within the TT sample of Study 1. The inconsistencies of the TT-derived SCS correlations coupled with the lack of correlation within the UK samples do not support the idea that independence (or individualism in general) and interdependence (or collectivism in general) are two ends of a unidimensional construct. If this were the case, strong correlations between independent and interdependent self-construal would be expected.

The inconsistent patterns of self-construal observed using the SCS (Singelis, 1994) highlight the challenges of measuring self-construal, though comparing patterns across studies is clearly limited by potential true variation of the individual samples used. Nevertheless, the variable reliability quotients obtained from the SCS across Studies 1 through 3 are notable, especially for the SCS Interdependence scale which was highly variable across cultures and studies. While interdependent self-construal is considered more flexible and dynamic (Cross et al., 2011; Levine et al., 2003; Singelis, 1994), these reliability indices raise concern regarding the ability of the SCS to reliably measure self-construal, especially interdependent self-construal, in both UK and Caribbean samples.

A number of researchers have criticized the widely adopted two-dimensional model of self-construal arguing that it is too dichotomous and vague, and they argue that the concept of the self and self-construal is complex and multidimensional (Grace & Cramer, 2003; Hardin et al., 2004; Levine et al., 2003; Vignoles et al., 2016). The inconsistent self-construal patterns obtained from the studies within this thesis may provide support for the criticism that the

two-dimensional model may be too simplistic and that different cultures value being independent and interdependent in particular ways that extend beyond the broader concepts of independence and interdependence (Vignoles et al., 2016). The fact that the UK and TT cultures differed on one out of the eight aspects of self-construal measured by the CIRN-3 (Vignoles et al., 2016) provides support for this argument.

The priming findings of Study 3 can also be used to highlight the complexity of self-construal. Contextual factors have been argued to impact the salience of independent and interdependent self-construal which researchers have claimed can result in variable self-reports of self-construal (Levine et al., 2003). Many researchers have used priming to demonstrate that self-construal can be induced or manipulated (e.g., Lee et al., 2000; Oyserman & Lee, 2008; Trafimow et al., 1991) but the effects vary (Oyserman & Lee, 2008; Wang & Ross, 2005) and formal self-construal measures often do not capture these effects (for reviews see Levine et al., 2003; Oyserman & Lee, 2008). Our research did not reveal an overall priming effect on self-construal ratings but a significant interaction between priming and nationality on interdependent self-construal ratings was found. Persons from TT rated higher levels of interdependence when they were interdependently primed than when there were independently primed or not primed at all. This indicated that self-construal was in fact able to be manipulated and that the SCS (Singelis, 1994) was able to capture these effects, at least at the level of interdependence which is often theoretically defined as more context-dependent and flexible than independent self-construal (Cross et al., 2011; Levine et al., 2003; Singelis, 1994). Having said that, interdependent ratings did not significantly differ according to priming condition within the UK group. This may be related to the relatively low reliability index of the SCS scale for the UK sample in this study. It is also possible that persons from the UK have a self-concept which is more stable and consistent across conditions and thus less

susceptible to situational factors compared to persons from TT. Despite the fact that self-construal data did not indicate that persons from the UK are more independent or less interdependent compared to persons from TT, there may still be cultural differences between the TT and the UK groups that are not picked up by the SCS, which allow interdependent self-construal to be more easily activated in persons from TT than persons from the UK. Future priming studies using larger numbers of participants and additional methods of capturing self-construal will be important for establishing the consistency of the current findings and for assisting with further understanding the complex nature of culture and self-construal.

Important information can also be gleaned by examining the relationship between measures of self-construal. Prior to the current research, studies comparing self-construal patterns between measures have been mixed and without strong correlations (Bresnahan et al., 2005; Grace & Cramer, 2003). This has been argued to reflect problems with the construct validity of these scales (Grace & Cramer, 2003) though some researchers believe that convergence would not be expected given that some scales (such as the SCS) measure stable traits while others (such as the TST) capture more momentary and dynamic aspects of the self (Kim & Raja, 2003). Study 2 of this thesis provided the opportunity to compare self-construal patterns across measures within the same sample. A significant positive correlation between SCS Independence scores and TST Independence proportion scores was observed for both the UK and the Caribbean samples. This indicated some degree of convergent validity alongside the fact that there was a cross-cultural trend (though not significant) using both measures which indicated higher independent self-construal in the Caribbean versus the UK.

In summary, the variable self-construal findings within this thesis as well as within previous research may be related to the difficulty conceptualizing as well as accurately and consistently capturing self-construal using self-report measures (Markus & Kitayama, 2010).

The findings presented within this thesis support the need to carefully consider, or reconsider, the way in which culture and self-construal are conceptualized and they support the need for further advancements in developing tools that acknowledge the complexity of self-construal and go beyond traditional dual theories.

### *6.3.2 Cross-Cultural Similarities*

The inconsistent self-construal patterns observed could be related to the fact that the two cultures may in fact be less dissimilar in self-construal than expected based on available aggregate-level individualism estimates such as those provided by the Hofstede classification system (Hofstede Insights, 2021). The inconsistent self-construal patterns are not the only indicator of potential cultural similarity. The current research also provides minimal evidence for differences in VIP use between the UK and Caribbean samples as well as differences in a range of additional memory characteristics including age at the time of the recalled memory, memory vividness, ease of imagery, strength of emotionality at the time of recalled events, emotional valence, frequency of memory rehearsal, memory focus (individual or social) and memory specificity (specific or general). An important consideration regarding the apparent cultural similarities between the UK and the Caribbean region may relate to the possibility that these two cultures may not epitomize individualism and collectivism to the degree that other cultures do. Firstly, very little is known about the true nature of self-construal in the Caribbean. For example, there are debates regarding the nature of the TT culture despite its low current Individualism index and overall collectivistic status based on Hofstede's classification system (Hofstede Insights, 2021). Some researchers argue that the TT culture is a balance of individualism and collectivism (Descartes, 2012; Stewart, 2004; Tidwell, 2001). Charles Tidwell (2001) argued that although there are strong elements of individualism including a significant amount of economic development, a relatively large middle class, and

access to public education, there are also elements of the TT culture that are less indicative of individualism such as a tropical climate and extended family structures. Additionally, the Caribbean region is multiethnic in nature. Given their shared history of colonisation, slavery, indentureship, and plantation culture (Premdas, 2011) the region shares a combination of African, European, Asian, and other influences albeit to varying degrees (Clarke & Brereton, 2020). Relationships between ethnicity and self-construal have been proposed. For example, Descartes (2012) argued that the African population in Trinidad is more individualistic and that the East Indian population is more collectivistic due to the different circumstances in which these groups left their ancestral homelands and entered TT. Despite these proposed differences, the TT culture has also been argued to have a "central core of culture" (Hodge 1996) given the tendency for persons to partake in each other's cultural traditions and celebrations (Descartes, 2012).

While largely considered individualistic and independent in nature, the UK may not epitomize individualism. Some researchers have found that European cultures are less individualistic than other Western regions such as North America. For example, using experimental tasks constructed to reflect independent and interdependent self-construal, Kitayama et al. (2009) found that the self-construal patterns from European participants (from the UK and Germany) fell midway between that of Japanese participants (who demonstrated more interdependence) and American participants (who demonstrated more independence). While the specific reasons for this intermediacy cannot be confirmed, factors such as within-country variations in religion have been proposed (Graham et al., 2013; Kitayama et al., 2009).

This thesis provides some evidence for cultural similarities between the UK and Caribbean cultures. It remains possible that cross-cultural differences in self-construal may emerge via alternative comparison groups (e.g., Caribbean versus North American samples).

This would also be important for determining whether the limited cultural differences in VIP use and other memory characteristics observed would extend beyond UK-Caribbean comparisons.

**6.3.2.1 Global Interconnectedness.** Technology has facilitated globalization and cultural interconnectedness such that cultures may no longer be as easily classifiable as they once were (Vignoles, 2018). For example, many Asian countries, traditionally assumed to be collectivistic in nature, have been increasingly exposed to and impacted by Westernized cultural values and practices (Gelfand et al., 2011; Zeng & Greenfield, 2015). Consequently, persons from these cultures may no longer demonstrate the degree of interdependent self-construal they once did (Kumar, 2013; Ng & Lai, 2011). As discussed in section 6.3.2, the nature of self-construal in the Caribbean has been a topic of debate. While there may not be a clear verdict on its traditional or current individualism-collectivism status, the Caribbean is part of an increasingly borderless world (Soysal & Soyland, 1994) which blurs the lines of culture based on nationality. The Caribbean region has faced an increasing tourist influx and Caribbean residents also frequently travel to Western regions including North America and Europe. Additionally, when in their "home" countries, Caribbean persons have constant access to Western-based media and they share the same online space with the rest of the world (Premdas, 2011). However, globalization does not only impact culture and identity in non-Western cultures. While persons from Western Europe once left their homelands to colonize and occupy international territories, this trend changed direction in the latter half of the twentieth century due to factors such as decolonization, economic growth, and the establishment of the European Union as a free trade and migration zone (Czaika & De Haas, 2014). As a result, migration to Western European countries increased significantly and involved citizens from both near and remote countries of the world (Czaika & De Haas, 2014).

It would be naïve to think that the culture of these host nations remain unchanged by large-scale immigration which facilitates the exchange and possible fusion of cultural values and practices.

In summary, the apparent emerging global entanglement of culture certainly poses a challenge for cultural research and may account for some of the limited cross-cultural findings presented within this thesis. In fact, researchers including Premdas (2011) argue that geographical bounded categorizations of culture may no longer be relevant. The empirical findings presented by this thesis support the need for a more modernized reconceptualization of culture.

### 6.4 The Relationship Between Self-Construal and VIP use

A primary aim of this thesis was to better understand the relationship between self-construal and VIP use given that self-construal has been argued to mediate the relationship between culture (in terms of nationality) and VIP use (Cohen & Gunz, 2002). As discussed in earlier sections, results have not provided sufficient evidence to confirm the nature of self-construal in persons from the UK and persons from Caribbean, or to confirm differences between these two cultures. This section includes a discussion of the relationship between self-construal and VIP use regardless of nationality.

Attempts to examine the relationship between self-construal and VIP use yielded mixed findings. Both Studies 1 and 2 did not reveal a relationship between independent self-construal ratings (as measured by the SCS) and VIP use. Using the TST in Study 2, higher levels of independent self-construal were associated with more Field perspective use but this was only observed for the childhood memories (and not for the adolescent or adulthood memories). In terms of the relationship between interdependent self-construal and VIP use, Study 1 produced mixed results without sufficient evidence to confirm interdependent self-

construal as a significant predictor of VIP use. Study 2 also did not demonstrate that higher interdependent self-construal ratings (as measured by the SCS) were associated with more frequent use of an Observer VIP during AM recall. Instead, interdependent self-construal was only significantly correlated with VIP for the adolescent memory and with the opposite pattern expected (higher interdependent scores were associated with more Field perspective use).

Taken together, the research presented within this thesis provide inconsistent findings regarding the relationship between self-construal and VIP use. They cannot be used to support previous findings that persons from cultures considered to be collectivistic more often use an Observer perspective compared to persons from cultures considered to be individualistic (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). Having said that, the studies of this thesis are the first known to explore the relationship between self-construal (at the individual level) and VIP use. As such, research replication will be very important and researchers will need to carefully consider alternative methods of capturing self-construal given the challenges highlighted by the current research.

**6.4.1.1 Self-Construal as a Mediator Between Nationality and VIP use**. In Cohen and Gunz's (2002) centre of attention study, they argued that self-construal was responsible for the cross-cultural differences in VIP use observed. More specifically, they stated that the more frequent use of an Observer perspective in collectivistic versus individualistic cultures is the result of a more interdependent type of self-construal which encourages persons to experience themselves through the eyes of others (Cohen & Gunz, 2002). The studies of this thesis have not confirmed that the UK and Caribbean groups sufficiently differ in self-construal or VIP use. However, even when cross-cultural differences in VIP use were observed (Study 1), self-construal (as measured by formal questionnaires) did not mediate this relationship. There

was also insufficient evidence across studies to support a relationship between self-construal and VIP use regardless of nationality. Priming self-construal (Study 3) also did not provide support for this mediating role. Results indicated minimal impacts of priming on self-reported levels of self-construal though the nature and degree to which the priming task activated self-construal cannot be confirmed via these measures alone. Nevertheless, even when the SCS did reflect significant priming effects (i.e. within the TT sample) this did not correspond with significant changes in VIP use. In fact, priming had no effect on VIP use for either culture. This priming study can be considered another way of testing the mediation model by manipulating the proposed mediator, and the lack of effects do not provide evidence to support the mediating role of self-construal in the relationship between culture (in terms of nationality) and VIP use.

Taken together, the studies of this thesis indicate that self-construal may not be a means through which culture (at the nationality level) impacts VIP use. However, in addition to sample size limitations, it is again important to consider that the concept of self-construal is complex and difficult to measure. As such, the self-construal data obtained via the measures used cannot be used to discount self-construal as a mediator between culture and VIP use. There is certainly a need for research replication using larger samples, as well as samples from various regions of the world. The use of alternative self-construal measures and priming techniques will also be important for more fully exploring the mediating role of self-construal in VIP use.

### 6.5 Clinical Implications

Visual imagery perspective use is an important phenomenological characteristic of memory recall given its potential to significantly impact emotional regulation (Berntsen & Rubin, 2006; Libby et al., 2005; Nigro & Neisser, 1983; Talarico et al., 2004; Williams & Moulds,

2007; Wilson & Ross, 2003) and overall emotional wellbeing (Kuyken & Moulds, 2009). While the current thesis was not focused on the emotional consequences of using particular VIPs, its findings offer important considerations regarding the application of therapeutic interventions across cultures.

Therapeutic techniques such as Cognitive Behavioural therapy (CBT) have been shown to be effective in treating a range of clinical disorders (Butler et al., 2006; Hofmann et al., 2012). Cognitive behavioural therapy integrates the relationships between AM, visual imagery, and one's sense of self and identity, and aims to modify maladaptive thoughts, images, and beliefs emerging from one's interpretation of their AMs (Cili & Stopa, 2018). Visual imagery perspective has been shown to be altered by psychopathology (e.g., Ayduk & Kross, 2010; Kenny & Bryant, 2007; McIsaac & Eich, 2004) and VIP manipulation has been used as a tool for managing emotional reactions to past experiences (Eich et al., 2012). The majority of studies to date have shown that patients experiencing distress benefit in the short-term by adopting an Observer perspective (Eich et al., 2012) which may serve to dampen the distress associated with difficult memories (e.g., Berntsen & Rubin, 2006; Kross & Ayduk, 2008; McIsaac & Eich, 2002; Williams & Moulds, 2007). However, the usefulness of recalling difficult memories from a distanced perspective is debatable given that these immediate benefits have often been shown to have long-term consequences (e.g., Kenny & Bryant, 2007; McIsaac & Eich, 2004) as these emotions are not adequately processed (Brewin & Holmes, 2003). In fact, CBT techniques often encourage the use of a Field perspective for clinical groups including persons with PTSD (see Eich et al., 2012) and social phobias (e.g., Clark et al., 2006). An issue however, is that the above therapeutic techniques are largely developed and validated in Western countries yet widely used across the world, often in cultures for which they have not been sufficiently validated (Bernal & Scharrón-del-Río, 2001; Wood et al., 2002). If differences in VIP

use exist across cultures (as demonstrated by previous research) then it becomes questionable as to whether the visual imagery techniques used in CBT serve persons from different cultures in the same way that they are proposed to serve persons from the Western developed world. As far as the studies within this thesis are concerned, persons from the Caribbean region do not appear to differ in their use of VIP during AM recall compared to persons from the UK, where CBT is very successfully employed. If this is the case, then CBT-type therapies should be useful in the Caribbean context as well. Having said that, a simple lack of difference in the type of VIP used by UK and Caribbean groups cannot be used to assume no differences in the impact of VIP use in the ways in which emotions are processed, or the overall effectiveness of these intervention strategies. A great deal of additional research is warranted in order to determine whether Western-developed therapeutic models and approaches are cross-culturally appropriate or whether they need to be modified to better suit the wide range of cultures in which they are applied.

In addition to the clinical considerations related to VIP use across cultures, the findings of this thesis indicate that self-construal cannot be assumed based on national-level indicators. This is also important for clinical practice since a clearer understanding of the nature of an individual's self-construal may help inform and guide therapeutic interventions (Kuo & Gingrich, 2005; Yeh & Hwang, 2000). For example, self-construal has been found to be associated with aspects of emotional wellbeing including perceived interpersonal stress and one's ability to cope with stress (Kuo & Gingrich, 2005) although findings have been mixed (Cross, 1995; Zaff et al., 2002). Overall, further research in the domains of VIP use as well as self-construal will be necessary in order to be able to guide clinicians working with persons from both Western and non-Western cultures.

## 6.6 Limitations

Several limitations are acknowledged within the scope of this thesis and limitations of each study are discussed within their respective chapters. As such, only the primary limitations are restated below alongside additional considerations, and recommendations are made for future research.

In terms of sample size, time and resource limitations restricted the recruitment of larger numbers of participants. Therefore, conclusions based on the limited cross-cultural differences in VIP, additional memory characteristics, and self-construal, as well as minimal self-construal priming effects, should be made with caution given the relatively small sample sizes and the associated risk of incorrectly retaining null hypotheses. Having said that, power analyses indicated that Study 4 in particular was sufficiently powered based on the results of previous research.

Another sample-related limitation relates to the non-diverse convenience sampling used within the studies of this thesis. Participant age was restricted to ages 18 to 30. While this allowed for the controlling of this potential confound given that age has often been associated with memory characteristics including VIP (e.g., Rathbone et al., 2015), it restricts the generalizability of results to older and younger age groups. Relatedly, all studies involved university students which was considered an appropriate participant pool for cross-cultural analyses, especially given that participants from both samples attended universities within their respective countries, thus hopefully reducing acculturation to some degree. Having said that, the use of young adults brings into play additional factors in need of consideration. Both participant age and memory age have been shown to impact the phenomenology of recalled AMs including the VIP adopted during recall (see sections 1.7.2.1 and 1.7.2.9). While it may seem appropriate to conduct research on young persons whose memories have likely

undergone less alteration over time compared to older persons, the use of young persons introduces additional challenges. As outlined in section 6.3.2.1, the world is becoming more culturally interconnected due to factors such as globalization (Premdas, 2011; Vignoles, 2018). Given ongoing advances in technology and travel, young adults are likely more impacted by globalization than older adults. Young adulthood is also a time when persons are in the process of establishing a stable sense of self and identity (Conway, 2005). It is possible that cultural differences between persons from the UK and persons from the Caribbean may emerge in older age groups who have likely been less influenced by globalization and who may have a more fully established sense of self and identity. Future research including participants from different age groups will allow for further explorations of culture and VIP use in the UK and the Caribbean region.

In all studies of this thesis, participants were provided with descriptions of the two VIPs before they engaged in AM recall. This strategy has been used by some researchers (e.g., Rice & Rubin, 2009; 2011) while others have presented these descriptions following AM recall (e.g., Cohen & Gunz, 2002; Nigro & Neisser, 1983). In the current research, the introduction to VIPs before AM recall was done in order to ensure that participants clearly understood the expectations of the task and the concept of VIP use which was a primary focus of the research. It is possible that this pre-exposure may have impacted the VIP participants' ultimately adopted, or encouraged them to recall their memories from both perspectives. However, this issue is likely to be difficult to mitigate since providing post-recall descriptions of the VIPs may also interfere with participants' retrieved images, resulting in an alteration of their natural VIPs and encouraging the use of both VIPs. Future studies may attempt to capture VIP use without overtly teaching participants about the specific perspectives. For example, participants may be encouraged to provide very detailed descriptions or visual reproductions

of their images. However, attempting to accurately capture and measure VIP based on these outputs would likely be very challenging.

Challenges regarding self-construal measures have been highlighted throughout this thesis. In general, self-report measures can impose bias and they challenge the objectivity of results. Additionally, self-report measures may not accurately capture one's attitudes and beliefs, which some researchers suggest may not be available in conscious awareness. For example, some researchers argue that cultural attributes may be so engrained within traditions and practices that persons may not even be aware of these and thus unable to report them on questionnaire measures (Han et al., 1998; Markus & Kitayama, 2010; Morling & Lamoreaux, 2008). Given the issues associated with self-report measures on the whole, as well as ongoing debates regarding the conceptualization and measurement of culture and self-construal, future studies should explore more objective methods of assessment. Some researchers have already begun using implicit association tests (e.g., Kitayama et al., 2009) and neuroimaging studies (e.g., Kim & Sasaki, 2014) in an attempt to more accurately capture self-construal and other individual-level attributes but further research is warranted.

Within the studies of this thesis, financial incentives were used in order to recruit participants for whom course credit could not be provided. Financial compensation was awarded to the UK group within some studies and the Caribbean group within other studies. This potential limitation must be acknowledged given the possible impact of financial incentives on participant interest, motivation, and engagement when completing studies. The nature of this impact cannot be easily determined within the scope of the current research. This issue is particularly complex given that the provision of financial incentives cannot be assumed to be a standalone factor that impacts cultural groups in the same way. Not only will future studies need to establish consistency of reimbursement methods, but an attempt

should be made to explore the different ways in which monetary incentives impact participant engagement across cultural groups.

### 6.7 Future Directions

In general, future research including larger samples will be necessary for establishing consistency in the current findings and for determining their generalizability. Additionally, research involving Caribbean cultures in comparison to additional Western cultures will be necessary for establishing the stability of the current results with respect to VIP use as well as the nature of self-construal across a wider range of world regions. Additional recommendations and ideas for future research are presented below.

An attempt was made to examine patterns of VIP use and self-construal endorsement across ethnic groups, especially within the multiethnic Caribbean samples. However, ethnicity was strongly associated with nationality and the relatively small sample sizes within some ethnic groups limited the usefulness of statistical analyses involving ethnicity. Studies 2 and 4 did not reveal differences in VIP use between persons of African and Asian ethnic backgrounds from TT. They also did not reveal differences in self-construal using the SCS (Singelis, 1994) or the TST (Kuhn & McPartland, 1954). However, use of the CIRN-3 (Vignoles et al., 2016) indicated that persons of Asian and African ethnic background differed on one of the eight dimensions of self-construal such that persons of African ethnic background more often defined themselves as unique individuals (versus being similar to others or wanting to fit in with others) compared to persons of Asian ethnic background. While interesting and potentially informative, future studies comprised of larger and more balanced proportions of ethnic groups will be necessary.

Potential reasons behind the limited cross-cultural differences in VIP use and self-construal found have been presented in sections 6.2 and 6.3. However, the unexpected

similarities should be used to question the nature of early socialization practices on the development of culture and self-construal. Cross-cultural differences in the nature and characteristics of AM have been argued to emerge from early parent-child reminiscing practices (Wang, 2016). Within conversations with their children, parents vary in terms of the frequency with which they recall memories, the types of memories they recall, how often they refer to others in their memories, and the level of detail they provide (e.g., Han et al., 1998; Schröder et al., 2015; Wang & Conway, 2004). These variations often reflect the cultural self-goals of independence and interdependence (Miller et al., 1997; Mullen & Yi, 1995; Wang et al., 2000). Given the limited cross-cultural differences revealed by this thesis, it would be important to dig deeper into early socialization practices. Are parent-child interactions surrounding memories similar between the Caribbean and the UK cultures? If they are, this may help explain the limited cross-cultural findings in memory characteristics revealed by the studies of this thesis. If significant differences are found, further investigations of cultural development later along the developmental timeline including considerations of digital interconnectedness, travel, and other culturally interfering factors will be important. Early differences in parent-child interactions surrounding memories may also indicate the potential presence of cultural differences in aspects of memory that are subtler than can be captured by the tools utilized within the studies of this thesis.

The role of VIP use in wellbeing across different cultures requires further exploration, even in the absence of solid research to confirm cross-cultural differences. Within the studies of this thesis, emotionality was explored in terms of the emotion experienced by participants at the time of the recalled events and not their emotional status at the time of memory retrieval. Research has revealed differences in VIP use between persons with and without emotional disorders including depression (Bergouignan et al., 2008; Lemogne et al., 2006;

Williams & Moulds, 2007) and anxiety (D'Argembeau et al., 2006; Wells et al., 1998). Several studies have also shown a relationship between self-construal and emotional distress (Hardin et al., 2006; Okazaki, 1997; Sato & McCann, 1998; Xie et al., 2008). Future studies should utilize clinical samples or screen for significant levels of emotional distress. This will allow for persons with significant distress to be identified and controlled for, while also allowing the opportunity to explore the relationships between emotional distress, VIP use, and self-construal in different cultural samples.

## 6.8 Conclusions

This thesis presents a series of studies examining the influence of culture on VIP use during AM recall. Previous research has revealed differences in VIP use between Western and East Asian cultures indicating that persons from interdependently-oriented cultures more frequently use an Observer perspective when recalling memories compared to persons from independently-oriented cultures (Cohen & Gunz, 2002; Martin & Jones, 2012; Sutin & Robins, 2007). The studies of this thesis were the first to explore VIP use in persons from the Caribbean region and to compare this to VIP use in a Western sample (UK). Their results challenge existing findings of cross-cultural differences in VIP use and they highlight the importance of widespread global research before assuming generalizability of patterns based on limited country comparisons. The studies presented within this thesis are also the first to explore cross-cultural differences in VIP use by attempting to measure self-construal at the individual level. The findings did not provide sufficient evidence to confirm differences in self-construal between the two cultures and self-construal (as measured by formal questionnaires) was not found to mediate the relationship between nationality and VIP use. Results also speak to the complexity involved in conceptualizing and measuring self-construal and most of all, they serve to warn cultural researchers of the potential dangers of assuming self-construal

based on nationality or aggregates of culture such as individualism indices. As it stands, it is too early to make conclusions regarding cross-cultural differences in VIP use and the mechanisms by which these may emerge. Nevertheless, the results of these investigations add to the literature base on cross-cultural differences in VIP use and it is intended that this thesis leads to a more careful and detailed examination of the interrelationships between nationality, self-construal, and VIP use in regions across the globe.

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**Appendix A**

**Participant Information Sheet for Study 1**

**Institution:** University of Reading, School of Psychology & Clinical Language Sciences, Earley Gate, Reading RG6 6AL

**Title:** Cross-cultural Differences in Visual Imagery Perspective

**Supervisor:** Professor Judi Ellis j.a.ellis@reading.ac.uk 0118 378 6415

**Student Experimenter**: Analisa Wittet a.l.wittet@pgr.reading.ac.uk

We would be grateful if you could assist us by participating in our study that aims to explore the qualities and characteristics of imagery in recalling (past) events in one Western (UK) and one developing (Trinidad & Tobago) country in healthy young adult populations. The study is being conducted online, using Alchemer. Below is the description of the study.

**This is a 2-Part Survey**

In **Part 1** we will be asking you to think about (visualize) a past event and to answer questions about this image/memory.

In **Part 2** we will be asking you to complete a questionnaire that measures a variety of feelings and behaviours in various situations.

Taking part in this study is completely voluntary; you may withdraw at any time without giving any reason. Your data will be kept confidential and securely stored. All information collected for the study will be destroyed after a period of 5 years from completion of the study.

Please contact a.l.wittet@pgr.reading.ac.uk should you have any questions or concerns about this study.

*This application has been*
*reviewed by the University Ethics Committee and has been given a favourable*
*ethical opinion for conduct*

## Appendix B

### Participant Consent Form

I agree to participate in the study for "**Cross-Cultural Differences in Visual Imagery Perspective**". I have seen and read a copy of the Information Sheet and have been given the opportunity to ask questions about the study and these have been answered to my satisfaction. I understand that all personal information will remain confidential to the investigator and arrangements for the storage and eventual disposal of any identifiable material have been made clear to me. I understand that participation in this study is voluntary and that I can withdraw at any time without having to give an explanation.

By selecting the option 'I am happy to proceed' below I agree to participate in the study, **Cross-Cultural Differences in Visual Imagery Perspective**, being conducted by Analisa Wittet under the supervision of Professor Judi Ellis at the University of Reading.

**Appendix C**

**Description and Pictured Examples of VIPs**

We can remember an event in different ways.

One way is to remember/visualize an event where you can see yourself in the scene as well as the action you are performing
(like an observer/onlooker)

The other way is to remember/visualize an event as if you are viewing it through your own eyes (from the same viewpoint that it was originally experienced)

Sometimes, we remember an event entirely from one perspective but it is also possible to recall an event both ways (switching between perspectives).

**Here is an example of these perspectives:**

*The picture on the left shows what it may be like to remember/visualize an event where you can see yourself in the scene as well as the action you are performing. The picture on the right shows what it may be like to remember/visualize an event through your own eyes.*

*(Photos: Timothy J Carroll/Flickr, https://i.ytimg.com/vi/b5z0jhdcgw4/maxresdefault.jp*

## Appendix D

## Visual Imagery Questionnaire for Study 1

**Please spend the next few minutes carefully thinking back** to a social event that occurred more than one month ago but less than 6 months ago. **Please take your time** and try your best to form a visual image of this memory. Once you have this image in mind, please answer the following questions. Please remember that there are no correct or incorrect answers.

Using the scale below, please rate how much your memory came as if you were seeing yourself in the scene (like an observer) versus as if it were seen through your own eyes. *

| 1 Entirely as an Observer | 2 | 3 | 4 | 5 | 6 | 7 Entirely through My Own Eyes |
|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Did you see this image from both perspectives? *

- ○ Yes
- ○ No

How vivid was your image? *

| 1 Not Vivid at all | 2 | 3 | 4 | 5 | 6 | 7 Extremely Vivid |
|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Please select the box below if you were unable to obtain a visual image of the event at all. Otherwise, move onto the next question.

- ○ No Image at all

Approximately when did this event occur? *

- ◯ 1 month ago
- ◯ 2 months ago
- ◯ 3 months ago
- ◯ 4 months ago
- ◯ 5 months ago
- ◯ 6 months ago

What emotion (if any) did you feel at the time? *

How strongly did you feel? *

| 1 Not strongly at all | 2 | 3 | 4 | 5 | 6 | 7 Extremely Strongly |
|---|---|---|---|---|---|---|
| ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

Please tell us how easy or how difficult it was for you to visualize your memory. *

## Appendix E

### Singelis Self-Construal Scale Instructions and Items

This is a questionnaire that measures a variety of feelings and behaviours in various situations. Listed below are a number of statements. Read each one as if it referred to you. Please select one response to show your agreement or disagreement using the scale below.

1=STRONGLY DISAGREE
2=DISAGREE
3=SOMEWHAT DISAGREE
4=DON'T AGREE OR DISAGREE
5=AGREE SOMEWHAT
6=AGREE
7=STRONGLY AGREE

1. I enjoy being unique and different from others in many respects.
2. I can talk openly with a person who I meet for the first time, even when this person is much older than I am.
3. Even when I strongly disagree with group members, I avoid an argument.
4. I have respect for the authority figures with whom I interact.
5. I do my own thing, regardless of what others think.
6. I respect people who are modest about themselves.
7. I feel it is important for me to act as an independent person.
8. I will sacrifice my self-interest for the benefit of the group I am in.
9. I'd rather say "No" directly, than risk being misunderstood.
10. Having a lively imagination is important to me.
11. I should take into consideration my parents' advice when making education/career plans.
12. I feel my fate is intertwined with the fate of those around me.
13. I prefer to be direct and forthright when dealing with people I've just met.
14. I feel good when I cooperate with others.
15. I am comfortable with being singled out for praise or rewards.
16. If my brother or sister fails, I feel responsible.
17. I often have the feeling that my relationships with others are more important than my own accomplishments.
18. Speaking up during a class (or a meeting) is not a problem for me.
19. I would offer my seat in a bus to my professor (or my boss).
20. I act the same way no matter who I am with.
21. My happiness depends on the happiness of those around me.
22. I value being in good health above everything.
23. I will stay in a group if they need me, even when I am not happy with the group.
24. I try to do what is best for me, regardless of how that might affect others.
25. Being able to take care of myself is a primary concern for me.
26. It is important to me to respect decisions made by the group.
27. My personal identity, independent of others, is very important to me.
28. It is important for me to maintain harmony within my group.
29. I act the same way at home that I do at school (or work).
30. I usually go along with what others want to do, even when I would rather do something different.

**Appendix F**

**Intercorrelations of Primary and Secondary Variables for Study 1**

| Variable | *n* | *M* | *SD* | 1 | 2 | *3* | *4* | *5* | *6* | *7* | *8* | *9* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Visual Imagery Perspective (VIP) | 92 | 4.35 | 1.83 | — | | | | | | | | |
| 2. SCS Independence | 92 | 4.94 | 0.67 | −.05 | — | | | | | | | |
| 3. SCS Interdependence | 92 | 4.49 | 0.75 | −.24* | −.25* | — | | | | | | |
| 4. Nationality[a] | 92 | 0.50 | 0.50 | .25* | −.15 | −.22* | — | | | | | |
| 5. Age | 92 | 22.65 | 3.51 | .20 | .11 | −.06 | −.01 | — | | | | |
| 6. Vividness | 92 | 4.95 | 1.29 | .20 | .16 | .03 | −.03 | .11 | — | | | |
| 7. Age of Memory (months) | 91 | 2.47 | 1.46 | −.05 | −.17 | −.09 | −.04 | −.22* | .04 | — | | |
| 8. Ease of Imagery[b] | 89 | 0.84 | 0.37 | −.12 | .09 | .16 | .18 | −.13 | .16 | −.00 | — | |
| 9. Strength of Emotionality | 92 | 4.77 | 1.36 | .04 | .23* | −.00 | .16 | .20 | .15 | .11 | .10 | — |

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. SCS = Singelis Self-Construal Scale.

[a] Trinidad and Tobago = 0, United Kingdom = 1. [b] More Hard = 0, More Easy = 1.

*$p < .05$.

**Appendix G**

**Participant Information Sheet for Study 2**

**Institution:** University of Reading, School of Psychology & Clinical Language Sciences,
Earley Gate, Reading RG6 6AL

**Title:** Cross-cultural Differences in Visual Imagery Perspective
**Supervisor:** Professor Judi Ellis j.a.ellis@reading.ac.uk 0118 378 6415
**Student Experimenter:** Analisa Wittet a.l.wittet@pgr.reading.ac.uk

We would be grateful if you could assist us by participating in our study that aims to explore the qualities and characteristics of imagery in recalling (past) events in one developed/Western (UK) and one developing (Caribbean) region in healthy young adult populations.

The study is being conducted online, using Alchemer. Below is the description of the study.

**This is a 3-Part Survey**

In **Part 1** we will be asking you to think about (visualize) a past event and to answer questions about this image/memory.

In **Part 2** we will be asking you to complete a questionnaire that measures a variety of feelings and behaviours in various situations.

In **Part 3** we will be asking you to complete statements about yourself.

Taking part in this study is completely voluntary; you may withdraw at any time without giving any reason. Your data will be kept confidential and securely stored. All information collected for the study will be destroyed after a period of 5 years from completion of the study.
Please contact a.l.wittet@pgr.reading.ac.uk should you have any questions or concerns about this study.

*This application has been reviewed by the University Ethics Committee and has been given a favourable ethical opinion for conduct*

## Appendix H

## Visual Imagery Questionnaire for Studies 2, 3, and 4

**Please answer the following questions about your memory.**

9. Using the scale below, please rate how much your memory came as if you were seeing yourself in the scene (like an observer) versus as if it were seen through your own eyes. *

| 1 Entirely as an Observer | 2 | 3 | 4 | 5 | 6 | 7 Entirely through My Own Eyes |
|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

10. Did you see this image from both perspectives? *

- ○ Yes
- ○ No

11. How vivid was your image? *

| 1 Not Vivid At All | 2 | 3 | 4 | 5 | 6 | 7 Extremely Vivid |
|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

12. Please select the box below if you were unable to obtain a visual image of the event at all. Otherwise, move onto the next question.

- ○ No Image At All

13. What emotion (if any) did you feel at the time? *

[ ]

14. How strongly did you feel? *

| 1 Not Strongly At All | 2 | 3 | 4 | 5 | 6 | 7 Extremely Strongly |
|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

15. How often you have thought and/or talked about the memory before?
*

| 1 Never | 2 Very Rarely | 3 Rarely | 4 Occasionally | 5 Frequently | 6 Very Frequently |
|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ |

16. Approximately how old were you when this event occurred?
*

17. Please tell us how easy or how difficult it was for you to visualize your memory.
*

| 1 Very Easy | 2 Easy | 3 Neutral | 4 Difficult | 5 Very Difficult |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

**Appendix I**

**Twenty Statements Test**

There are twenty numbered blanks on the page below.

Please write twenty answers to the simple question 'Who am I? 'in the blanks.
Just give twenty different answers to this question.

Answer as if you were giving the answers to yourself, not to somebody else.

Write the answers in the order that they occur to you. Don't worry about logic or importance.

**I am...**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

## Appendix J

## Intercorrelations of Primary and Secondary Variables for Study 2

**Table J1**

*Intercorrelations of Primary and Secondary Study Variables for the Childhood Memory*

| Variable | *n* | *M* | *SD* | 1 | 2 | *3* | *4* | *5* | *6* | *7* | *8* | *9* | *10* | *11* | *12* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Visual Imagery Perspective (VIP) | 127 | 3.85 | 2.19 | — | | | | | | | | | | | |
| 2. SCS Independence | 127 | 4.81 | 0.76 | .16 | — | | | | | | | | | | |
| 3. SCS Interdependence | 127 | 4.69 | 0.64 | −.04 | .11 | — | | | | | | | | | |
| 4. TST Independence Proportion | 125 | 0.79 | 0.20 | .24** | .32*** | .07 | — | | | | | | | | |
| 5. Nationality[a] | 127 | 0.54 | 0.50 | −.02 | −.30*** | −.04 | −.12 | — | | | | | | | |
| 6. Participant Age | 127 | 22.07 | 3.62 | .08 | .25** | −.05 | .12 | −.27** | — | | | | | | |
| 7. Vividness | 127 | 5.16 | 1.32 | .14 | .19* | .09 | .11 | −.25** | .20* | — | | | | | |
| 8. Ease of Imagery | 127 | 2.09 | 0.92 | −.22* | −.12 | −.10 | −.12 | −.17 | −.26** | −.62*** | — | | | | |
| 9. Strength of Emotionality | 127 | 5.37 | 1.25 | .07 | .12 | .06 | .08 | .05 | −.02 | .32*** | −.50*** | — | | | |
| 10. Rehearsal | 127 | 3.27 | 1.06 | .07 | .07 | .16 | −.12 | .01 | .10 | .12 | −.15 | .32*** | — | | |
| 11. Memory Focus[b] | 126 | 0.25 | 0.44 | .12 | .00 | −.01 | .12 | −.07 | −.09 | −.06 | .08 | −.08 | .08 | — | |
| 12. Memory Specificity[c] | 126 | 0.83 | 0.37 | −.10 | −.10 | −.02 | −.14 | .10 | −.21* | .05 | −.02 | .13 | −.01 | −.03 | — |

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Higher numbers for Ease of Imagery indicate greater difficulty visualizing the memory. SCS = Singelis Self-Construal Scale; TST = Twenty Statements Test.

[a] Trinidad and Tobago = 0, United Kingdom = 1. [b] Social = 0, Individual = 1. [c] General = 0, Specific = 1.

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

**Table J2**

*Intercorrelations of Primary and Secondary Study Variables for the Adolescent Memory*

| Variable | *n* | *M* | *SD* | 1 | 2 | *3* | *4* | *5* | *6* | *7* | *8* | *9* | *10* | *11* | *12* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Visual Imagery Perspective (VIP) | 127 | 4.31 | 2.02 | — | | | | | | | | | | | |
| 2. SCS Independence | 127 | 4.81 | 0.76 | .07 | — | | | | | | | | | | |
| 3. SCS Interdependence | 127 | 4.69 | 0.64 | .18* | .11 | — | | | | | | | | | |
| 4. TST Independence Proportion | 125 | 0.79 | 0.20 | .13 | .32*** | .07 | — | | | | | | | | |
| 5. Nationality[a] | 127 | 0.54 | 0.50 | .02 | −.30*** | −.04 | −.12 | — | | | | | | | |
| 6. Participant Age | 127 | 22.07 | 3.62 | .11 | .25** | −.05 | .12 | −.27** | — | | | | | | |
| 7. Vividness | 127 | 5.26 | 1.47 | .22* | .21* | .09 | .24** | −.12 | .14 | — | | | | | |
| 8. Ease of Imagery | 127 | 2.20 | 0.92 | −.17 | −.05 | .03 | −.08 | −.08 | −.11 | −.61*** | — | | | | |
| 9. Strength of Emotionality | 127 | 5.35 | 1.31 | .21* | .14 | .06 | .22* | .09 | −.03 | .53*** | −.44*** | — | | | |
| 10. Rehearsal | 127 | 3.14 | 1.30 | .10 | −.11 | .21* | −.11 | .21* | −.05 | .10 | −.30*** | .21* | — | | |
| 11. Memory Focus[b] | 125 | 0.24 | 0.43 | .16 | −.03 | −.08 | .10 | −.04 | −.08 | −.04 | −.11 | −.02 | .06 | — | |
| 12. Memory Specificity[c] | 125 | 0.94 | 0.25 | .02 | −.21* | .02 | −.14 | .15 | −.17 | .02 | .00 | .10 | −.12 | −.08 | — |

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Higher numbers for Ease of Imagery indicate greater difficulty visualizing the memory. SCS = Singelis Self-Construal Scale; TST = Twenty Statements Test.

[a] Trinidad and Tobago = 0, United Kingdom = 1. [b] Social = 0, Individual = 1. [c] General = 0, Specific = 1.

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

**Table J3**

*Intercorrelations of Primary and Secondary Study Variables for the Adulthood Memory*

| Variable | *n* | *M* | *SD* | 1 | 2 | *3* | *4* | *5* | *6* | *7* | *8* | *9* | *10* | *11* | *12* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Visual Imagery Perspective (VIP) | 127 | 4.94 | 2.12 | — | | | | | | | | | | | |
| 2. SCS Independence | 127 | 4.81 | 0.76 | .07 | — | | | | | | | | | | |
| 3. SCS Interdependence | 127 | 4.69 | 0.64 | .08 | .11 | — | | | | | | | | | |
| 4. TST Independence Proportion | 125 | 0.79 | 0.20 | −.04 | .32*** | .07 | — | | | | | | | | |
| 5. Nationality[a] | 127 | 0.54 | 0.50 | −.04 | −.30*** | −.04 | −.12 | — | | | | | | | |
| 6. Participant Age | 127 | 22.07 | 3.62 | −.14 | .25** | −.05 | .12 | −.27** | — | | | | | | |
| 7. Vividness | 127 | 6.09 | 1.26 | .31*** | .07 | −.02 | .03 | −.05 | −.12 | — | | | | | |
| 8. Ease of Imagery | 127 | 1.58 | 0.88 | −.23** | −.07 | .14 | −.08 | −.05 | .03 | −.56*** | — | | | | |
| 9. Strength of Emotionality | 127 | 6.08 | 1.14 | .25** | .06 | .03 | .02 | −.14 | .01 | .54*** | −.44*** | — | | | |
| 10. Rehearsal | 127 | 4.06 | 1.35 | .07 | .15 | .08 | .10 | .07 | .01 | .21* | −.26** | .25** | — | | |
| 11. Memory Focus[b] | 126 | 0.30 | 0.46 | .12 | .10 | −.08 | .13 | −.08 | .05 | −.04 | −.04 | .01 | .09 | — | |
| 12. Memory Specificity[c] | 126 | 0.96 | 0.20 | .01 | −.26** | −.03 | −.20* | .14 | −.15 | .08 | .02 | −.02 | −.16 | −.22* | — |

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Higher numbers for Ease of Imagery indicate greater difficulty visualizing the memory. SCS = Singelis Self-Construal Scale; TST = Twenty Statements Test.

[a] Trinidad and Tobago = 0, United Kingdom = 1. [b] Social = 0, Individual = 1. [c] General = 0, Specific = 1.

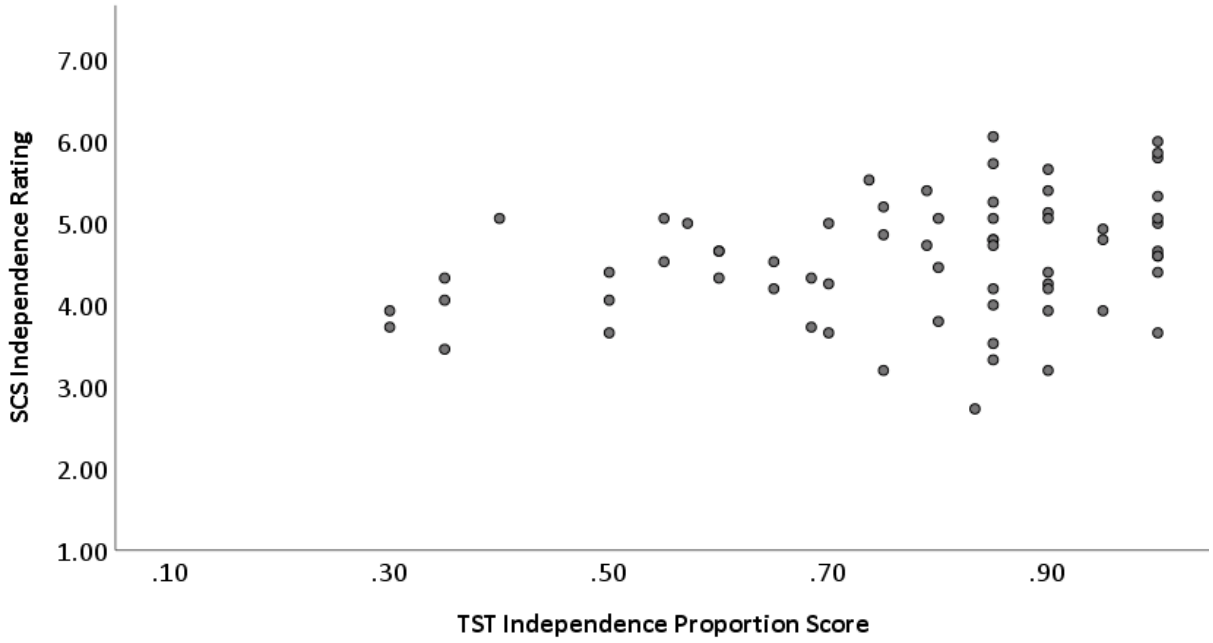
*$p < .05$. **$p < .01$. ***$p < .001$

## Appendix K

### Association Between TST Scores and SCS Interdependence Ratings for Study 2

**Figure K1**

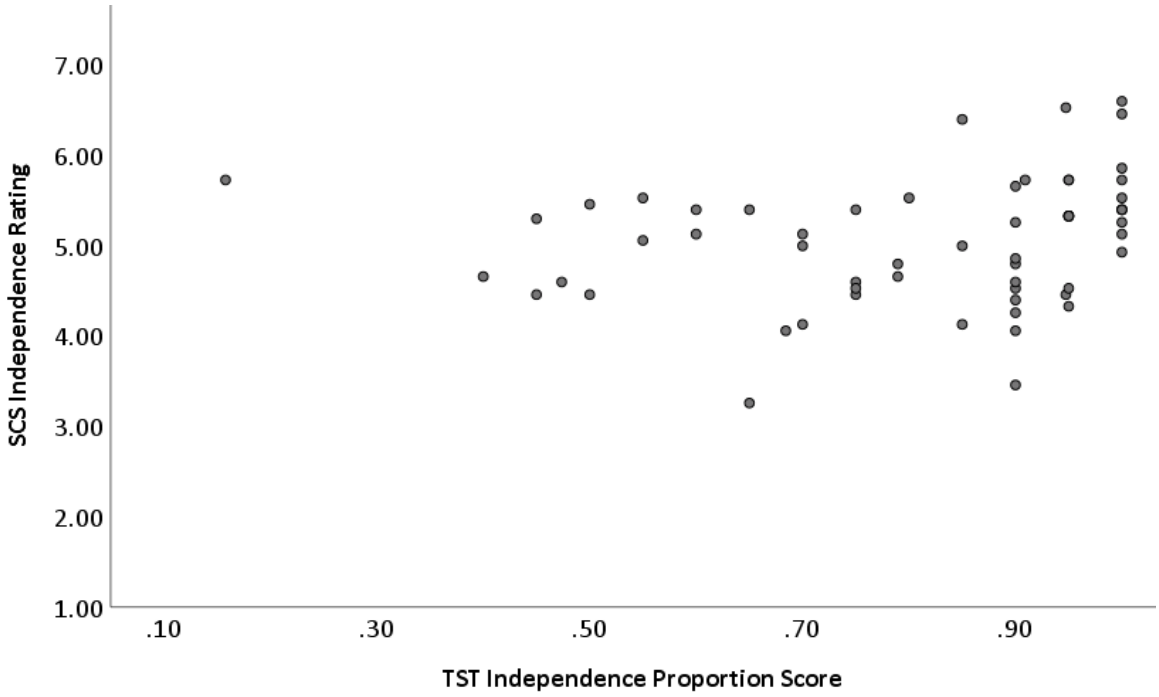
*Association Between TST Independence Proportion Scores and SCS Interdependence Ratings Within the UK Sample*




*Note.* SCS = Singelis Self-Construal Scale. TST = Twenty Statements Test.

**Figure K2**

*Association Between TST Independence Proportion Scores and SCS Interdependence Ratings Within the Caribbean Sample*




*Note.* SCS = Singelis Self-Construal Scale. TST = Twenty Statements Test.

**Appendix L**

**Participant Information Sheet for Study 3**

Title: Cross-cultural Differences in Visual Imagery Perspective Supervisor: Professor Judi Ellis j.a.ellis@reading.ac.uk 0118 378 6415_University of Reading, School of Psychology & Clinical Language Sciences,Earley Gate, Reading RG6 6AL Student Experimenter: Analisa Wittet a.l.wittet@pgr.reading.ac.uk

We would be grateful if you could assist us by participating in our study that aims to explore the qualities and characteristics of imagery in recalling (past) events in one developed/western (UK) and one developing (Caribbean) region in healthy young adult populations.

**Here is a description of the study**

**This is a 3 Part Survey**

In **Part 1** we will be asking you to write 10 statements.

In **Part 2** we will be asking you to think about (visualize) past events and to answer questions about these images/memories.

In **Part 3** we will be asking you to complete a questionnaire that measures a variety of feelings and behaviours in various situations.

Taking part in this study is completely voluntary; you may withdraw at any time without giving any reason. Your data will be kept confidential and securely stored. All information collected for the study will be destroyed after a period of 5 years from completion of the study. Please contact a.l.wittet@pgr.reading.ac.uk should you have any questions or concerns about this study.

This application has been reviewed by the University Ethics Committee and has been given a favourable ethical opinion for conduct

**Appendix M**

**Participant Information Sheet for Study 4**

Title: Cross-cultural Differences in Visual Imagery Perspective Supervisor: Professor Judi Ellis j.a.ellis@reading.ac.uk 0118 378 6415_University of Reading, School of Psychology & Clinical Language Sciences,Earley Gate, Reading RG6 6AL Student Experimenter: Analisa Wittet a.l.wittet@pgr.reading.ac.uk

We would be grateful if you could assist us by participating in our study that aims to explore the qualities and characteristics of imagery in recalling (past) events in different countries in healthy young adult populations.

**Here is a description of the study**

**This is a 3 Part Study**

In **Part 1** we will ask you to think about (visualize) a past event and answer questions about this image/memory.

In **Part 2** we will ask you to think about (visualize) another past event and answer questions about this image/memory.

In **Part 3** we will ask you to answer questions about yourself.

Taking part in this study is completely voluntary; you may withdraw at any time without giving any reason. Your data will be kept confidential and securely stored. All information collected for the study will be destroyed after a period of 5 years from completion of the study. Please contact a.l.wittet@pgr.reading.ac.uk should you have any questions or concerns about this study.

This application has been reviewed by the University Ethics Committee and has been given a favourable ethical opinion for conduct

## Appendix N

### Culture and Identity Research Network Self Construal Scale Version 3 Instructions and Items

*Below are some statements that someone might use to try to describe you. Probably some of the statements will not describe you well, whereas others will describe you better. Please circle a number beside each statement to show how well it describes you. For example, if the statement doesn't describe you at all, then circle 1. If the statement describes you very well, then circle 4. If you are undecided between two possible answers, you can circle the number in between (1½, 2½, 3½, 4½).*

**How well does each statement describe you?**

| **doesn't describe me at all** | | **describes me a little** | | **describes me moderately** | | **describes me very well** | | **describes me exactly** |
|---|---|---|---|---|---|---|---|---|
| **1** | 1½ | **2** | 2½ | **3** | 3½ | **4** | 4½ | **5** |

| | | |
|---|---|---|
| 1 | You like being similar to other people. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 2 | If someone in your family achieves something, you feel proud as if you had achieved something yourself. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 3 | You always make your own decisions about important matters, even if others might not approve of what you decide. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 4 | You show your true feelings even if it disturbs the harmony in your family relationships. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 5 | You see yourself the same way even in different social environments. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 6 | Your happiness is independent from the happiness of your family. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 7 | You usually ask your family for approval before making a decision. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 8 | Someone could understand who you are without needing to know about your social standing. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 9 | You tend to rely on yourself rather than seeking help from others. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |

| | | |
|---|---|---|
| 10 | You prefer to preserve harmony in your relationships, even if this means not expressing your true feelings. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 11 | You usually give priority to your personal goals, before thinking about the goals of others. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 12 | If someone wants to understand who you are, they would need to know about the place where you live. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 13 | You would not feel personally insulted if someone insulted a member of your family. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 14 | In difficult situations, you tend to seek help from others rather than relying only on yourself. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 15 | You behave in a similar way at home and in public. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 16 | Someone could understand who you are without needing to know about your place of origin. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 17 | You like being different from other people. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 18 | If someone insults a member of your family, you feel as if you have been insulted personally. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 19 | You usually follow others' advice when making important choices. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 20 | You try to adapt to people around you, even if it means hiding your feelings. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 21 | Your own success is very important to you, even if it disrupts your friendships. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 22 | You act very differently at home compared to how you act in public. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 23 | If someone wants to understand who you are, they would need to know which social groups you belong to. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 24 | You see yourself as similar to others. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 25 | You value good relations with the people close to you more than your personal achievements. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 26 | You see yourself as unique and different from others. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 27 | If a close friend or family member is sad, you feel the sadness as if it were your own. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |

| | | |
|---|---|---|
| 28 | You decide for yourself what goals to pursue even if they are very different from what your family would expect. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 29 | Being able to depend on others is very important to you. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 30 | You protect your own interests, even if it might sometimes disrupt your family relationships. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 31 | You behave in the same way even when you are with different people. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 32 | You would rather be the same as others than be different. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 33 | You usually do what people expect of you, rather than decide for yourself what to do. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 34 | You prefer to rely completely on yourself rather than depend on others. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 35 | You prefer to express your thoughts and feelings openly, even if it may sometimes cause conflict. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 36 | You usually give priority to others, before yourself. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 37 | You behave differently when you are with different people. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 38 | If someone wants to understand who you are, they would need to know about your place of origin. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 39 | You try to avoid being the same as others. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 40 | If a close friend or family member is happy, you feel the happiness as if it were your own. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 41 | You usually decide on your own actions, rather than follow others' expectations. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 42 | Someone could understand who you are without needing to know which social groups you belong to. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 43 | You prefer to ask other people for help rather than rely only on yourself. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 44 | You try not to express disagreement with members of your family. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 45 | You try to avoid being reliant on others. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |

| | | |
|---|---|---|
| 46 | You like to discuss your own ideas, even if it might sometimes upset the people around you. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 47 | You would sacrifice your personal interests for the benefit of your family. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |
| 48 | You see yourself differently when you are with different people. | **1** 1½ **2** 2½ **3** 3½ **4** 4½ **5** |

## Appendix O

## Intercorrelations of Primary and Secondary Variables for Study 4

**Table O1**

*Intercorrelations of Primary and Secondary Study Variables for the COA Memory*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Visual Imagery Perspective (VIP) | — | | | | | | | | | | | | | | | |
| 2. Self-reliance | .09 | — | | | | | | | | | | | | | | |
| 3. Self-containment | .07 | −.07 | — | | | | | | | | | | | | | |
| 4. Difference | −.18 | .35*** | −.13 | — | | | | | | | | | | | | |
| 5. Self-interest | .22* | .34*** | .31** | .13 | — | | | | | | | | | | | |
| 6. Consistency | .10 | .09 | −.04 | −.10 | .05 | — | | | | | | | | | | |
| 7. Self-direction | .14 | .54*** | .03 | .31** | .39*** | .21* | — | | | | | | | | | |
| 8. Self-expression | .07 | −.19 | .15 | .30** | .33** | .36*** | .52*** | — | | | | | | | | |
| 9. Decontextualized | .10 | .11 | −.13 | .14 | −.09 | .23* | .01 | −.04 | — | | | | | | | |
| 10. Nationality[a] | .09 | .19 | −.09 | .07 | .19 | .04 | .11 | −.08 | .28** | — | | | | | | |
| 11. Participant Age | −.02 | .12 | .03 | .03 | −.11 | .06 | .09 | .02 | .08 | −.18 | — | | | | | |
| 12. Age at Memory | .10 | .05 | −.00 | −.06 | −.10 | .07 | .14 | −.01 | .18 | −.02 | .40*** | — | | | | |
| 13. Vividness | .29** | −.03 | −.06 | −.00 | .10 | .10 | .03 | −.02 | .16 | .08 | −.10 | .23* | — | | | |
| 14. Ease of Imagery | −.10 | .04 | .04 | −.04 | .07 | −.04 | −.00 | .00 | −.04 | −.18 | .01 | −.16 | −.51*** | — | | |
| 15. Strength of Emotionality | .02 | −.16 | −.21* | −.23* | −.03 | .01 | −.04 | .05 | −.01 | −.00 | .18 | .10 | .19 | −.17 | — | |
| 16. Rehearsal | .06 | −.20* | −.18 | −.10 | −.12 | .01 | .02 | −.13 | −.14 | .02 | .12 | .09 | .29** | −.19 | .32** | — |

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Higher numbers for Ease of Imagery indicate greater difficulty visualizing the memory. *N* = 101 for the total sample.

[a] Trinidad and Tobago = 0, United Kingdom = 1.

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

**Table O2**

*Intercorrelations of Primary and Secondary Study Variables for the NCOA Memory*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Visual Imagery Perspective (VIP) | — | | | | | | | | | | | | | | | |
| 2. Self-reliance | −.02 | — | | | | | | | | | | | | | | |
| 3. Self-containment | −.05 | −.07 | — | | | | | | | | | | | | | |
| 4. Difference | −.15 | .35*** | −.13 | — | | | | | | | | | | | | |
| 5. Self-interest | .02 | .34*** | .31** | .13 | — | | | | | | | | | | | |
| 6. Consistency | −.06 | .09 | −.04 | −.10 | .05 | — | | | | | | | | | | |
| 7. Self-direction | .02 | .54*** | .03 | .31** | .39*** | .21* | — | | | | | | | | | |
| 8. Self-expression | −.09 | −.19 | .15 | .30** | .33** | .36*** | .52*** | — | | | | | | | | |
| 9. Decontextualized | −.05 | .11 | −.13 | .14 | −.09 | .23* | .01 | −.04 | — | | | | | | | |
| 10. Nationality[a] | .14 | .19 | −.09 | .07 | .19 | .04 | .11 | −.08 | .28** | — | | | | | | |
| 11. Participant Age | −.03 | −.18 | .03 | .03 | −.11 | .06 | .09 | .02 | .08 | −.18 | — | | | | | |
| 12. Age at Memory | .10 | .05 | −.02 | −.09 | .02 | .20* | .05 | .06 | .07 | −.00 | .34*** | — | | | | |
| 13. Vividness | .27** | −.21* | −.07 | −.05 | .11 | −.09 | −.13 | −.03 | −.05 | −.13 | −.06 | .26* | — | | | |
| 14. Ease of Imagery | −.12 | .13 | .02 | −.05 | −.09 | −.03 | .01 | .10 | −.16 | .04 | .07 | −.34*** | −.53*** | — | | |
| 15. Strength of Emotionality | .10 | −.16 | .07 | −.09 | .05 | .24* | .05 | −.06 | .14 | −.08 | .14 | −.04 | .28** | −.23* | — | |
| 16. Rehearsal | .12 | −.06 | −.08 | −.09 | .09 | .10 | .12 | −.10 | −.09 | −.18 | .05 | .06 | .20 | −.22* | .35*** | — |

*Note.* Higher numbers for Visual Imagery Perspective indicate more Field perspective ratings. Higher numbers for Ease of Imagery indicate greater difficulty visualizing the memory. $N$ = 101 for the total sample.

[a] Trinidad and Tobago = 0, United Kingdom = 1.

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