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# UNIQUELY U: THE EFFECTS OF TERTIARY EDUCATION DISCIPLINES ON THE DEVELOPMENT OF DUAL SELF-CONSTRUALS AND ITS IMPACT ON CONFLICT MANAGEMENT TENDENCIES

#### $\mathbf{BY}$

# CHOO WAN YEE

# SINGAPORE MANAGEMENT UNIVERSITY MASTER'S THESIS

2019

Uniquely U: The effects of Tertiary Education Disciplines on the Development of Dual Self-Construals and its impact on Conflict Management Tendencies

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Submitted to Singapore Management University in partial fulfilment of the requirements for the Degree of Master of Philosophy in Psychology

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I hereby declare that this Master's thesis is my original work and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in this thesis.

This Master's thesis has also not been submitted for any degree in any university previously.



Choo Wan Yee

13 June 2019

#### **Abstract**

While the effects of self-construal on one's conflict management tendencies are well-documented, the effects of dual self-construals on conflict management tendencies are under-explored. In present paper, two studies were conducted to explore how tertiary education disciplines could influence the development of dual self-construals among Singaporeans which, in turn, determine their conflict management tendencies, as well as, how context influences the switch of different self-construals and conflict management styles. Our findings revealed that individuals from business disciplines displayed greater competitive conflict management tendencies than their peers from social science disciplines and this relationship is mediated by their endorsement of independent self-construal. These findings reiterate the implications of self-construal on conflict management tendencies. Specifically, within societies like Singapore, individual differences in the development of dual self-construals is associated with one's tertiary education disciplines. This then influences conflict management tendencies across individuals with different educational background, yielding significant theoretical and practical implications

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for me so unconditionally.

#### Introduction

The concept of self-construal was developed to account for cross-cultural variations in psychological outcomes and it points to how culture can influence our definitions of the self in relation to our social world. According to Markus and Kitayama (1991), there are two types of self-construal, namely the independent and interdependent self-construal. Self-construal patterns are argued to vary across cultures where the independent self-construal dominates in Western societies while the interdependent self-construal dominates in most non-Western societies. The variations in self-construal patterns then account for the differences across many observed behaviours.

Given that humans are social creatures, social interactions are therefore regarded as fundamental for one's well-being. Yet, interacting with others can be challenging especially when there are disagreements and conflicts. While conflicts are inevitable, with proper resolution and management, we can ameliorate its effects and benefit from these conflicts. To this end, research has delved into conflict management behaviours and highlighted how self-construal serve as a predictor of one's conflict management tendencies (e.g., Oetzel, 1998; Ting-Toomey, 1997; Ting-Toomey, Oetzel, & Yee-Jung, 2001; Utz, 2004). However, the relationship between self-construal and conflict management tendencies has become an increasingly complex one due to the rise of dual self-construals.

As a result of increasing globalisation and modernisation processes, self-construal patterns can no longer be succinctly categorized as strictly independent or interdependent.

Instead, because of the influx of information and media from various cultures, individuals are often exposed to a host of cultural influences that would unarguably impact on one's sense of self. Specifically, many Asian societies experienced rapid modernisation and development over the short span of a few decades and such progresses are accompanied by increased exposure to individualistic values and practices. As such, the coexistence of both

collectivistic and individualistic influences within a single society also lead us to question how would that influence one's self-construal patterns and subsequently, important behavioural outcomes like conflict management tendencies.

While past research highlighted that processes like modernisation may facilitate the development of dual self-construals in collectivistic societies (Cheng, Jose, Kennon, & Sheldon, 2011), no studies have yet examined the specific contextual factors that are involved in this developmental process. In present paper, we investigate the effects of tertiary education disciplines on the development of dual self-construals within Singapore. First, we posit that Singapore serves as an ideal location to examine the acquisition of dual selfconstruals as it represents a modernising Asian society marked with the coexistence of both collectivistic and individualistic cultural influences. Next, we proceed to argue that tertiary education disciplines would play a critical role in the developmental process of dual selfconstruals for Singaporeans. This is so as the disciplinary cultures within different tertiary education disciplines may facilitate the acquisition of the independent self-construal to varying extent. Importantly, this also emphasizes the possible nuances in the acquisition of dual self-construals among Singaporeans with different tertiary education background and experiences. Because of such variations in the developmental process of dual self-construals among Singaporeans, it then accounts for the observed individual differences in one's conflict management tendencies.

In summary, our paper attempts to, first, highlight the role of tertiary education disciplines in facilitating the development of dual self-construals within Singapore, which would shed light on individual differences in self-construal patterns among Singaporeans.

Next, since self-construal is argued to impact one's conflict management tendencies, we proceed to explore how individual differences in the development of dual self-construals could then determine an individual's approach towards conflict. For those who are currently

pursuing a university degree, many would presumably take on important leadership roles within our society and thus, the knowledge of how they would communicate and manage conflicts across different situations will be extremely meaningful and crucial. To this end, current paper will also investigate the effects of conflict settings on individuals' conflict management tendencies. More precisely, we propose that the extent to which one endorses dual self-construals could, in turn, explain how they choose to manage conflicts across professional and social settings.

#### **Self-Construal**

Self-construal, a term first coined by Markus and Kitayama (1991), refers to how an individual defines the self with respect to their social relationships. Prior to cross-cultural research on the self, psychologists had long assumed that the self was only perceived as an autonomous and individualized unit, that is distinct and separate from others around them (Geertz, 1975). However, findings from cross-cultural research (e.g., Fiske, Kitayama, Markus, & Nisbett, 1998; Markus & Kitayama, 1991; Shweder & Bourne, 1982; Triandis, 1989) yielded evidence of significant differences between cultures that prompted further examination of the relationship between culture and the self. To consolidate the findings from cross-cultural research, Markus and Kitayama (1991) proposed the construct of self-construal and identified two main types of self-construal, namely the independent and interdependent self-construal.

The independent self-construal can be defined as the view of the self as a single, individualized entity that is separate from others (Markus & Kitayama, 1991). When thinking about the self, individuals with well-developed independent self-construal are likely to reflect on their own abilities, traits, and attributes (Markus & Kitayama, 1991; Singelis, 1994). They are motivated to set themselves apart from others by highlighting their own uniqueness

(Cross & Madson, 1997), and are generally more concerned with individual advancement, prioritizing personal goals over groups' goals (Markus & Kitayama, 1991).

The independent self-construal tends to dominate in Western societies as the presence of the individualistic culture nurtures individuals to construe the self as a distinct and independent entity. For instance, an individualistic culture emphasizes the values of autonomy and independence (Triandis, 2001) and the cultural norms encourage one to realize their own potential and express their unique traits and abilities (Johnson, 1985; Marsella et al., 1985; Miller, 1988; Shweder & Bourne, 1984). Exposure to such a culture would require individuals to construe the self as an independent unit that is detached from others (Hofstede, 1980), prompting the development of a stronger independent self-construal in the West.

On the other hand, the interdependent self-construal is conceptualized as the view of the self as being interconnected with others around them (Markus & Kitayama, 1991). When thinking of the self, individuals with a well-developed interdependent self-construal are likely to reflect on their relationships and roles. Many important psychological outcomes are contingent on others and their relationships (e.g., Iyengar & Lepper, 1999; Kim & Markus, 1999; Markus & Kitayama, 1991). For the interdependent selves, they aim to fit in with their social environment, are constantly adjusting their behaviors according to the social contexts and tend to prioritize group goals over individual's desires (Cross & Madson, 1997).

The interdependent self-construal tends to dominate in non-Western societies where the collectivistic culture guides one to perceive others as an essential component of the self. A collectivistic culture emphasizes the importance of interconnectedness between the self and others (Hofstede, 1980; Triandis, 1983) where individuals are expected to prioritize communal goals over personal advancement and to preserve the harmony in relationships. (Cross & Madson, 1997; De Vos, 1985; Miller, 1988; Markus & Kitayama, 1991). Thus, the

expectations and norms found in a collectivistic culture would promote the development of a stronger interdependent self-construal in non-Western societies.

#### **Implications of Self-Construal**

One reason why self-construal received so much attention over the last two decades lies in its potentiality in explaining variations across important psychological outcomes. In their paper, Markus and Kitayama (1991) proposed several arguments regarding how self-construals may exert an influence over one's thoughts, emotions, and motivations. Since then, a surge of research into self-construal has provided many empirical evidence which lent further support for their proposal.

For instance, self-construal has been found to influence one's endorsement of values and societal views (Gardner, Gabriel, & Lee, 1999). Gardner et al. (1999) found that independent self-construal was associated with an endorsement of individualistic goals and the perception of having a lower obligation towards others while the opposite was true for the interdependent self-construal. Studies also found distinct self-construal differences relating to information processing (Kühnen, Hannover, & Schubert, 2001) and social judgment (Hannover, Kühnen, & Birkner, 2000). Importantly, self-construal may also explain crucial psychological outcomes like one's self-esteem, subjective well-being, and life satisfaction. To illustrate, Singelis, Bond, and Sharkey (1999) found that a higher level of independent self-construal and a lower level of interdependent self-construal predicts greater self-esteem. In a study exploring one's subjective well-being, Cheng et al. (2011) suggested that it may be largely dependent on one's self-construal. For example, individuals with a high level of independent self-construal tend to derive their sense of satisfaction by achieving their selforiented goals whereas the interdependent self-construal emphasizes on maintenance of harmonious interpersonal relations. Lastly, self-construal has also been found to impact one's life satisfaction. Individuals who perceive the self in interdependent terms are more likely to

evaluate their life satisfaction based on their social environment compared to those who viewed the self in a more idiocentric manner (Suh, Diener, & Updegraff, 2008). In sum, these findings form a strong argument regarding the importance of self-construal in our understanding of crucial psychological outcomes.

The effects of self-construal extend beyond intrapersonal processes as it also shapes important interpersonal behaviours. For instance, self-construal has been found to predict differences in one's communication preferences (e.g., Gudykunst, Matsumoto, Ting-Toomey, Nishida, Kim, & Heyman, 1996; Kapoor, Hughes, Baldwin & Blue, 2003; Kim & Sherman, 2007; Oetzel & Ting-Toomey, 2003; Utz, 2004). Kapoor et al. (2003) found that interdependent self-construal prefers high-context communication while independent self-construal prefers direct low-context forms of communication. In a series of studies conducted by Kim & Sharkey (1995), findings from studies illustrated distinct patterns relating to one's self-construal and their communication preferences. For instance, individuals who endorse a dominant independent self-construal prioritizes clarity in communication processes whereas those who endorse a dominant interdependent self-construal is primarily concerned with protecting others' feelings.

In relation to a key aspect of interpersonal behaviour which is one's approach towards interpersonal conflict, researchers also established that there are consistent self-construal differences in conflict management (e.g., Oetzel & Ting-Toomey, 2003; Oetzel, 1998; Utz, 2004). Individuals who are higher on interdependent self-construals are thought to be generally more cooperative than those with a higher independent self-construal and tend to place more emphasis on preserving the other party's image (Oetzel & Ting-Toomey, 2003). Taken together, how one construes the self in relation to others would unarguably impact the way they choose to interact and approach others in interpersonal situations. Their behaviours in such interpersonal settings could then translate to the outcomes of the interaction.

#### **Managing Conflicts**

Conflicts are considered part and parcel of most interpersonal relationships. Conflicts can occur across different types of relationships, for instance, one could disagree with their partners, with their colleagues at work, or with their close group of friends. Without proper management of conflicts, the outcomes of a conflict can incur both emotional and financial costs. While conflicts are often unavoidable, the knowledge of how to better handle conflicts in a more strategic manner will allow parties involved to better direct the outcomes of the conflicts.

A conflict can be defined as a process in which one perceives that their own interests are being opposed by another party (Dohohue & Kolt, 1992; Fink, 1986; Pruitt & Rubin, 1986; Putnam & Poole, 1987; Rahim, 1983; Rahim & Magner, 1995). It can be further classified as either intrapersonal conflict or interpersonal conflicts (Deutsch, 1990). When one faces intrapersonal conflict, it can be a person-role, inter-sender, or inter-role conflict (Kahn, Wolfe, Quinn, Snoek & Rosenthal, 1964). Interpersonal conflict, on the other hand, refers to conflict between an individual with another individual or with another group of people (e.g., interorganisational conflict, wars between nations). Present paper will only address interpersonal conflict where one faces disagreement or opposition from another party.

Over the past few decades, extensive research into conflict management has attempted to conceptualize individual's behaviours when resolving conflict (e.g., Deutsch, 1973, 1980, 1990, 1994; Blake & Mouton, 1964; Lawrence & Lorsch, 1967; Hall, 1969; Kilmann & Thomas, 1977; Putnam & Wilson, 1982; Rahim, 1983; Renwick, 1975a; Riggs, 1983; Ross & DeWine, 1982). Conflict management style can be defined as one's general tendencies or responses towards a conflict (Putnam & Poole, 1987; Stemberg & Dobson, 1987; Ting-Toomey, 1997). One of the most prominent theories that have been developed to

understand conflict resolution would be Deutsch's (1949) theory on cooperation and competition. In a review of over 500 studies, Johnson and Johnson (1989) found strong empirical support for Deutsch's (1949) theory which posits that how an individual perceives their goals in a conflict could explain important outcomes like feelings of frustration, disappointments and their general approach towards the conflict (Deutsch, 1973; 1980).

Generally, cooperative tendencies in a conflict can be characterized by behaviours like the active engagement in negotiation with the other party, a willingness to compromise, and mediation to conflict resolution (Leung, 1997). Individuals who display cooperative tendencies tend to take into consideration the needs and interests of the other party that is involved in the conflict and attempt to satisfy them.

On the other hand, competitive tendencies in a conflict usually include a reluctance to compromise or negotiate with the other party, and an insistent on pursuing individual's goals and a strong desire to 'win at any cost' (Loewenstein, 1998; Rubin, Pruitt, & Kim, 1994). For individuals who display competitive behaviours, they are mainly keen on satisfying their own needs while forgoing the interests of the other party.

Although Deutsch (1973, 1980, 1990, 1994) proposed a concise model to categorize conflict behaviours as either cooperative or competitive, many researchers later identified specific patterns of conflict management styles that incorporated both competitive and cooperative elements. For instance, Rahim (1983) identified five types of conflict management styles that emerged from two basic dimensions of concern for the self and concern for the others (Rahim & Bonoma, 1979). Concern for the self measures the degree (high or low) to which an individual is motivated to satisfy their own needs and concerns while concern for others measures the degree (high or low) to which an individual is motivated to fulfil or satisfy the concerns of the other person. Studies by Ruble and Thomas (1976) and Van de Vliert and Kabanoff (1990) yielded support for these dimensions.

The five conflict management styles (see Figure 1), represent different individual tendencies towards dealing with conflicts that arise from a combination of the two dimensions. Avoiding style (low level of concern for self and others) is often associated with withdrawal while obliging style (low level of concern for self and high level of concern for others) is associated with satisfying the concerns of the other party at the expense of individual's needs. Individuals with a dominating style (high level of concern for self and low level of concern for others) look to win their own position and ignore the needs or concerns of the other party. On the other hand, individuals with integrating style (high level of concern for self and others) tend to be very open in discussions, exchanging information and attempting to resolve the problem with an effective solution that satisfies both parties' needs. Finally, for someone with a comprising style (intermediate in concern for self and others), they are likely to give-and-take to achieve a mutually acceptable decision.

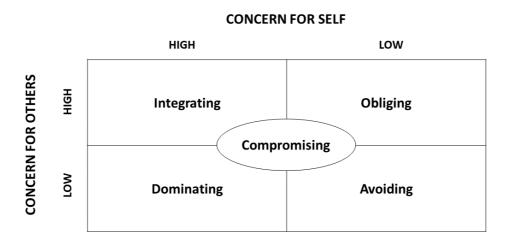


Figure 1.

Self-Construal and Conflict Management

Research on self-construal and communication revealed that self-construal can predict one's conflict management style (e.g., Oetzel, 1998; Ting-Toomey, 1997; Ting-Toomey et al., 2001; Utz, 2004). Findings from some studies also revealed that self-construal served as a

better predictor for one's conflict behaviours compared to demographic variables like one's ethnicity or gender (Gudykunst et al., 1996; Kim et al., 1995; Oetzel, 1998; Ting-Toomey et al., 2001) and the effects of self-construal differences on one's conflict management style have also been consistently supported.

As Markus and Kitayama (1991) argued, individuals with a high level of interdependent self-construal often prioritize the maintenance of harmonious relationships over the pursuit of personal goals (Markus & Kitayama, 1991; Cross & Madson, 1997). Kim (1993) also found that individuals who are higher on interdependent self-construal are more concerned about being well-liked by the other party and are more sensitive towards the needs and feelings of the other party. This suggests that interdependent self-construal may be associated with more cooperative conflict management styles like obliging. On the other hand, individuals with a dominant independent self-construal are likely to place individual's needs and concerns first (Markus & Kitayama, 1991; Utz, 2004). They are generally more particular about the clarity in communication and prefer direct and explicit communication styles (Brown & Levinson, 1987). Hence, they are likely to be more forthright, confrontational, and competitive compared to the interdependent selves.

Some empirical studies have yielded support for such patterns. For instance, Oetzel & Ting-Toomey (2003) applied the face-negotiation theory (Ting-Toomey, 1988; Ting-Toomey & Kurogi, 1998) to understand conflict management tendencies across individuals with differing patterns of self-construals. They found that individuals with higher interdependent self-construal levels are more concerned about other-face (i.e., concern for other party's image) which prompts them to avoid competition and utilize cooperative conflict styles like avoiding, obliging, and compromising. On the other hand, independent individuals are more likely to utilize competitive conflict styles like dominating. Similarly, Oetzel (1998) found that the use of dominating conflict management style is closely associated with independent

self-construal whereas the other four cooperative conflict management styles like obliging, avoiding, integrating, and compromising are often associated with interdependent self-construal. Results from Utz's (2004) studies also demonstrated similar findings where individuals who were primed with independence were more concerned with their own outcomes and exhibited competitive strategies in a social dilemma game while those primed with interdependence exhibited more cooperative strategies. In another study that also examined social-dilemma games, results also indicated that individuals from more collectivistic cultures like Vietnam were more cooperative than their American counterparts, highlighting possible self-construal differences in influencing one's cooperation or competitive tendencies (Parks & Vu, 1994).

#### **Dual Self-Construals**

Although previous studies established that interdependent selves are likely to display cooperative conflict management styles while independent selves are likely to deal with conflict more competitively, the relationship between self-construal and conflict management styles has become an increasingly complex one. This is due to the development of dual self-construals within individuals from modernizing collectivistic societies (Cheng et al., 2011).

While self-construal may vary across culture as established by Markus and Kitayama (1991), several researchers argued that any given individual can also vary along both the independent and interdependent dimensions (e.g., Dijksterhuis & van Knippenberg, 1998; Gudykunst et al., 1996; Singelis, 1994; Trafimow, Triandis, & Goto, 1991). For instance, Singelis (1994) reviewed multiple studies on self-construal and suggested that both independent and interdependent self-construals can coexist within an individual even though the culture and situation one is exposed to may still exert an influence on the development of one self-construal more strongly than the other (Markus & Kitayama, 1991; Triandis, 1989).

In this case, it is possible for individuals to endorse both self-construal simultaneously. For individuals who possess both well-developed independent and interdependent views of the self, they are considered as individuals with dual self-construals. The coexistence of both well-developed selves has been documented across several studies. For example, studies revealed that both collectivistic indigenous values (e.g. filial piety) and individualistic values (e.g. autonomy) tend to coexist among Chinese and Singaporeans (e.g., Chang, Wong, & Koh, 2003; Lu & Kao, 2002; Pek & Leong, 2003; Zhang, Zheng, & Wang, 2003). Roland (1988) also found that many Indian and Japanese clients faced difficulties in balancing their independent and interdependent selves, illustrating the existence of dual self-construals within a single individual. In another study that involved Polish students, Pilarska (2014) found evidence of coexisting self-construals in Poland, which represents a society with both moderately collectivistic and individualistic cultural influences (Forbes, Zhang, Doroszewicz & Haas, 2009). Taken together, these findings clearly demonstrate the possibility of coexistence of dual self-construals within a given individual.

#### **Development of Dual Self-Construals**

The development of dual self-construals is argued to be facilitated by factors like modernization in previously subsistence-based collectivistic societies (Cheng et al., 2011).

According to classic modernization theories and theories of social change (e.g., Moore, 1963; Weiner, 1966), rapid modernization may bring about changes in education levels, with rising emphasis on one's personal freedom and achievement, and gender equality. Hence, modernization processes in collectivistic societies have granted individuals to become increasingly acquainted with individualistic values, beliefs, and practices which can aid in the nurturance of the independent self. Prolonged exposure to such individualistic values and practices would allow for the development of a strong independent self-construal on top of their existing interdependent self-construal. However, no studies have yet examined the

influence of specific contextual factors on the development of dual self-construals. Thus, an investigation of specific factors that could aid in the acquisition of independent self-construal is needed to enhance our understanding of the developmental process of dual self-construals within these societies.

One important contextual factor that could influence dual self-construal development would be tertiary education institution. Researchers who examined the interplay between culture and the self have repeatedly emphasized the role of institutions in the influencing one's self-construal (e.g., Markus, Kitayama, & Heiman, 1996; Markus & Kitayama, 1994; 2003; 2010). For instance, in a review paper by Markus and Kitayama (2003), the authors highlighted the concept of mutual constitution between cultures and the selves and identified institutions as embodiments of culture-specific beliefs and practices. Similarly, Markus, Kitayama, and Heiman (1996) also posited that self-construal reflects the goals and beliefs of the culture one is embedded in and such goals are often elaborated and encouraged through institutions within the societies. Notably, organizations like school, workplace, and religious organizations can shape individuals to live out the core values advocated by these institutions (Markus & Kitayama, 1994; 2010). For example, the authors cited how schools in Japan exemplify the cultural values of interdependence through their rules and practices. Japanese students are taught to wait for every one for their peers to be assembled before leaving for lunch or for other activities as a group. Such practices aid in reinforcing the ideas of interconnectedness and a sense of community for the young Japanese students which can foster the development of as strong interdependent self. Altogether, it suggests the influential role of institutions in determining how one derives their self-concept (Markus & Kitayama, 1994; 2010). Through individual's experiences in these institutions, it can mould the way they perceive the self in relation to others.

In present paper, we attempt to investigate the effects of institutional factors on the development of dual self-construals within the context of Singapore. First, we present Singapore as an ideal platform to examine the development of dual self-construals. Specifically, we demonstrate that the unique cultural context and influences found within the Singaporean society allow for individuals to acquire both the independent and interdependent self-construal. We then argue for the role of tertiary education on one's development of dual self-construals among Singaporeans. More precisely, we assert that Singaporeans who are enrolled in different types of tertiary education disciplines (e.g., business, social science) may show differences in their acquisition of dual self-construals which then impact on their conflict management tendencies.

#### **Singapore: Where East meets West**

Singapore is an ideal location to examine the development of dual self-construals as it is a multicultural, cosmopolitan city that many dubbed as 'Easy Asia' or 'East meets West'. Because of its rapid development from a collectivistic subsistence-based economy to a modernized cosmopolitan city-state, Singapore serves as a suitable platform to investigate how individuals manage the influences of both the Asian and Western cultures on the society (Ang & Stratton, 1995; Chang et al., 2003; Dixon, 2005; Hazel, 1994; Lang, 2007; Lee, 2012; Poon, 2013) and its impact on the developmental process of dual self-construals (see Cheng et al., 2011).

Many of the practices found in Singapore are largely influenced by a blend of both the Asian and Western cultures. From the consumer market to local education system, and language preferences (Hazel, 1994; Kumar, 2013; Lee, 2012; Lang, 2007), most practices and policies in Singapore are results of a combination of both the East and the West. For instance, while the local education system in Singapore is heavily modelled after the British education system, the government has made it compulsory for students to undergo Moral Education

modules which are aimed to ensure that young Singaporeans remain connected to their own traditional cultural identities and roots (Wei, 1994). Altogether, the salience of both individualistic and collectivistic influences coupled with the rapid socioeconomic progress in Singapore positioned it as an ideal location to examine the development of dual self-construals and subsequently, its relationship with one's conflict management tendencies.

#### **Self-Construal in Singapore**

Development of Interdependent Self-Construal

Daily socialization and interactions with the various cultural groups in Singapore, would unarguably exert an influence on the way Singaporeans define the self. For instance, the main racial groups in Singapore (i.e. Chinese, Malay, Indian) are considered highly collectivistic and frequent interactions with their families and friends create an environment that nurtures the development of Singaporean's interdependent self-construal at an early age (Hofstede, 1980; Liu & Wang, 2010).

Even though these ethnic groups may have their own unique traditions and customs that differentiate them from one another, they share many similar values and beliefs. For instance, filial piety is regarded as a central value to all Singaporeans regardless of their ethnic identity even though this concept is the most strongly rooted in the Chinese Confucian teaching (Koh, 2014). Singapore's national values are also constructed based on collectivistic Asian values that are shared by the different ethnic groups. For instance, The White Paper of Shared Values (1991) was developed to create a common Singaporean identity that incorporates the cultural values, heritage, and practices from the various ethnic groups in Singapore. Furthermore, the government consulted each ethnic groups' representative to ensure agreement and support for the shared values. These values are considered collectivistic in nature and it reflects the 'Asian-ness' that the Singapore government was advocating for. Some of the values include the need to put 'nation before the community and

society before the self', 'family as the basic unit of society' and 'consensus, not conflict'.

Thus, these national values that are developed to incorporate the different beliefs and values and would shape the collectivistic cultural roots for all Singaporeans, prompting the development of the interdependent self.

Development of Independent Self-Construal

Besides the unique blend of collectivistic values from the different cultural groups in Singapore, Singaporeans are also regularly exposed to an environment that emphasizes individualistic values through the local education system. To begin with, Singapore's education is heavily modelled after the British's education system, sharing many similar key stages (e.g., primary, secondary) and examination formats (e.g., GCE 'O' Levels and 'A' Levels). Schools in Singapore are also designed and structured to emphasize individualistic values like intellectual independence, moulding students to be self-directed individuals who take pride in their own learning (Ministry of Education, 2018). Such values are considered congruent to those advocated in most individualistic cultures (see Hofstede, 1980; Triandis, 1983; 1989; 2001).

Additionally, the main language of instruction in schools is English which was officially designated as the first language in 1987. Thus, for all Singaporeans who are schooled in the local education system, they are regularly exposed to the English language and are generally more proficient in English compared to other neighbouring Asian countries (EF English Proficiency, 2018). A recent report also showed that English is now the most commonly used language at homes in Singapore (Department of Statistics Singapore, 2015) which illustrates Singaporeans' familiarity with and their proficiency in the language. Through the frequent use of and exposure to the English language, Singaporeans are able to consume information and entertainment resources from the West (Alsagoff, 2007). Regular exposure to media that frequently uses English language has been found to influence one's

identity, economic and political ideology and morality, especially in non-Western cultures (Hasanen, Al-Kandari, & Al-Sharoufi, 2014; Wiley, 2008).

In summary, we present Singapore as an ideal location to examine the development of dual self-construals. This is so as Singapore is a chiefly collectivistic society as influenced by the population's ethnic and cultural background (e.g., Hofstede, 1980; Liu & Wang, 2010). As such, most Singaporeans would acquire a strong interdependent self-construal through their socialization and interactions with others around them. However, as the nation undergoes rapid modernization and socioeconomic progress, Singaporeans are introduced to an influx of individualistic values and practices that cultivate the development of their independent selves, thereby explaining the development of both self-construals. Yet, the development of independent self-construal would not be consistent across individuals. Instead, we tend to observe individual differences in the acquisition of independent self-construal among Singaporeans. To investigate this phenomenon, we seek to identify specific contextual factors that explain the development of dual self-construals within Singapore. Specifically, we argue that tertiary education would serve as an important phase in explaining the development of dual self-construals among Singaporeans.

#### **Tertiary Education Institutions and Dual Self-Construals**

As Markus and Kitayama (1994, 2010) posited, institutions like schools play a fundamental role in shaping individuals' sense of self. Specifically, the values that are advocated by these institutions are often endorsed by their members and could exert an influence on how they define the self. Across the different stages in Singapore's education system, we contend that tertiary education would be the most critical when it comes to examining the individual differences in development of dual self-construals.

First, tertiary education often serves as a key transition phase to adulthood for many students where they experience greater autonomy and independence (e.g., Goldscheider &

DaVanzo, 1986). Upon entry into tertiary education institutions, individuals are exposed to an influx of values, alternative perspectives, and new knowledge which encourages individuals to embrace an individualized and self-chosen set of beliefs and values (Perry, 1970). Prior research on higher education highlight that tertiary education institutions aim to foster a proindependence environment that values personal autonomy and intellectual independence (e.g., Baird, 1988; Baird, 2006; Barnett, 1998; Trice & Dey, 1997). Indeed, individuals who received tertiary education were found to be more open to explorations and are likely to cogitate alternative perspectives (e.g., Pascarella & Terenzini, 1991; Perry, 1970, 1999).

However, the experience of tertiary education is argued to be largely contingent on the discipline one is enrolled in to. To illustrate, a comparison between business disciplines (e.g., operations, strategy) and social science disciplines (e.g., psychology, sociology), would reveal differences in the nature of the knowledge and content being taught, methods of assessments, teaching styles and values. Such disciplinary differences can then influence the degree to which one's experience of tertiary education may encourage the development to dual self-construals.

#### **Culture of Academic Disciplines**

To understand how tertiary education disciplines may impact on the development of dual self-construals, we investigate this phenomenon by taking on a cultural approach. Indeed, some researchers have proposed that academic disciplines may be best understood through an examination of its values (e.g., Becher & Trowler, 1989; Kennedy, 1997; Walvoord et al., 2000) or in other words, the discipline's culture. For instance, Clark (1963) has long advocated for the examination of academic disciplines through a cultural lens. Since then, several studies in higher education research have applied culture to the study of academic disciplines (e.g., Becher 1981, 1987; Becher & Trowler, 2001; Clark, 1987a, Feldman & Paulsen, 1999; Freedman 1979; Gaff & Wilson, 1971; Kuh & Whitt, 1988;

Masland, 1982; Paulsen & Feldman, 1995a; Tierney & Bensimon, 1996; Tierney & Rhoades, 1993; Toma, 1997; Toma, Dubrow, & Hartley, 2005).

Academic disciplines are argued to have developed their own distinctive culture, with persistent patterns of shared values, beliefs, and assumptions among individuals within that area of study (e.g., Becher & Trowler, 1989; Chafee & Tierney, 1988; Clark, 1984; Kurt & Whitt, 1988; Lee, 2007). Perhaps one of the most prominent arguments put forth would be from Becher and Trowler (1989) who proposed that academic disciplines resembled that of 'tribes'. Specifically, Becher (1981, p. 108) stated that 'academic disciplines are also a cultural phenomena: they are embodied in collections of like-minded people, each with their own codes of conduct, setoff values, and distinctive intellectual tastes'. For members (e.g., faculty members, students) who belong to specific 'tribes', they develop day-to-day intellectual and social practices that are consistent with the shared expectations and norms of their disciplinary cultures (Bechler & Trowler, 2001; Krause, 2014). Through conceptualizing discipline as a culture, we could then better clarify how these norms, values, and practices that are advocated within each discipline may subsequently influence how individuals perceive and make sense of the self.

#### **Disciplines and Development of Dual Selves**

In present paper, we attempt to compare the effects of business disciplines and social science disciplines on the development of dual self-construals among Singaporeans. This is so as these disciplines represent notable distinctive academic cultures that warrant further examination on their influences on individuals (e.g., Biglan, 1973). This would allow us to gather important insights into the different aspects of discipline cultures between business and social science and how it could influence young Singaporeans who are enrolled in these respective disciplines.

Culture in Business Disciplines.

In analyzing the academic culture in business disciplines, we first turn to studies examining the characteristics of business disciplines from higher education research (e.g., Biglan, 1973). For instance, previous studies investigating goal orientations found that faculty members from applied disciplines like business tend to prioritize character development and intellectual self-actualization (e.g., shaping students to be creative-thinker, to articulate their independent thoughts) as key teaching goals (Smart & Elton, 1982). Also, they are more likely to involve provision of practical experience where teaching is done via immersion in simulated or real professional work. Problem cases serve as a common teaching tool for faculty members and importantly, there is a strong tendency to include contributions from experienced practitioners as a significant component in their teaching process (Neumann, Parry & Becher, 2002). Considering the teaching methods used, students in business disciplines are frequently exposed to case studies and problems that replicate that of real-world situations. This requires students to engage in critical thinking and analysis followed by independent decision-making (Knight, 1992). Furthermore, there are often no 'correct answers' to real-world projects or questions as opposed to objective tests (Chaffee, 1992). Hence, students in business disciplines are trained to articulate their independent opinions, to be comfortable with making autonomous decisions and to remain adaptable to dynamic and ambiguous situations.

With respect to the nature of knowledge within the field, business disciplines tend to focus on functional knowledge. They are primarily concerned with the enhancement of professional practice with an implicit emphasis on personal growth and intellectual breadth (Becher, 1987; Neumann et al., 2002). The curriculum is also designed in a way where the emphasis is primarily on project-based assessments and real-world problem-solving. Peer and self-assessment tasks are also much more common with the intention of prompting students

to improve self-reflection and practical skills. Additionally, even though guidelines and rubrics may be available, they are often ambiguous as many of the practical skills required from the students are rather inexplicit and difficult to specify in precise term (Neumann et al., 2002).

Finally, when we consider students' activities, behaviours, and learning, we can also observe distinct cultural patterns within business disciplines. Becher (1987) observed that the cultures within business schools are typically characterized by uncertainty in status and are generally more power-oriented. Supporting this observation, Sawyer (1966) also found that business students are more concerned with maximising their own welfare at the expense of others which further emphasizes their competitiveness and independence from others. *Culture in Social Science Disciplines*.

In contrast, the disciplinary cultures in social sciences are often less competitive and more interdependent. To begin with, Finkelstein (1978) found that faculty peers in social sciences are more receptive to collaboration and multiple authorships, fostering a more collaborative and harmonious work environment. With respect to teaching methods and curriculum designs, Neumann et al. (2002) reported that in pure fields like psychology, the common practice is to conduct teaching in a face-to-face manner within smaller groups. Faculty members tend to utilize seminars and discussion groups and encourage students to put forward their own ideas. These practices emphasize the importance of collaborative inclass learning, thorough understanding of theoretical concepts, and showing acceptance and tolerance towards alternative perspectives.

Additionally, the nature of knowledge taught within social science disciplines is described as one that is more reiterative and holistic. That is, they tend to advocate for deeper understanding and alternative interpretation of the subject matter. Students are often graded based on essays, writing, and reports which form their main assessment tasks (Piper et al.,

1996). The purpose of these assessments is to evaluate students' level of sophistication and individual's judgement of a complex debatable issue (Bazerman, 1981). Importantly, clear guidelines and rubrics to assessment criteria are often given compared to other disciplines (Piper et al., 1996), providing more explicit and definite standards for the students.

With respect to students' behaviours and culture, Becher (1987) identified that social science disciplines as more loosely structured with less competition and more person-oriented. Similarly, Sawyer (1966) also reported that social science students tend to accommodate to their in-group members (e.g., friends or peers) compared to business students. They are also more likely to act in accord with principles of exchange and reciprocity, extending help to those who have helped and supported them (Sawyer, 1966).

In all, it is notable that the disciplinary cultures between tertiary education disciplines do differ to a certain degree. For instance, most business disciplines emphasizes the development of one's independent thinking and decision-making (Smart & Elton, 1982). They are also expected to manage practical real-world problems that are often subjected to unexpected changes independently (e.g., Knight, 1992; Neumann et al., 2002), training them to become more confident and self-directed. Importantly, business disciplines are also characterized as more power-oriented and competitive (Becher, 1987) where individuals prioritize their own goals above that of others (Sawyer, 1966). On a whole, the culture in business disciplines is said to replicate that of a pro-independence environment where espoused values like competition, novelty, autonomy, and independence (e.g., Hofstede, 1980; Schwartz & Bilsky, 1990; Triandis, 1989) are highly salient and are endorsed by their members.

Exposure to such an environment may demand individuals to construe the self in highly independent terms. For instance, the training of forming one's independent thoughts and decisions may inform individuals that having their own distinct opinions is a highly

valued within the discipline. This could hence encourage them to define the self as a unique and separated entity that is clearly differentiated from others around them. Thus, it is arguable that students who are exposed to such a culture for a prolonged period would likely develop a strong independent self-construal. In this case, we assert that Singaporeans students who are enrolled in business disciplines are more likely to develop a strong independent self-construal on top of their existing dominant interdependent self-construal and therefore, are considered individuals with well-developed dual self-construals.

On the other hand, students who belong to social sciences disciplines are exposed to a culture that more closely resembles one in a collectivistic culture. For starters, studies found that faculty members from social sciences showed greater willingness to collaborate (Finkelstein, 1978) which helped to foster an environment of collaboration and interconnectedness. Furthermore, the teaching tools (e.g., use of discussion groups, face-to-face teaching) used in social sciences also aid in creating a cooperative environment that is aimed at deepening students' understanding of theoretical concepts. The disciplinary culture is also described as one that is more person-oriented (Becher, 1978) and accommodating where individuals look out for the needs of others around them (Sawyer, 1966). As such, individuals who are enrolled in social sciences disciplines are exposed to an environment that would not pose a strong demand for them to construe the self in highly independent terms. Hence, they are less likely to develop a strong sense of independent self-construal compared to their peers from business disciplines.

Based on our arguments above, we posit that Singaporean students belonging to business disciplines would be likely to develop a stronger independent self-construal on top of their existing interdependent self-construal compared to their peers from social science disciplines. Therefore, the training and culture within business disciplines are more likely to encourage the acquisition of dual self-construals than that of social science disciplines.

With respect to interdependent self-construal, it is argued that all Singaporeans are likely to develop a strong interdependent self-construal through socialization practices and shared societal values. As such, we do not expect any significant differences in endorsement of interdependent self-construal to emerge between individuals from business or social science disciplines.

#### **Disciplines and Conflict Management Tendencies**

Of utmost importance, the types of academic disciplines could possibly influence conflict management tendencies. As we have established, the disciplinary culture in business disciplines would represent one that is similar to that of an individualistic culture. Building on Markus and Kitayama's (1991) argument concerning the interplay between culture and the self, we assert that individuals from business disciplines are more likely to develop a stronger independent self-construal than individuals from social science disciplines. Hence, we expect individuals from business disciplines to then display greater competitive conflict management tendencies than their peers from social science disciplines. This is consistent with past findings concerning the relationship between independent self-construal and conflict management tendencies (e.g., Oetzel & Ting-Toomey, 2003; Oetzel, 1998; Utz, 2004).

In contrast, the disciplinary culture found within social science disciplines would not pose as strong of a demand for individuals to endorse a high level of independent self-construal compare to that of business disciplines. Therefore, individuals enrolled in social science disciplines are less likely to develop a strong sense of independent self-construal compared to their counterparts from business disciplines. Building on this argument, we posit that they are less likely to display competitive conflict management styles like dominating and more likely to utilize cooperative styles like obliging, avoiding, integrating, and compromising.

This brings us to the following hypotheses:

H1: The relationship between types of disciplines and conflict management tendencies will be mediated through one's self-construal. Specifically, individuals from business disciplines would display greater competitive conflict management tendencies through a higher level of independent self-construal compared to individuals from social science disciplines (Figure 2).

H1a: Individuals from business disciplines are more likely to endorse a higher level of independent self-construal than individuals from social science disciplines.

H1b: Individuals from business disciplines will display greater competitive conflict management tendencies compared to individuals from social science disciplines.

H1c: Independent self-construal will be positively associated with competitive conflict management tendencies.

H2: The relationship between types of disciplines and conflict management tendencies will be mediated through one's self-construal. Specifically, individuals from business disciplines would display lower cooperative conflict management tendencies through a higher level of independent self-construal compared to individuals from social science disciplines (Figure 3).

H2b: Individuals from business disciplines will display lower cooperative conflict management tendencies compared to individuals from social science disciplines.

H2c: Independent self-construal will be negatively associated with the use of cooperative conflict strategies.

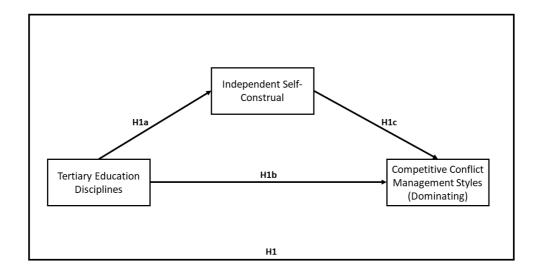


Figure 2.

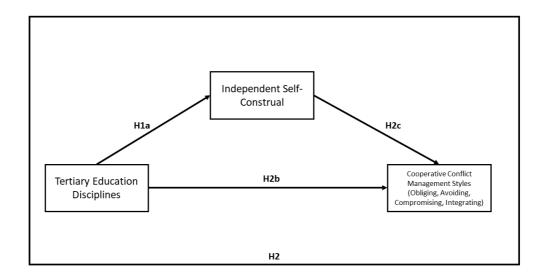


Figure 3.

#### **Implications of Dual Self-Construals**

Having acquired dual self-construals, individuals are then able to view the self in both independent and interdependent terms. In this case, an important question may arise concerning the behavioural patterns of individuals with well-developed dual self-construals. For one, would they act in an assertive and competitive manner when faced with conflicts as predicted by their independent self-construal? Or would they display an accommodating and cooperative manner as guided by their interdependent self-construal?

Interestingly, some studies have reported that individuals with dual self-construals can engage in both types of behaviours depending on the contextual cues. For instance, it has been established that individuals who possess dual self-construals are able to switch between their behaviours depending on the contexts that they are presented with (e.g., Cheng & Chun, 2008; Cheng, Wang, & Golden, 2011).

Such switching effects observed within dual self-construals individuals is akin to the phenomenon of 'frame switching' (Hong, Morris, Chiu, & Benet-Martinez, 2000). Frame switching refers to how individuals who have internalized different cultural knowledge (e.g., bicultural individuals) are able to utilize either culture to guide their thoughts, feelings, and behaviours (Hong et al., 2000). In their paper, Hong et al. (2000) argued that for bicultural individuals who are socialized into both cultures, they would possess two distinct cultural systems that could be activated based on primes or contextual cues. When they are exposed to either one of the cultural primes or cues (e.g., cultural icons like national flags, famous people, landmarks), it activates the corresponding cultural network which would then guide them to act and think in accordance to the expectations of that culture.

It is argued that individuals with dual self-construals may similarly display switching of behaviours as they possess both sets of self-construals that could be activated based on primes or contextual situation (e.g., Brewer & Gardner, 1996; Briley & Wyer, 2001; Gardner et al., 1999; Kuhnen & Hannover, 2000; Trafimow et al., 1991; Utz, 2004). These primes will then determine the types of behaviours individuals with dual self-construals would likely display (e.g., Cheng and Chun, 2008; Cheng, Wang, & Golden, 2011).

#### **Dual Self-Construals and Conflict Setting**

In present paper, we investigate whether the framing of a conflict as either a professional or social conflict could influence how individuals with dual self-construals manage with conflicts in different settings. A professional conflict usually takes place at

work or in school where parties may disagree over certain decisions regarding projects or assignments. On the other hand, a social conflict refers to conflict that takes place outside of work context, usually with one's friends or family members.

Studies have shown that by manipulating the context of a conflict situation as either competitive or cooperative can determine how an individual chooses to resolve the conflict. In a study conducted by Liberman, Samuels, & Ross (2004), the authors found that by merely labeling a prisoner dilemma game as 'Wall Street Game' or 'Community Game' could significantly impact individuals' decision to cooperate. Furthermore, several other studies also demonstrated similar effects by changing the context of the tasks or games from one that is concerned with 'business dealings' to 'ethical dilemmas', or one that evokes competitive versus cooperative norms (e.g., Allison, Beggan & Midgley, 1996; Blount & Larrick, 2000; Larrick & Blount, 1997; Tenbrunsel & Messick, 1999; van Dijk & Wilke, 2000).

This is so as different sets of values, beliefs, and norms are often more closely associated with one context than the other. For instance, individualistic values are generally more salient in a professional setting. To illustrate, Schein (1973) found that individuals tend to perceive successful professionals as individuals who demonstrate self-reliance, aggressiveness, objectivity and are well-informed and direct which are values and behaviours that are typically endorsed in highly individualistic cultures (e.g., Triandis & Gelfand, 1998; Triandis & Suh, 2002). On the other hand, values that are associated with social contexts tend to be more communal-oriented. For instance, some of the core Singapore Family Values emphasized in Singapore's National Values and Messages include 'mutual respect', 'filial responsibility', 'love, care and concern' (Tan & Tan, 2014). Therefore, it is likely that by exposing individuals to conflicts in either professional or social settings can evoke different expectations and certain values and norms are would become more pronounced. This, in turn,

influences the activation of self-construal which then impact on one's conflict management tendencies.

For individuals who are enrolled in business disciplines, we argued above that they would possess both well-developed independent and interdependent self-construals (i.e., dual self-construals). When faced with different conflict settings (i.e., professional vs. social), different self-construal would be primed which then guide them to exhibit different conflict management tendencies. More precisely, we posit that the effect of independent selfconstrual will only be revealed when one faces a professional conflict (e.g., workplace conflict, conflict in school) which would guide them to exhibit more competitive conflict management tendencies. This is so as a professional context would more closely resemble an individualistic environment for Singaporeans with respect to the values and goals that individuals are supposed to endorse and identify with (e.g., Schein, 1973). Given that individuals from business disciplines are regularly exposed to an individualistic academic culture, they would readily possess available information and knowledge concerning their independent self. Hence, introducing a professional conflict context would then serve as an applicable prime for individuals to activate their independent self-construal (Higgins, 1996; Higgins 1989a). Therefore, when faced with a professional conflict, individuals from business disciplines will be primed to perceive the self in a more independent term and thus, exhibit competitive conflict management styles like dominating.

However, when faced with a social conflict, individuals are likely to resort back to relying on their interdependent self-construal and exhibit more cooperative conflict management tendencies. This is so as being involved in a social conflict (e.g., with friends or family members) would likely remind individuals of their social relationships and values, and thereby serve as a salient cue for the interdependent self-construal. Therefore, individuals from business disciplines are likely to construe the self in interdependent terms which guides

them to utilize cooperative management styles like obliging, compromising, integrating, and avoiding when dealing with social conflicts.

For individuals who are from social science disciplines, it is argued that the academic culture may not facilitate the development of the independent self-construal as greatly as compared to that of business disciplines. In this case, individuals would possess a relatively lower level of independent self-construal compared to their peers from business disciplines. When faced with a professional conflict (e.g., at the workplace), while the context itself may encourage one to act in more independent terms (e.g., Schein, 1973), individuals from social science disciplines would not as readily possess the available knowledge or information concerning their independent self-construals compared to their counterparts from business disciplines who are frequently required to adopt an independent view of the self. As such, individuals from social sciences disciplines may find the contextual cue less of a fit to their pre-existing knowledge (i.e., less applicable) and would rely on their dominant interdependent self-construal to guide their conflict management tendencies (Higgins 1996; Higgins 1989a). Hence, we argue that they are likely to display cooperative conflict management tendencies (i.e., obliging, avoiding and compromising) despite facing a professional conflict setting.

When faced with a social conflict (e.g., with friends or family members), the context would serve as an applicable prime for the interdependent self-construal. Individuals from social science disciplines would then utilize their interdependent self-construal to guide their behaviours. As such, we similarly expect them to display cooperative conflict management tendencies when faced with a social conflict setting.

Taken together, we hypothesize the following:

H3: There will be an interaction effect between the types of tertiary education disciplines (business, social sciences) and conflict settings (professional, social) on one's conflict management tendencies.

H3a: Individuals from business disciplines will display more competitive conflict behaviors than individuals from social science disciplines in professional conflict settings.

H3b: Individuals from business disciplines will display no more competitive conflict behaviors than individuals from social science disciplines in social conflict settings.

### Study 1

In Study 1, we examine the individual differences in developmental process of dual self-construals in Singapore by investigating the effects of tertiary education disciplines on the nurturance of independent self-construal among Singaporeans. It is hypothesized that individuals from business disciplines would endorse a higher level of independent self-construal compared to their peers from social science disciplines. This is because the culture within business disciplines are highly pro-independence and would demand students to acquire an independent view of the self. However, students in social science disciplines are trained in an environment that has a relatively lower emphasis on individualistic and pro-independence values and practices. As such, there is a lower emphasis and exposure to individualistic values and practices that could aid in the development of the independent self-construal compared to that of business disciplines. Thus, it is expected that the level of independent self-construal will differ across students from different types of tertiary education disciplines.

Furthermore, we also attempt to investigate if the differences in tertiary education disciplines would then explain individual differences in conflict management tendencies.

Consistent with our arguments above, students in business disciplines would display more competitive conflict behaviours compared to students in social science disciplines as they

would endorse a higher level of independent self-construal. On the other hand, the endorsement of a higher level of independent self-construal would also account for the lower use of cooperative conflict management styles compared to their peers from social science disciplines. Taken together, study 1 seeks to examine if the effects of tertiary education disciplines on conflict management tendencies would be mediated by one's endorsement of independent self-construal.

#### **Methods**

Data Screening.

One hundred and seventy-two undergraduate students were recruited through Subject Pool System and received payment of \$10 for their participation. The survey was administered as an online survey where participants were allowed to complete it at their own convenience. As such, it is imperative for us to check for the quality of the data collected. To do so, we first conducted a univariate screening of outliers. From our analysis, we identified 1 potential outlier (i.e., 3 standard deviations from the mean) on our key dependent variables (i.e., self-construal and conflict management tendencies) and removed it from our analysis. Additionally, we ran regression diagnostics on our dependent variables and identified for any influential cases. The results showed no notable influential cases.

Participants.

The final sample consisted of 171 participants. A post-hoc power analyses conducted using G\*Power revealed that the statistical power N to detect moderate effect size ( $f^2$ =.25) was more than adequate, .90. Participants were recruited from the Subject Pool System and received either 2 course credits or \$10 in exchange for their participation (35 males, 136 females; mean age= 22.20 years, SD = 1.44). All participants have at least a year of schooling experience within their disciplines. Among the 171 participants, 64 (37.4%) were from social sciences disciplines ( $n_{soss}$ =64) and 107 (62.6%) were from business disciplines ( $n_{biz}$ =107).

Importantly, there were a few participants with a second major from either business or social science schools (e.g., Marketing and Psychology, Sociology and Operations). There were 27 (42.2% of social science discipline participants) participants from social sciences disciplines with a second major in business, and 8 (7.48% of business discipline participants) participants from business disciplines with a second major in social sciences. Results from independent t-tests conducted comparing individuals with only social science majors from individuals with a first major in social science and a second major in business revealed no significant difference on our variable of interest, t(1,62) = 1.30, p = .20. Similarly, comparing individuals with only business majors from individuals with business as a first major and social science as a second major revealed no significant difference between our groups on our variable of interest, t(1,105) = .05, p = .96. Hence, we proceeded with our analyses by classifying the participants based on their first majors only (i.e., business disciplines or social science disciplines).

Materials.

Self-Construal.<sup>1</sup> To measure self-construal, we administered Vignoles et al. (2016) Multi-dimensional Self-Construal measure which consists of 22 items on a 7-point (1=Strongly Disagree, 7=Strongly Agree) Likert scale (Appendix A). Vignoles' et al. (2016) analysed data from over 50 cultural groups in 33 nations and found that both independence and interdependence are multifaceted and that they are theoretically interpretable bipolar oppositions. The measurement identified seven dimensions in which one can contrast a particular way of being independent or way of being interdependent. The seven dimensions are (1) self-reliance vs. dependence on others, (2) self-containment vs. connection to others, (3) difference vs. similar, (4) self-interest vs. commitment to others, (5) consistency vs.

 $<sup>^{1}</sup>$  Correlation between Singelis' (1994) Self-Construal Scale (Independent) and dependent measure is r = .60. Correlation between Singelis' (1994) Self-Construal Scale (Interdependent) and dependent measure is r = .16.

variability, (6) self-direction vs. receptiveness to influence and (7) self-expression vs. harmony. To form a composite score of independent self-construal, we computed the mean scores across all the 22 items and checked for its reliability ( $\alpha = 0.78$ ). Additionally, we also conducted a reliability analysis across the 7 dimensions ( $\alpha = 0.73$ ). Both the reliabilities are considered acceptable ( $\alpha > .70$ ). Besides relying on the composite score alone, we also further examined each of the dimensions, allowing us to identify if any of them, in particular, are related to our variables of interest.

Conflict Management Tendencies. To measure one's conflict management tendencies, we utilized Rahim's Organizational Conflict Inventory-II (Rahim, 1983) which consists of 28 items on a 5-point (1=Strongly Disagree, 5=Strongly Agree) Likert scale (Appendix B). This measure allows us to analyze individual tendencies across the five conflict management styles (i.e., integrating, obliging, dominating, avoiding, and compromising).

The following variables are analyzed as potential control variables as they may self-construal and conflict management tendencies (e.g., Cross & Madson, 1997; Gabriel & Gardner, 1999; Lalwani & Shavitt, 2009; Levison, Langer, & Rodebaugh, 2011; Tams, 2008; Watkins, Mortazavi, & Trofimova, 2000).

Personality variables. To measure individual's traits, we utilize the Ten-Item

Personality Inventory (TIPI) developed by Gosling, Rentfrow, & Swann (2003). It consists of

10 items on a 7-point Likert scale (1=Strongly Disagree, 7=Strongly Agree) (Appendix E)

Social Desirability Bias. To measure one's social desirability bias, we administer the 13-Item Short Form Social Desirability Scale developed by Crowne & Marlowe (1960). It consists of 13 items where participants have to rate each item as either 'true' or 'false' (Appendix F).

Procedures.

Participants signed up for the survey through subject pool system in exchange for either 2 course credits or \$10 in exchange for their participation. After signing up, they are sent an online survey link and are tasked to do the survey before a 2-3 days deadline. The survey included a series of questions asking about their self-construal patterns, conflict management tendencies, and other general behaviours. After completing the survey, we collected some demographic information from the participants and debriefed them accordingly.

# Results

**Table 1: Correlation Matrix** 

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Disciplines	-													
2. Independent Self-Construal	.21**	-												
3. Dominating	.05	.28**	-											
4. Obliging	12	19*	09	-										
5. Integrating	16*	.08	.01	.01	-									
6. Avoiding	.04	15*	13	.54**	04	-								
7. Compromising	22**	09	05	.33**	.56**	.17*	-							
8. Extraversion	.15*	.32**	.20**	01	.21**	12	.11	-						
9. Agreeableness	02	.21**	14	11	.29**	05	.12	.40**	-					
10. Conscientiousness	.08	.26**	.02	12	.24**	.01	.04	.11	.23**	-				
11. Emotional Stability	.08	.24**	.04	09	.19*	11	.08	.22**	.26**	.31**	-			
12. Openness	06	.37**	.07	.00	.08	08	.15	.30**	.30**	.19*	.21**	-		
13. Social Desirability	.15*	.15*	01	07	04	04	14	.09	.14	.20**	.061	.19*	-	
14. Gender	01	24**	14	.16*	.06	.20*	.18*	02	.13	09	14	12	16*	-
15. Age	.10	.21**	.03	13	01	10	09	.01	03	.11	.16*	.15	.16*	56*

Table 2: Descriptive Statistics of Predictors, Covariates, Mediators & Criterion Variables

	M	SD	Skewedness	Kurtosis	Reliability
Predictor Variables &					
Mediator					
Majors	62.60	-	-	-	-
(% Business Disciplines)					
Independent	4.37	.57	.11	.42	.78
Self-Construal					
Criterion Variables					
Integrating	4.15	.42	22	1.18	.81
Obliging	3.53	.60	31	.01	.81
Dominating	3.17	.72	26	29	.77
Avoiding	3.40	.69	47	07	.80
Compromising	4.02	.54	62	1.36	.76
Covariates					
Extraversion	4.68	.96	.53	02	-
Agreeableness	5.37	.84	34	09	-
Conscientiousness	5.16	.88	14	18	-
<b>Emotional Stability</b>	4.86	.85	02	30	-
Openness	5.10	.89	24	.15	_
Social Desirability	4.73	1.74	.60	.20	_
Gender (% Males)	21.05	-	-	-	_
Age	22.20	1.44	-	-	-

Referring to Table 1, we observe that several of the personality variables are significantly correlated with independent self-construal. Additionally, levels of social desirability, gender, and age are also significantly associated with our variables of interests like discipline types and levels of independent self-construal. Hence, we controlled for these variables in the following analyses. Table 2 represents some of the descriptive statistics of our key variables. All the variables are normally distributed, and the reliabilities of the scales are acceptable ( $\alpha > .70$ ).

Types of Disciplines and Self-Construal. We first analysed if there were differences in self-construal patterns across types of disciplines utilizing analysis of covariance (ANCOVA) with one independent variable – type of disciplines (business vs. social sciences), while controlling for several covariates. Specifically, we included personality traits (extraversion, conscientiousness, openness, neuroticism, agreeableness), affective states (positive affect, negative affect), social desirability, age and gender as covariates. This is so as these variables were significantly correlated with our key variables (see Table 1) and may exert an influence on how one construes the self that is independent of the training and exposure one gather from their academic discipline (e.g., Cross & Madson, 1997; Gabriel & Gardner, 1999; Lalwani & Shavitt, 2009; Levison, Langer, & Rodebaugh, 2011; Tams, 2008; Watkins, Mortazavi, & Trofimova, 2000).

Results from ANCOVA revealed a significant effect of disciplines on one's independent self-construal, F(1,161) = 7.38, p = .01 < .05. As we have hypothesized in H1a, students belonging to business disciplines reported a higher level of independent self-construal than students from social science disciplines ( $M_{biz}$ =4.45,  $M_{soss}$ =4.23). On further examination of each dimensions of independent self-construal from Vignoles' et al. (2016) scale, results from ANCOVA revealed a significant effect of discipline on one's score on self-containment, F(1,161) = 15.87, p < .01, and a marginally significant effect of discipline on one's score on consistency, F(1,161) = 3.71, p = .06, self-expression, F(1,161) = 2.97, p = .09, and self-interest, F(1,161) = 3.42, p = .07. No significant results were reported for the dimensions of difference, self-direction, and self-reliance.

Types of Disciplines and Conflict Management Tendencies. We conducted an ANCOVA to identify if there are potential differences in conflict management tendencies across disciplines. Types of disciplines was included as our independent variable and the five conflict management styles from Rahim's (1983) Organizational Conflict Inventory were

included as dependent variables. We similarly included personality traits (extraversion, conscientiousness, openness, neuroticism, agreeableness), social desirability, age and gender as covariates.

Results revealed no significant differences between tertiary education disciplines in the use of dominating as a competitive conflict management style, F(1,161) = .02, p = .89 > .05. Hence, our results did not yield support for H1b. However, our analyses revealed significant differences in the use of integrating, F(1,161) = 7.43, p = .01 < .05, and compromising, F(1,161) = 8.05, p = .01 < .05, conflict management styles across disciplines, yielding partial support for H2b. More precisely, social science disciplines ( $M_{soss}=4.26$ ) found to be more integrating compared to business disciplines ( $M_{biz}=4.09$ ). With respect to compromising, social science disciplines ( $M_{soss}=4.18$ ) are similarly found to be compromising than business disciplines ( $M_{biz}=3.93$ ). No significant differences were found for obliging, F(1,161) = 2.26, p = .14 > .05, and avoiding, F(1,161) = .49, p = .49 > .05.

Self-Construal and Conflict Management Tendencies. To analyse the relationship between self-construal and conflict management tendencies, we conducted regression analyses with each conflict management style as the outcome variable. We similarly included personality traits (extraversion, conscientiousness, openness, neuroticism, agreeableness), social desirability, age and gender as covariates.

With respect to competitive conflict management tendencies, regression analyses revealed a significant a positive effect of independent self-construal on dominating strategy,  $\beta$  = .33, SE = .11, t(161) = 3.12, p = .01 < .05, lending support for H1c. On the other hand, independent self-construal was found to have a marginally significant negative relationship with cooperative conflict management strategies like obliging,  $\beta$  = -.18, SE = .09, t(161) = -1.92, p = .06, and compromising,  $\beta$  = -.15, SE = .08, t(161) = -1.88, p = .06, yielding partial

support for H2c. No significant relationship was observed for integrating,  $\beta = -.03$ , SE = .06, t(161) = -.47, p = .639 > .05, and avoiding,  $\beta = -.10$ , SE = .11, t(161) = -.95, p = .34 > .05.

We further analysed the relationship between each dimension of independent selfconstrual and conflict management tendencies. Results from our regression analyses revealed that the dimension of self-containment is positively related to competitive strategies like dominating,  $\beta = .17$ , SE = .07, t(161) = 2.41, p = .02 < .05, and is negatively associated with cooperative strategies like integrating,  $\beta = -.09$ , SE = .04, t(161) = -2.32, p = .02 < .05. With respect to the dimension of self-expression, our results showed a marginally significant positive effect on dominating,  $\beta = -.10$ , SE = .06, t(161) = 1.70, p = .09, and a significant negative effect on obliging,  $\beta = -.12$ , SE = .05, t(161) = -2.33, p = .02 < .05. Finally, our results also revealed a significant negative relationship between the dimension of self-interest and integrating,  $\beta = -.07$ , SE = .04, t(161) = -2.04, p = .04 < .05, a marginally significant negative relationship with compromising,  $\beta = -.09$ , SE = .05, t(161) = -1.77, p = .08, and a positive relationship with dominating,  $\beta = .25$ , SE = .06, t(161) = 4.08, p < .01. Taken together, the results from our analyses are generally in support of our hypotheses where independent self-construal is positively related with competitive conflict tendencies like dominating (H1c) and negatively related with cooperative conflict tendencies like integrating and obliging (H2c).

*Mediation Analysis*. To test our proposed mediation models (see Figure 2 and Figure 3), we utilize Hayes' (2013) PROCESS Macro for SPSS. We ran our analyses on model 4, using disciplines as predictor variable, conflict management styles as dependent variables and independent self-construal as the mediator. We also included the abovementioned control variables into our analyses.

Our analyses revealed a significant mediation effect of independent self-construal for the relationship between discipline types and dominating conflict management style,  $\beta_{indirect}$ 

= .08,  $SE_{Boot}$  = .04, 95% CI<sub>Boot</sub> [.01, .16], supporting H1. Specifically, individuals from business disciplines were found to report higher level of independent self-construal,  $\beta$  = .22, SE = .08, t(161) = 2.72, p = .01 < .05, and independent self-construal was positively associated with the use of competitive conflict management tendencies like dominating,  $\beta$  = .34, SE = .11, t(161) = 3.15, p < .01. Furthermore, we also found a significant mediation effect of self-containment on the relationship between disciplines and dominating strategy,  $\beta_{indirect}$  = .09,  $SE_{Boot}$  = .04, 95% CI<sub>Boot</sub> [.01, .18], which similarly lends support to H1. To be precise, individuals from business disciplines were found to report a higher level of self-containment vs. connection to others,  $\beta$  = .50, SE = .13, t(161) = 3.98, p < .01, and self-containment was positively associated with the use of dominating conflict style,  $\beta$  = .18, SE = .07, t(161) = 2.48, p = .01 < .05. Together, this lend support for H1 where the relationship between disciplines and competitive conflict management tendencies is significantly mediated through one's endorsement of independent self-construal.

However, we did not find any significant mediation effect of independent self-construal on the relationship between discipline and cooperative conflict management styles like obliging,  $\beta_{\text{indirect}} = -.03$ ,  $SE_{\text{Boot}} = .02$ , 95% CI<sub>Boot</sub> [-.09, .01], avoiding,  $\beta_{\text{indirect}} = -.03$ ,  $SE_{\text{Boot}} = .03$ , 95% CI<sub>Boot</sub> [-.08, .02], compromising,  $\beta_{\text{indirect}} = -.02$ ,  $SE_{\text{Boot}} = .02$ , 95% CI<sub>Boot</sub> [-.07, .02], and integrating,  $\beta_{\text{indirect}} = -.01$   $SE_{\text{Boot}} = .04$ , 95% CI<sub>Boot</sub> [-.03, .03], Hence, our findings did not yield support for H2.

#### **Discussion**

Our results from Study 1 provided support for the relationship between types of tertiary education disciplines, self-construal, and competitive conflict management styles (H1a, H1c, H1). In other words, our analyses revealed that the relationship between tertiary education discipline and competitive conflict management styles like dominating is significantly mediated by one's endorsement of independent self-construal. More precisely,

individuals from business disciplines reported a higher endorsement of independent self-construal which accounts for their greater usage of dominating conflict management styles compared to their peers from social science disciplines. This demonstrates the importance of tertiary education disciplines in influencing important psychological outcomes like how individuals construe the self which, in turn, allows us to better identify and anticipate the types of conflict management styles one may utilize. Taken together, this lends support to our assertion that tertiary education disciplines would influence the development of independent self-construal which then result in differences in the display of competitive conflict behaviours among Singaporeans with different educational background.

Importantly, we also identified which specific dimensions of independent selfconstrual could explain the relationship between tertiary education disciplines and conflict management tendencies. Our results pointed to the importance of self-containment vs. connection to others, which refers to an individual's experience of their selfhood (Vignoles et al., 2016). An individual with a dominant independent self-construal is likely to experience the self as a bounded and distinct entity. On the other hand, an individual with a dominant interdependent self-construal is likely to experience the self as being more loosely bounded, more interconnected with close others and their sense of self is built upon their relationships with others. This dimension mediated the relationship between disciplines and conflict management tendencies. More precisely, individuals from business disciplines reported a higher level of self-containment which, in turn, explains their greater use of competitive conflict management styles like dominating. This can be explained by the discipline's culture within business schools where individuals are encouraged to be independent, competitive, and differentiated from others. This environment fosters a sense of self-containment where individuals perceive the self as an independent and bounded entity that is dissociated from others which then encourage them to prioritize their self-interest over that of others. Taken

together, this finding similarly provided strong support for our arguments and allowed us to better understand how discipline could shape a specific aspect of an individual's self-construal and subsequently influence their conflict management tendencies.

However, our findings did not yield support for the relationship between types of tertiary education disciplines, independent self-construal, and cooperative conflict management style (H2). Notably, we did find partial support for H2b and H2c. Specifically, individuals from business disciplines did report a lower tendency to utilize cooperative conflict management styles like integrating and compromising than peers from social sciences disciplines (H2b). However, this did not hold for obliging and avoiding styles. This illustrates the unique impact of the various cultural influences on Singaporeans who are enrolled in tertiary education institutions. As we have posited, the disciplinary culture within social sciences is considered to be more collectivistic, and hence, we would expect individuals from social science disciplines to exhibit more cooperative conflict management tendencies like obliging. However, we only noted significant differences in the use of integrating and compromising styles, which emphasizes that individuals from social science disciplines do not entirely forgo their own interests at the expense of satisfying the other party's. Rather, it appeared that they considered the other party's interest alongside their own's and attempted to satisfy both. This demonstrates that because Singaporeans are regularly exposed to individualistic values and cultures within the society which prompts them to endorse a certain degree of independent self-construal on top of their existing interdependent self-construal, they do seek to satisfy and fulfill their own interests to a certain extent. However, one's tertiary education discipline would, importantly, account for the observed individual differences in the acquisition of independent self-construal and thereby, conflict management tendencies.

Additionally, our results also revealed marginally significant negative relationships between independent self-construal and obliging and compromising (H2c), replicating previous findings on self-construal and conflict management style (e.g., Oetzel, 1998; Oetzel & Ting-Toomey, 2003). However, we did not observe significant relationships with avoiding and integrating conflict management styles. One possible explanation could be that the use of avoiding strategy may mean different things for different individuals (e.g., Lee & Rogan, 1991). For instance, some researchers classified avoiding as a competitive behaviour (e.g., Song, Xie, & Dyer, 2000; Tjsovold & Chia, 1989) where individuals are unconcerned or show disinterest in dealing with the conflict. However, most researchers regard avoiding as a form of cooperative behaviour (e.g., Oetzel, 1998; Oetzel & Ting-Toomey, 2003) where one may control their behaviours and steer clear of potential conflicts and disagreement. As such, the association between independent self-construal and avoiding conflict management style may be less pronounced as it depends on how individuals interpret the use of this strategy.

With respect to integrating conflict management style, we did not find any relationship between independent self-construal and the tendency to utilize integration. While this is not consistent with our hypothesis, it is in line with Rahim's (1983) theoretical proposal of the dual-concern model where integrating is considered a 'win-win' strategy. Specifically, the model posits integrating style as one that reflects a high degree of concern for the self and other. As such, a higher endorsement of independent self-construal may not necessarily imply a lower use of integrating since this strategy does allow for individuals to pursue their own interests and needs which is an important concern of those who endorse high levels of independent self-construal.

Although study 1 illustrated that individuals from business disciplines are likely to acquire a higher level of independent self-construal, thereby developing dual self-construals, we did not examine their conflict management tendencies across different conflict settings.

According to past findings, individuals who acquired dual self-construals may possibly exhibit switching of behaviours depending on the contextual cues they are exposed to (e.g., Cheng & Chun, 2008; Cheng et al., 2011). In study 2, we tested if participants with dual self-construals would be more likely to switch between their conflict management tendencies when exposed to different conflict settings.

#### Study 2

In Study 2, we extend to study 1's findings concerning tertiary education disciplines, self-construal, and conflict management tendencies to examine the switching effects of dual self-construals. Specifically, we attempt to investigate if individuals from business disciplines who acquired well-developed dual self-construals are more likely to switch their conflict management tendencies across different conflict settings compared to individuals from social sciences disciplines. More precisely, we argued that when faced with a professional conflict at work (e.g., internship projects), individuals from business disciplines are more likely to exhibit competitive behaviours compared to those from social science disciplines. On the other hand, when faced with a social conflict with close others (e.g., deciding on vacation locations), they are likely to reduce their use of competitive behaviours. Importantly, when compared to their peers from social science disciplines, we do not expect any significant differences in the display of competitive behaviours to emerge between individuals from these two disciplines. This demonstrates that while business disciplines are able to adjust their conflict management tendencies across conflict settings, individuals from social science disciplines will be less likely to do so. Instead, they would consistently display cooperative conflict management tendencies regardless of the conflict settings.

#### **Methods**

Data Screening.

88 undergraduate students were recruited through Subject Pool System and received payment of \$10 for their participation. The survey was administered as an online survey where participants were allowed to complete it at their own convenience. To ensure the quality of the data collected, we first conducted a univariate screening of outliers. Our analyses revealed no distinct outliers or influential cases.

### Participants.

Our sample consisted of 88 undergraduate participants. Post-hoc power analyses conducted using G\*Power revealed that the statistical power to detect moderate effect size  $(f^2=.25)$  was .64. Participants were recruited from the Subject Pool System and received either 2 course credits or \$10 in exchange for their participation (24 males, 64 females; mean age= 22.90 years, SD = 1.57). All participants have at least a year of schooling experience within their disciplines. Among the 88 participants, 31 (35.2%) were from social sciences disciplines ( $n_{soss}=31$ ) and 57 (64.8%) were from business disciplines ( $n_{biz}=57$ ).

Switching of Conflict Management Tendencies. To measure individual's conflict management tendencies across conflict settings, we developed two measures to capture conflict behaviours in professional setting and social setting respectively (Appendix C & Appendix D). Participants were first tasked to select a choice out of three options. Following that, they were told that a member of their groups opposed to their choice and offered an alternative option. Participants are then tasked to either stick with their personal choice (i.e., compete) or to follow the choice of another person's (i.e., cooperate), when faced with: (a) a professional conflict that results from an internship project or (b) a social conflict that results from planning an itinerary for a vacation with friends. As such, our dependent variable is measured as a binary variable where one can choose to exhibit competitive behaviour by sticking to their personal choice or cooperative behaviours by switching and following the

choice of the other's. The task allows us to capture competitive and cooperative tendencies as the choice to insist on their own position in face of opposition would reflect one's prioritization of their own desires and needs over another member's from their group which can be described as a highly competitive approach where one 'insist on pursuing individual's goals' and a strong desire to 'win at any cost' (e.g., Loewenstein, 1998; Rubin et al., 1994). On the other hand, the choice to give in and follow another's choice would reflect a cooperative tendency where one shows a willingness to give in and compromise (e.g., Leung, 1997). To supplement our analysis, we also included a short open-ended question allowing participants to explain their decisions.

The following variables were analyzed as control variables to ensure that there will no potential confounds.

Personality variables. To measure individual's traits, we utilized the Ten-Item

Personality Inventory (TIPI) developed by Gosling, Rentfrow, & Swann (2003). It consists of

10 items on a 7-point Likert scale (1=Strongly Disagree, 7=Strongly Agree) (Appendix E)

Social Desirability Bias. To measure one's social desirability bias, we administered the 13-Item Short Form Social Desirability Scale developed by Crowne & Marlowe (1960). It consists of 13 items where participants rated each item as either 'true' or 'false' (Appendix F).

## Procedures.

Participants signed up for the survey through subject pool system for \$10 in exchange for their participation. After signing up, they were sent an online survey link and were tasked to complete the survey before a 2-3 days deadline. The survey included a series of questions asking about their self-construal patterns, conflict management tendencies, and other general behaviours. After completing the survey, we collected some demographic information from the participants and debriefed them accordingly.

# Results

**Table 3: Correlation Matrix** 

	1	2	3	4	5	6	7	8	9	10
1. Disciplines	-									
2. Competition (Workplace)	.02	-								
3. Competition (Social)	11	05	-							
4. Extraversion	09	.16	.21	-						
5. Agreeableness	15	05	05	11	-					
6. Conscientiousness	05	04	.07	.02	.12	-				
7. Emotional Stability	03	.10	.16	.11	.29**	.34**	-			
8. Openness	03	.26*	.17	.42**	.06	01	.22*	-		
9. Social Desirability	.19	.06	.03	.21	.20	01	.35**	.26*	-	
10. Gender	.03	20	12	08	09	14	51**	25*	25*	-
11. Age	.01	.08	.15	.22*	.09	.16	.34**	.17	.02	51**

**Table 4: Descriptive Statistics of Predictors & Covariates** 

	M	SD	Skewedness	Kurtosis
Predictor Variables &				
Mediator				
Majors (% Business	64.80	-	-	-
Disciplines)				
Covariates				
Extraversion	3.91	1.49	.16	80
Agreeableness	5.13	1.00	33	77
Conscientiousness	4.69	1.12	06	45
Emotional Stability	4.51	1.50	35	49
Openness	4.60	1.15	12	47
Social Desirability	5.15	1.96	.24	69
Gender (% Males)	27.27	-	-	-
Age	22.90	1.58	-	-

Referring to Table 3, we observe significant correlations between personality variable of 'openness' and competitive behaviours at the workplace. As such, we controlled for it later in our analyses. Table 4 reflects the descriptive variables of our key statistics. All the variables are normally distributed.

Disciplines, Conflict Behaviours and Conflict Settings. Our analyses revealed that 59.6% of individuals from business disciplines chose to behave competitively in the professional conflict condition as compared to 40.4% of them who indicated so in the social conflict condition. On the other hand, 58.1% of individuals from social science disciplines chose to behave competitively in professional conflict setting, while a lower percentage of 51.6% indicated so in the social conflict condition.

We utilized generalized estimating equations (GEE) methodology to estimate the effects of tertiary education disciplines on conflict management tendencies for both professional and social conflict settings. Specifically, we indicated disciplines as our independent variable, and conflict behavior (i.e., binary: compete vs. cooperate) as our outcome variable. We also included the personality variable of openness as our covariate (see Table 3).

Professional Conflict Setting. Results from our analysis revealed that the types of disciplines did not significantly predict one's use of competitive behaviour within the professional conflict setting,  $\beta = .33$ , SE = .36, p = .37. Although the trend was consistent with our prediction, such that students belonging to business discipline exhibit more use of competitive behaviour than students belonging to social science discipline, our results failed to find support for H3a.

Social Conflict Setting. Results from our analysis revealed that the types of disciplines did not significantly predict one's competitive behaviour within social conflict setting,  $\beta = -0.07$ , SE = .35, p = .86. This is in support of H3b where we hypothesized that individuals from business disciplines will not display more competitive conflict behaviours than individuals from social science disciplines when met with a social conflict.

Interaction between disciplines and conflict setting. To test for the interaction effects between disciplines and conflict settings on conflict tendencies, we further included an interaction term into our analysis. Results revealed no significant interaction between disciplines and conflict setting,  $\beta = .521$ , SE = .63, p = .41. As such, we were unable to find support for H3.

#### **Discussion**

Taken together, our results did not find any significant interaction effect between

types of disciplines and conflict settings on one's conflict management tendencies.

Individuals from business disciplines were not more likely to switch their conflict management tendencies across professional and social context relative to individuals from social sciences. However, our analyses did reveal that individuals from business disciplines were not more competitive than individuals from social science disciplines when met with social conflicts, consistent with H3b. A potential reason as to why we did not find our hypothesized results could be that the sample size of our study is relatively small. As seen from the post-hoc power analyses, the design of current study is underpowered and may not be sufficient to detect any effects. Furthermore, our dependent variable is measured as binary variable. One possible implication would be that the binary variable results in an underestimation of variation in outcome between individuals from different disciplines (e.g., Altman & Royston, 2006).

#### General Discussion

Present paper explored the relationship between dual self-construal and conflict management within Singapore. We first established Singapore as an ideal location to investigate the development of dual self-construals as it is a unique society that is influenced and shaped by both its collectivistic roots and individualistic influences. Specifically, Singaporeans are exposed to these influences at an early age through socialization practices as well as formal education and training, unlike other societies where such exposure may be limited. While it is argued that institutions like schools have their own distinctive cultures, little is known about how would that go on to impact on one's self-construal. Present paper attempts to better clarify this link by narrowing the scope of our analysis to study a key developmental stage for young Singaporeans, and that is their enrolment into tertiary education institutions. We examined the effects of tertiary education disciplines on one's self-

construal and posit that this effect could exert an influence on conflict management tendencies.

Our findings demonstrated that tertiary education discipline was indeed associated with the endorsement of independent self-construal among Singaporeans. Individuals enrolled in business disciplines were more likely to endorse a higher independent self-construal and thereby, displayed a greater tendency to utilize competitive conflict management styles like dominating than peers from social science disciplines. Specifically, individuals from business disciplines reported a higher level of self-containment vs. connection with others, which then explained their greater use of competitive conflict management styles like dominating. However, the setting of the conflict did not prompt these individuals with dual self-construals to utilize different approaches towards managing of conflicts.

The key theoretical contribution of present paper is in its efforts in extending to the existing literature on self-construal and conflict management tendencies by, first, introducing the concept of dual self-construals and then, examining it jointly with the influence of contextual factors like tertiary education disciplines. While past studies have primarily focused on self-construal and conflict management tendencies (e.g., Oetzel, 1998; Oetzel & Ting-Toomey, 2003), present paper introduced the concept of dual self-construals and investigated its relationship with conflict management tendencies. Furthermore, we also examined the acquisition of dual self-construal within modernizing collectivistic societies like Singapore by drawing attention to the influence of contextual and institutional factors like tertiary education disciplines in facilitating the development of self-construals which is something that is often overlooked by researchers in the field.

Our findings demonstrate that disciplinary culture does have an impact on one's sense of self which hints at the importance of one's experiences (e.g., schooling experience) in

shaping one's selfhood. Even though it is clear that nation's culture may promote the development of a dominant self-construal over another, the results from present studies emphasize the importance of subcultures within institutions in exerting a simultaneous effect on one's self-construal. Crucially, it suggests that one's self-construal can be seen as malleable and susceptible to influences from various experiences.

Another important implication of our findings would concern the benefits of adopting dual self-construals. Our results showed that the endorsement of independent self-construal helped to explain the greater use of dominating style as a conflict management strategy for individuals from business disciplines. However, we did not find this mediation effect for cooperative conflict management styles. This illustrates that the development of dual self-construal is associated with a greater use of competitive conflict management style while still allowing one to maintain their tendency to utilize cooperative conflict management styles. Considering such findings, it is likely that individuals with dual self-construal possess knowledge and experience in utilizing these different styles to manage conflicts. In other words, the development of dual self-construals may allow individuals to acquire the knowledge and information associated with independent self-construal while still maintaining that of their interdependent self-construal. Thus, having well-developed dual self-construals could yield potential benefits for individuals allowing them to utilize the knowledge and information from their respective selves to enhance psychological outcomes.

In a more practical perspective, these findings are essential in shaping our understanding of how Singaporeans with different educational backgrounds will then interact with one another. Indeed, for parties who are involved in a conflict and were both from business disciplines, we may expect them to behave in a highly competitive manner. This is especially common in workplace where young graduates from similar tertiary education background may display a strong sense of competitiveness. However, for parties that were

from social science disciplines, they are likely to respond to conflicts within the workplace in a very different manner and may have different priorities. For instance, they may strive to maintain harmony among their coworkers and display the tendency to accommodate to other parties in the conflict. In this case, the experience provided by different types of tertiary education disciplines could hence influence the dynamics of the interactions among individuals which can affect many important personal or organizational outcomes. Crucially, this line of research also contributes to the understanding of informational diversity on workgroup outcomes. Previous studies suggest that informational diversity (i.e., differences in knowledge and perspectives) may benefit team performance, especially when its associated with innovation and complex problem solving (Williams & O'Reilly, 1998) or making of comprehensive strategic decisions (e.g., Mello & Ruckes, 2006). It has also been found to facilitate learning and accumulation of new knowledge and skills (Ackerman & Humphreys, 1990). However, it is crucial for one to anticipate potential conflicts within groups and identify methods to resolve such conflicts in order to reap the benefits of information diversity. In this case, our findings would provide important implications in identifying the context and situation surrounding the conflicts (e.g., business students becoming very dominating while social science students are too accommodating) and may allow practitioners to better anticipate potential problems and disagreements within groups and sought for a way to resolve the conflict in a just manner. Finally, many of these young graduates would be entrusted with key leadership roles in the future. They will take over important roles in the society and their decisions and behaviours can have severe societal impacts. As such, having the knowledge of how these individuals may deal with conflicts would be imperative when it comes to selection of leader and leadership development.

#### **Limitations & Future Directions**

A limitation of our study would be that we are unable to make any causal claims between tertiary education discipline and the development of independent self-construal. This is so as Study 1 was designed as a correlational study where participants were asked to report their self-construals and conflict management tendencies. Study 2, on the other hand, is a quasi-experimental design where participants were exposed to different conflict settings and asked to report their conflict management tendencies. The inability to utilize a full experimental design means that there is a possibility of selection effects. In other words, it is possible that individuals with a higher independent self-construal may have chosen to enroll in business disciplines than social science disciplines. In this case, we are unable to discern the effects of disciplinary cultures on the acquisition of independent self-construal. As such, we recommend for future researchers to utilize longitudinal studies to investigate this phenomenon and better clarify the links between tertiary education disciplines and the development of dual self-construals. A longitudinal design will allow researchers to examine the changes in self-construal patterns across time, which can lend further support to the causal relationship between tertiary education disciplines and self-construal patterns among Singaporeans.

Our study serves also serves as an initial comparison of how different types of tertiary education disciplines can influence the development of dual self-construals and subsequently, exert an impact on conflict management tendencies. Our findings provide a promising avenue for researchers who are keen to explore the interplay between education, self-construal, and psychological outcomes like conflict resolution. Future studies may consider examining a wider range of disciplines (e.g., engineering) to better discern the effects of disciplinary cultures on one's perception of the self. Interestingly, some studies that explored the concept of gender-professional identities also demonstrated how females belonging in STEM fields

may experience conflicts between their gender and professional identities. In light of the present findings, it would be interesting and of great significance for future studies to examine the disciplinary cultures within STEM fields and how it may exert an influence on individual's self-construal and consider how social roles like gender may moderate the its effect on the acquisition of dual self-construals. For instance, some studies have shown that females tend to endorse a stronger relational interdependence self-construal (e.g., Cross & Madson, 1997; Markus & Oyserman, 1989) where they are more communally-oriented compared to males. Therefore, it is possible that females in STEM fields may take longer to acquire dual self-construals or to manage these different self-construals which could implicate their outcomes at work.

We also urge future researchers to consider the priming of dual self-construals. While the priming of a single self-construal is well-documented (e.g., Brewer & Gardner, 1996; Gardner et al., 1999; Kuhn & McPartland, 1954; Trafimow et al., 1991), no studies have yet examined the possibility of priming both self-construals simultaneously and observing its effects on individuals who endorse dual self-construals. Importantly, Cheng, Sanchez-Burks, & Lee (2008) found that bicultural individuals are able to access and apply knowledge from both cultures when they are exposed to both cultural primes simultaneously. This, in turn, allowed them to produce more creative and innovative ideas. However, this effect is contingent on one's ability to integrate their dual cultural identities, in other words, their identity integration (II) (Benet-Martinez & Haritatos, 2005). Extending present paper to works on identity integration, the next step would concern examining the integration process for individuals with dual self-construals which may then moderate its effects on important psychological outcomes. Building on research on II, individuals who are able to integrate their independent and interdependent selves effectively may exhibit a stronger display of switching behaviours (e.g., Benet-Martinez et al., 2002; Cheng, Lee, & Benet-Martinez,

2006). However, for those who are less able to integrate their dual selves, we may expect them to exhibit contrast effects. In other words, the development of dual self-construals should be examined in tandem with the ability to integrate and utilize the dual selves to account for its effects on important psychological outcomes.

Finally, future research could also consider how tertiary education disciplines and dual self-construals could influence other important psychological outcomes in organization context. For instance, literature surrounding group creativity often highlight the importance of creativity stages like idea generation and idea selection. Some researchers have argued that the values of both individualism and collectivism may contribute across different stages of creativity under different types of circumstances. (e.g., Flynn & Chatman, 2001; Goncalo & Staw, 2004; O'Reilly & Chatman, 1996). Considering this along with the concept of dual self-construals, future researchers could direct this line of research to examine how priming of individualistic or collectivistic norms within a workgroup may lead individuals with dual self-construals to behave differently and how would that be constructive to group creativity across different brainstorming stages. For instance, it is argued that individualistic norms and settings may encourage creativity due to the reduced pressure for one to conform to the majority (e.g., Nemeth, 1985). In this case, it may be meaningful for individuals with dual self-construals to activate their independent self-construal during the idea generation stage so that they would feel less compelled to conform to the majority's position and contribute new and provoking ideas to the group. On the other hand, the interdependent self-construal would be important when it comes to idea selection where the group must come to a consensus on a single idea to work on. Individuals with dual self-construal may then find it useful to utilize their interdependent self-construal to guide them in selecting an idea that would satisfy the needs of their groups. On a more practical perspectives, research could also contribute to group formations by identifying what kind of group composition (e.g., number of business

students and social science students) would aid in stages of idea generation and idea selection respectively. This would allow importantly contribute to literature on creativity and self-construal in modernizing societies and allow us to gain insights on how individuals who acquired dual self-construals could activate different self-construal depending on situations to guide their behaviours, facilitating creativity processes.

On a whole, present paper established that the individual differences in self-construal patterns existing within the Singaporean society are fostered by one's experience in tertiary education. Specifically, the tertiary education discipline one is enrolled in could importantly influence the way they construe the self which, in turn, explains their behaviours when dealing with conflicts.

### **Appendices**

#### Appendix A: Self-Construal Scale (Vignoles et al., 2016)

Below are some statements of what you might be like. Probably some will describe you well and others will not describe you well.

Read the following statements carefully and rate how well do they describe you, on a scale of 1 (Not at all) to 7 (Exactly).

Not at all	Slightly	A little	Moderately	Quite well	Very well	Exactly
1	2	3	4	5	6	7

### Difference versus similarity (E-W) (correlated to I-C)

You like being different from other people.

You see yourself as unique and different from others.

Being different from others makes you feel uncomfortable.

You try to avoid being noticeably different from others.

## Self-containment versus connection to others (correlated to I-C)

Your happiness is unrelated to the happiness of your family.

If someone in your family is sad, you feel the sadness as if it were your own.

#### Self-direction versus receptiveness to influence (correlated to I-C)

You prefer to do what you want without letting your family influence you.

You always ask your family for advice before making a decision.

# Self-reliance versus dependence on others

You prefer to rely completely on yourself rather than depend on others.

You try to avoid being reliant on others.

You prefer to ask other people for help rather than rely only on yourself.

### Consistency versus variability

You behave in the same way even when you are with different groups of people.

You always see yourself in the same way even when you are with different people.

You behave the same way at home and in public.

You act very differently at home compared to how you act in public.

You see yourself differently in different social environments.

## <u>Self-expression versus harmony (E-W) (correlated to I-C)</u>

You prefer to say what you are thinking, even if it is inappropriate for the situation.

You show your inner feelings even if it disturbs the harmony in your family.

You try to adapt to people around you, even if it means hiding your inner feelings.

## <u>Self-interest versus commitment to others</u>

You value personal achievements more than good relations with the people close to you.

Your own success is very important to you, even if it disrupts your friendships.

You value good relations with the people close to you more than your personal achievements.

## Appendix B: Rahim's Organizational Conflict Inventory-II (Rahim, 1983)

Please check the appropriate box after each statement, to indicate how you handle your disagreement or conflict with others. Try to recall as many recent conflict situations as possible in ranking these statements.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Disagree	2	1101 Disagree	Λ	5
1	2	3	4	3

I try to investigate an issue with the others to find a solution acceptable to us.

I generally try to satisfy the needs of others.

I attempt to avoid being "put on the spot" and try to keep my conflict to myself.

I try to integrate my ideas with those of the others to come up with a decision jointly.

I try to work with the others to find solution to a problem that satisfies our expectations.

I usually avoid open discussion of my differences with the others.

I try to find a middle course to resolve an impasse.

I use my influence to get my ideas accepted.

I use my authority to make a decision in my favor.

I usually accommodate the wishes of the others.

I give in to the wishes of the others.

I exchange accurate information with the others to solve a problem together.

I usually allow concessions to the others.

I usually propose a middle ground for breaking deadlocks.

I negotiate with others so that a compromise can be reached.

I try to stay away from disagreement with the others.

I avoid an encounter with the others.

I use my expertise to make a decision in my favor.

I often go along with the suggestions of the others.

I use "give and take" so that a compromise can be made.

I am generally firm in pursuing my side of the issue.

I try to bring all our concerns out in the open so that the issues can be resolved in the best possible way.

I collaborate with my peers to come up with decisions acceptable to us.

I try to satisfy the expectations of the others.

I sometimes use my power to win a competitive situation.

I try to keep my disagreement with the others to myself in order to avoid hard feelings.

I try to avoid unpleasant exchanges with the others.

I try to work with the others for a proper understanding of a problem.

## Appendix C: Professional Conflict Setting

For this task, you will be asked to read a scenario regarding an internship group project. Please imagine yourself as part of the group and respond to the questions honestly. Your responses are strictly anonymous.

As part of your internship requirement, you are tasked to work on a final internship group project. This group project involves presenting on something you have learned from your internship experience with the company. This project will be evaluated by your supervisor and feedback will be given to your school regarding your internship performance. As such, this project is very important to you and you hope to deliver a good presentation. You are tasked to work with 4 other interns whom you have never seen or met before. Your group exchanged brief introduction and decided to meet the following day to decide on a topic to work on. Your supervisor provided a few options that your group could present on:

- a) Workplace Fairness
- b) Diversity at Workplace
  - c) Workplace Civility

During the meeting, you shared your preferred choice. Please indicate which option are you most likely to go for:

Workplace Fairness
Diversity at Workplace
Workplace Honesty

After sharing your preferred choice, another intern (Intern A) from your project group voiced an alternative opinion. Intern A felt that (*piped text*) was a better topic and wanted to the group to work on it for the project.

Other interns did not share their preferences or had no preference. Thus, the group is divided between your preferred choice (*piped text*) and Intern A's preferred choice (*piped text*). The group has to make a decision by the end of this meeting.

The group members all agreed that they want to do well for this project as it will affect their internship evaluation and prospective employee opportunities. Faced with this situation, please indicate which option will you choose:

- (a) Your Choice (piped text)
- (b) Intern's A Choice (piped text)

Please spend some time to describe how did you feel about making this decision and why did you eventually decide on this option. (Please do not write any sensitive or personal information)

## Appendix D: Social Conflict Setting

For this task, you will be asked to read a scenario regarding a group of close friends planning a vacation trip. Please imagine yourself as part of the group and respond to the questions honestly. Your responses are strictly anonymous.

As the semester is finally ending, you and 4 of your close friends are planning to travel together for a short vacation. This vacation is very important to you and your group of friends as it is the only time when you are all available to catch up and unwind after a busy semester. Due to everyone's busy schedules, your group of friends have not met up for a long time. As such, everyone is looking forward to bonding with each other and having a good time together through this trip.

Recently, you just met up with your friends to plan for the trip. As a group, you and your friends have narrowed down to 3 possible vacation spots (listed below). Your group could select one of the options below:

- a) Krabi
- b) Phuket
  - c) Bali

During	the meeting,	you shared that	at your pref	ferred cho	ice. Please in	dicate which	h option are
you mo	ost likely to go	o for:					
	Krabi						

☐ Phuket
☐ Bali

After sharing your preferred choice, one of your friends (Friend A) voiced an alternative opinion. Friend A felt that (*piped text*) was a better vacation destination and wanted the group to select *piped text*.

The rest of your friends did not share their preferences or had no preference. Thus, the group is divided between your preferred choice (*piped text*) and Friend A's preferred choice (*piped text*). Your group has to make a decision by the end of this meeting.

The group agreed that they want to select the most ideal destination as it is a good opportunity to travel together. Faced with this situation, please indicate which option will you choose:

- (a) Your choice (piped text)
- (b) Friend A's choice (piped text)

Please spend some time to describe how did you feel about making this decision and why did you eventually decide on this option. (Please do not write any sensitive or personal information)

# Appendix E:Ten-Item Personality Inventory (TIPI) (Gosling, Rentfrow, & Swann, 2003)

Please rate yourself on a scale of 1 (Strongly Disagree) to 7 (Strongly Agree) with regards to the personality traits below:

Strongly Disagree						Strongly Agree
1	2	3	4	5	6	7

Extraverted, enthusiastic.

Critical, quarrelsome

Dependable, self-disciplined

Anxious, easily upset

Open to new experiences, complex

Reserved, quiet

Sympathetic, warm

Disorganized, careless

Calm, emotionally stable

Conventional, uncreative

## Appendix F: 13-Item Short Form Social Desirability Scale (Crowne & Marlowe, 1960)

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

- It is sometimes hard for me to go on with my work if I am not encouraged.
- I sometimes feel resentful when I don't get my way.
- On a few occasions, I have given up doing something because I thought too little of my ability.
- There have been times when I felt like rebelling against people in authority even though I knew they were right.
- No matter who I'm talking to, I'm always a good listener.
- There have been occasions when I took advantage of someone.
- I'm always willing to admit it when I make a mistake.
- I sometimes try to get even rather than forgive and forget.
- I am always courteous, even to people who are disagreeable.
- I have never been irked when people expressed ideas very different from my own.
- There have been times when I was quite jealous of the good fortune of others.
- I am sometimes irritated by people who ask favors of me.
- I have never deliberately said something that hurt someone's feelings.

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