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Perception of norm clarity and punishment in affecting value-expressive behaviors

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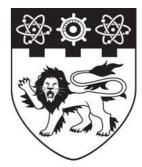
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NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

PERCEPTION OF NORM CLARITY AND PUNISHMENT IN AFFECTING VALUE-EXPRESSIVE BEHAVIORS

MENGRU LIU

SCHOOL OF SOCIAL SCIENCES

PERCEPTION OF NORM CLARITY AND PUNISHMENT IN AFFECTING VALUE-

EXPRESSIVE BEHAVIORS

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SCHOOL OF SOCIAL SCIENCES

A thesis submitted to the Nanyang Technological University

in partial fulfillment of the requirement for the degree of

Doctor of Philosophy

Statement of Originality

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Jan 19, 2019

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May

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ABSTRACT

This research examines how impacts of norm perceptions on behaviors may depend on the driving forces of the behaviors. I propose two types of norm perceptions, norm clarity and punishment, as two features of tightness of norms. The former concerns whether individuals perceive there is clear expectation of behavior and the latter concerns individuals' perceptions of how severe the social disapproval is for norm violation. Whereas individuals in tighter societies are expected to display norm adherence, little is known on how individuals' perceptions of norm clarity and punishment might affect their decisions in norm adherence for value-expressive behaviors. Social-focused values concern how individuals relate socially to others. I expect engagement in behaviors expressing social-focused values to be predicted by perceived norm clarity and punishment because individuals would be concerned about the perceptions of social others. Personal-focused values concern individuals' expression of personal preferences. I expect the effect of perceived clarity and punishment on engagement in behaviors expressing personalfocused values to be moderated by the extent to which norm adherence would fulfill the individual's personal needs. Five studies were conducted to test the hypotheses. Studies 1 and 2 found that in Singaporean culture, perceived clarity and punishment predicted engagement in behaviors expressing social-focused values. However, for behaviors expressing personal-focused values, there was no effect of perceived punishment, and the predictive effect of perceived clarity was only apparent for individuals high in need for closure. Study 3 extended the findings to the cultural context of friendship group. Study 4 suggested that perceptions of the personal and social focus motivation were insufficient to drive the different influences of norm perceptions on personal-focused behaviors and social-focused behaviors. Study 5 manipulated the motivation of a norm to be either personally focused or socially focused and replicated the findings from

Studies 1, 2 and 3. The research sheds lights on the motivational mechanism underline the

impact of perceived norm clarity and punishment on value-expressive behaviors.

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CHAPTER I: INTRODUCTION

Perceptions of the norm can be important determinants of individuals' behaviors (Ajzen, 1991). What types of norm perceptions affect individuals' behaviors and why they are effective? I adopt the definition of the norm as "shared behavior expectations by members of a group" (Aarts & Dijksterhuis, 2003; Axelrod, 1986; Burke & Peyton-Young, 2011). For instance, in Singapore, giving seats up for those in need in public transportation is a widely shared behavioral expectation. People may perform the behavior because they see a priority seating sign, which makes the norm clear to them. It is also likely that people perform the behavior for fear of discrimination from surrounding people or even online condemnation. The example illustrated two types of norm perceptions proposed in the current research: norm clarity and punishment. *Norm clarity* refers to perceptions of whether there is clear expectation of behavior, whereas *punishment* refers to perceptions of how severe the social disapproval is for norm violation (Gelfand et al., 2011; Pelto, 1968). I believe that perceiving a norm as clearly expected and severely enforced impose normative pressures on individuals' behaviors.

However, I contend that to what extents do individuals affected by the normative pressures from perceived clarity and punishment may depend on the driving value of the behavior. Besides giving seats to those in need, there is a wide range of behaviors in daily life that may be subjected to normative influences, such as interpersonal contact, holiday celebration, dating, choosing major or career path and so forth. To systematically examine how influences of norm clarity and punishment on different behaviors are affected by their driving values, I categorized behaviors investigated in the current research into either expressing social-focused or personal-focused values. Social-focused values are concerned with how individuals maintain social relationships with others (Schwartz, 1992; Schwartz et al., 2012). I posit engagement in

behaviors expressing social-focused values to be predicted by perceived norm clarity and punishment because individuals would be concerned about the perceptions of social others. By contrast, personal-focused values are concerned with concern individuals' expression of personal preferences (Schwartz, 1992; Schwartz et al., 2012). I posit that the effects of perceived clarity and punishment on engagement in behaviors expressing personal-focused values to be moderated by the extent to which norm adherence would fulfill the individual's personal needs.

To conclude, the current research examines how norm clarity and punishment affect individuals' behaviors expressing different values, and whether they differ in the underline motivational mechanisms. Studying norm clarity and punishment can contribute to the field of social influence by providing a new angle of norm perceptions to better understand individuals' behaviors. Moreover, it helps to elucidate the extent to which norm perceptions affect different behaviors, and whether there is a pattern which can be explained. Also, probing into the motivational mechanisms underline the normative influences from norm clarity and punishment will on the other hand expand the existing understanding of the two constructs in the tightness literature. In addition, pragmatical benefits from this study include the potential contributions for policy makers. For example, policy makers can be inspired by including clarity and punishment in the strategy to facilitate public compliance, and innovating flexible policies based on their driving forces. The first chapter begins with specifying the meaning of norm. Then, I will elaborate on norm clarity and punishment in the literature, and how they relate to norm adherence. I will also explicate relations between value and behavior, and introduce the theory of human values (Schwartz, 1992) as a basis for understanding value-expressive behaviors, which includes the categorization of social-focused values and personal-focused values. After that, I will propose how norm clarity and punishment impacts behaviors expressing social-focused

values and personal-focused values respectively, followed by two personal needs potentially fulfilled by norm adherence. Finally, I will recap my hypotheses and provide an overview of the five studies conducted to examine the proposed hypotheses.

Norm Perceptions: Clarity and Punishment

Norm

I define the norm in the study as expectations of behaviors shared by members in a culture (Aarts & Dijksterhuis, 2003; Axelrod, 1986; Burke & Peyton-Young, 2011). Cultural norms include shared ideas, beliefs, representations and behavioral expectations in a culture (Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010; Frese, 2015; Rohner, 1984). I place a premium on behavioral component of cultural norms for the reason that how individuals perceive others setting up expectations for their behaviors is supposed to be the factor with the most direct influences on individuals' behaviors. A variety of behavioral norms have been studied by a large body of previous researches, including littering, recycling, energy use, alcohol consumption, drug use, socially responsible behavior and so forth (e.g. Donaldson, Graham, & Hansen, 1994; Larimer & Neighbors, 2003; Neighbors, Larimer, & Lewis, 2004; Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007).

The norms in the current research concern individuals' perceptions of how others in the culture expect them to behave. This was also referred to *perceived norm* in the literature (Rimal & Real, 2005). Norms could exist both at a cultural level and an individual level (Schwarz, 2014; Uz, 2015). Norms operated at the cultural level are the actual sharedness of individuals' expectations of what was culturally construed and transmitted (Arrow & Burns, 2004; Hofstede, 2003). Perceived norm, on the other hand, existed at the individual level, which referred to individuals' understanding of the shared expectations and whether they perceive the collective

others would endorse the norm. Their perceptions may or may not be accurate. Individuals in the culture may lack accurate and adequate knowledge of the actual rates of shared behaviors or values. The example of pluralistic ignorance (O'Gorman, 1988; Prentice & Miller, 1993) and false consensus (Ross, Greene, & House, 1977) helped illustrate individuals were not particularly proficient at inferring the norm. Pluralistic ignorance is incorrectly perceive a norm which is not actually expected by others, and false consensus is incorrectly perceive that most others expect in the same way as the individual. Individuals' subjective perceptions of the actually shared expectations usually derive from selected normative information based on their unique experiences or experiences of surrounding people (Tankard & Parluck, 2016). Given that individuals usually lack sufficient information to infer the actual norm, individuals' perceptions of norms can be more illuminating in guiding their behaviors. Therefore, I limited my interest construct to the individual level of the norm, as I believe tapping into individuals' perceptions about the norms would be valuable to understand and explain their own decisions in norm adherence.

Other types of the norm in the literature

Besides defining what it is, distinguishing the norm to be examined with other types of norms in the literature aids better understanding of the norm in the current research. In the literature, a myriad of terms have been used to describe the norm, including descriptive and injunctive norms (Cialdini, 1990; Cialdini & Trost, 1998; Gelfand & Harrington, 2015), subjective norms (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), normative influences (Cialdini, Reno, & Kallgren, 1990; Deutsch & Gerard, 1955), social influences (Rice, 1993) or simply social norms (Cialdini & Trost, 1998).

One term that has been largely explored is the descriptive norm versus injunctive norm. Cialdini, Reno, & Kallgren (1990) defined the descriptive norm as individuals' perceptions of "the most common actions actually exhibited in a social group", and the injunctive norm as individuals' perceptions of "how people in a social group ought to behave". The norm in the current research differs from the descriptive norm regarding that norms in the current research are concerned with individuals' perceptions of expectations from social others, whereas descriptive norms are concerned with individuals' perceptions of actual behaviors performed by social others. Meanwhile, injunctive norms are concerned with what individuals feel to be right based on their moral beliefs, whereas norms in the current literature do not involve the element of moral obligation because expectations from others are not necessarily perceived to be right.

Another commonly studied term is the subjective norm, which was proposed by Fishbein and Ajzen in 1975. The subjective norm was defined as how individuals perceive that people whose opinions matter most to them expect them to behave (Fishbein & Ajzen, 1975). The norm in the current research differs from the subjective norm as it concerns perceived expectations from social others in the culture instead of the important others. Unlike measuring perceptions of important referents, norms in the current research will be measured by aggregating individuals' perceptions of what most people in the culture expect them to behave. Perceived norm clarity and punishment are to be examined in the same manner. Norm clarity concerns how clear the norm is expected by social others in the culture, and perceived punishment deals with social disapproval which comes from social others in the culture.

Norm clarity and punishment in tightness-looseness dimension

The terms "norm clarity" and "punishment" were originally used as two key components in differentiating cultures in tightness-looseness dimension (Gelfand, Nishii, & Raver, 2006;

Gelfand et al., 2011; Pelto, 1968; Triandis, 1989). Pelto (1968) was the first to propose the index of tightness-looseness and documented the variation among traditional societies in their expression of and adherence to social norms. In tight cultures, such as Pueblo Indians, Hutterites, Japanese and other agriculture societies, norms were expressed very clearly and unambiguously, and severe sanctions were imposed on those who deviated from norms. By contrast, in loose cultures, such as Skolt Lapps of Northern Finland, Thais and other hunting or fishery societies, norms were expressed through a wide variety of alternatives, and there was a high tolerance for norm violation (Pelto, 1968).

Gelfand et al. (2011) systematically examined the tightness-looseness dimension in modern societies. Researchers defined the "tight" culture as "have clearly-defined norms and a low tolerance of deviant behavior" and "loose culture" as "have ambiguous norms and a high tolerance of deviant behavior" (Gelfand et al. 2011, p.1100). 6823 respondents from a wide range of occupations in 33 nations were assessed about their perceptions of whether the norm in their nation is pervasive, clear, and imposed with social disapproval. Results showed that the Pakistan, Malaysia and India ranked among the tightest societies, whereas the societies of Ukraine, Estonia and Hungary were ranked among the loosest (Gelfand et al. 2011).

Though not directly tapping into the relationship between the two components and norm adherence, researchers agreed that tight cultures characterized with more clear norms and severe punishment in general involve strong norm enforcement, more compliance, order, discipline, behavioral inhibition and less deviance. In contrast, loose cultures, which involve more ambiguous norms and high social tolerance, are featured with loose organization, considerable degree of latitude, more variability, lack of formal authority, and weak cultural commitment (Carpenter, 2000; Gelfand et al. 2011; Pelto, 1968; Triandis, 1989; Uz, 2015). That is to say,

clarity and punishment, as two features of the culture, enforce individuals in the culture to comply with cultural norms in general.

However, norms vary much within cultures (Fischer & Schwartz, 2011). Gelfand, Harrington & Jackson (2017) admitted the norm variation within tight cultures or loose cultures. Tight cultures, such as Japan, allowed much latitude in drinking. By contrast, loose cultures, such as Israel, attached great importance to national identity and family size. No matter in tight cultures or loose cultures, there were tight norms with high clarity and punishment as well as loose norms with low clarity and punishment.

As tight cultures involve more norm adherence, do all tight norms within a culture also relate to more norm adherence? In the extant tightness-looseness measurement, individuals were asked to refer to all norms in a culture as a whole and rated how clear and severely imposed they perceive all norms in general in the culture. In tight cultures, norms were generally clearly expected and norm violations were severely punished. Clarity and punishment, as two elements featuring norms in general in the culture, were effective in regulating individuals' behaviors and facilitating norm adherence (Gelfand et al., 2011). Nevertheless, little is known about whether clarity and punishment could also be used to explain norm adherence when the two elements are regarded as features of specific norms varying in clarity and punishment within a culture. Do all norms high in clarity and punishment regulate individuals' behaviors more? The current research was aimed to fill the research gap by considering clarity and punishment as two features of specific norms and examining their impacts on norm adherence. It is worthwhile examining whether norms high in clarity and punishment also relate to more norm adherence and whether the relationship varies across norms, which will shed light on how features of norm perceptions exert normative influences on individuals' behaviors.

Norm clarity and punishment

To investigate how impacts of norm clarity and perceived punishment on adherence to different norms, we consider norm clarity and perceived punishment as two components of perceptions of a cultural norm, instead of cultures. Following Pelto (1968) and Gelfand et al. (2011), I define *norm clarity* as the extent to which individuals perceive the norm be clearly expected by the collective in a certain culture. Cultural norms with high clarity provide sufficient information about what is appropriate and what is not appropriate for given situations with clear expectation and understanding.

Pelto (1968) and Gelfand et al. (2011) defined punishment as the severity of sanctioning for deviance from norms. I narrowed the sanction to social disapproval in the extant research both in conceptualization and operationalization. *Punishment* is defined as the extent to which the social disapproval from social others is expected for deviance from norms in a certain culture. Norms with high perceived punishment suggest serious social disapproval for failing to follow the norm. The form of punishment was narrowed to social disapproval because our research is focusing on norms that are primarily social in nature. Norms are socially constructed by group members based on group consensus in a culture, which are supposed to direct and constrain individuals' behaviors through collective power. Punishments should also come from the social network. Violating a norm accepted and expected by others in a culture naturally incur disapproval from others. Thus, disapproval from social others is supposed to be the primary and most naturally occurring form of sanctioning for norm violation applicable to all norms. A variety of punishments for norm violation exist across norms. For example, bringing durian to the MRT in Singapore incurs a penalty of 500 dollars, cheating in the exam results in a fail grade, and staying up brings about an unhealthy body. Meanwhile, performing those behaviors

expose oneself to criticism and censure from others. Being socially expected rules of behaviors, norms impose punishment in the form of social disapproval on all deviant behaviors. Violating socially agreed norms, regardless of what the norm is, should lead to social disapproval. As a matter of fact, the perceived punishment in Gelfand et al.'s study, though not explicitly stated, was also measuring individuals' perception of social disapproval (e.g., "In this country, if someone acts in an inappropriate way, others will strongly disapprove"; p.1103). Therefore the anticipation of social disapproval is the only form of punishment I measure in the present research.

Norm clarity and punishment as two distinct constructs

The literature considered norm clarity and punishment as two consistent features of cultural tightness, without differentiation in their influences on norm adherence. The two constructs were related, as clear norms clarified what constitutes deviance, and less tolerance for deviance also signaled the clarity of the norm (Gelfand & Jackson, 2016; Uz, 2015).

However, I posit that norm clarity and punishment are distinct constructs as they may exert normative influences through different motivational mechanisms. By definition, norm clarity and punishment are referring to different aspects of norm perception. Clarity concerns whether the norm is perceived to be clearly expected by the collective and provides clear guidance on how to behave. By contrast, punishment depicts perceived severity of potential social disapproval as a consequence of norm violation. To illustrate, for the norm of keeping quiet when entering a library, the norm clarity part concerns whether keeping quiet is clearly the most expected behavior at that time, whereas the perceived punishment part is about whether not keeping quiet would incur others' criticisms. By dwelling on different aspects of the norm,

clarity and punishment are postulated to serve different functionalities on decisions in norm adherence and moderated by different motivational mechanisms.

I manifest that clarity affects norm adherence for the motive to obtain accurate information, and punishment affects norm adherence for the motive to avoid social disapproval. The two influences were noted by Cialdini & Goldstein (2004) as two ways of how cultural norms influence individuals' behaviors. For informational social influence, individuals adhered to the norm to obtain and form accurate information about reality, because the shared rule was more accurate than their own. For normative social influence, individuals adhered to the norm to obtain social approval and avoid social disapproval from others, because they wanted to be liked by the group, instead of being socially rejected as a deviant. With that being said, I believe that norm clarity exerts its influences on individuals' behaviors motivated by informational path, as it provides clear information about the expected rule of behaviors. By contrast, punishment exerts its influences on individuals' behaviors motivated by normative path, as it suggests potential severity of social disapproval for deviance.

Therefore, in the current studies, the effects of norm clarity and punishment on individuals' behaviors were examined respectively. To the best of my knowledge, none of the extant research discussed whether there are differences between norm clarity and perceived punishment in normative influences. Our study is aimed to extend the research by investigating norm clarity and perceived punishment as two independent components characterizing the tightness of cultural norms, and exploring the motivational mechanisms underline their influences on behaviors. I posit that informational path drives the influence of norm clarity on individuals' behaviors by providing clear information about the expected rules of behaviors. And normative path drives the influence of punishment on individuals' behaviors by conveying the

severity of potential social disapproval for deviance. This will advance our theoretical understanding of the two constructs, and help to explain in what condition or for which individuals norm clarity and perceived punishment will loom large in predicting behavior.

Norm adherence

High norm clarity and punishment are related to more norm consistent behavior as two important components of the cultural context. As explained before, Pelto (1968) noted that cultures in which norms were expressed very clearly and accompanied with severe sanctioning for deviance, generally involve more compliance, order and discipline. Gelfand et al. (2011) also found a high correlation between norm clarity and compliance. Individuals in the culture with high clarity norms tended to perceive "people in this country almost always comply with social norms" (Gelfand et al., 2011, p.1102). Moreover, Uz (2015) found that cultural tightness, characterized by high clarity and punishment, were positively correlated with behavioral inhibition, and negatively correlated with feelings of freedom of choice and tolerance for personal deviations.

In addition, tight cultures characterized by high clarity and punishment enforced individuals to comply with norms. Tight cultures were argued to be homogeneous that individuals were more similar in tight cultures and there was few deviations in the values they endorsed and behaviors they performed (Carpenter, 2000; Triandis, 1989; Uz, 2015). This could be explained by how clearly defined and severely punished norms shaped the cultures. In tight cultures, guidelines for individuals' behaviors were clearly defined, and even minor deviance from the guideline was hardly tolerated, thus regulating individuals' behaviors and making dissimilar others unlikeable (Triandis, 1989).

Comparably, loose cultures with low clarity and punishment allowed individuals to be heterogeneous that there were many variations in culture members' behaviors and values. In loose cultures, there were less clear boundaries to restrict individuals, high tolerance of various behaviors, and deviance was obscurely defined and slightly restrained (Carpenter, 2000; Triandis, 1989; Uz, 2015), thus allowing more behavioral freedom for individuals.

The element of social disapproval has been largely studied for its influences on norm adherences. In the deterrence literature, the threat of social disapproval was considered as the informal sanction, which deterred individuals from committing deviant behavior (Grasmick & Green, 1980). The folk theory of norm influence also stated that people followed norms for fear of social criticism and loss of reputation (Jowett, 1925; Morris & Cushman, 2017).

Social disapproval's effectiveness in regulating individuals' behaviors has been testified in many studies. For instance, Schultz et al. (2007) conveyed social approval message by a smiling face, and social disapproval message by an unhappy face. They found people do act in ways consistent with the social expectation. Participants used more energy after they received the message that their energy consumptions were below the average. However, when a smiling face (social approval) came together with the message, participants' energy consumption did not increase after being told that their consumption was below the average. In contrast, participants used less energy after they received the message that their energy consumptions were above the average. When an unhappy face (social disapproval) appeared along with the message, participants used even less energy after being told that their consumption was above the average. The findings suggested that participants followed the norms based on information about others' behaviors, and social cues of others' attitudes were also effective in regulating their behaviors.

Social disapproval for norm violation does not always guarantee norm adherence (Morris & Cushman, 2017). For example, individuals still followed the norm of fairness and honesty in laboratory economic games when the game was anonymous, in other words, their actions would go unpunished with no concern for social disapproval or reputation (Camerer, 2003; Fehr & Schmidt, 2006). Also, some people still used excessive amounts of drugs despite the extremely poor evaluations towards drug users (Room, 2005).

Building on the literature, it is natural to infer norm clarity and punishment both impose normative pressures on individuals' behaviors. However, a general tendency of norm compliance within the culture does not qualify individuals' adherences to all of the norms in that culture. There is a lack of empirical study to systematically examine the effectiveness of norm clarity and punishment on different behaviors, respectively.

Value-expressive behaviors

Value and behavior

Value refers to guiding principles of life regarding desirable end states (Schwartz, 1992). Value is a motivational construct which guides behavior, and behaviors were considered as consequences of values and express their motivating values (Bardi & Schwartz, 2003; Rokeach, 1973; Schwartz, 1992). For example, a person strives for dominant positions reflect he values power, and a person who frequently helps others suggest the endorsement of benevolence. Value and behavior are related.

Values impact behaviors in a variety of ways, directly or indirectly. Value affects the likelihoods of individuals to engage in a behavior by changing perceived valence of a behavior and its alternative course of action (Feather, 1988; Roccas & Sagiv, 2010). As desirable end states, values represent what people consider meaningful and deserving (Rokeach, 1973).

Systematical value priorities are formed to judge behaviors in daily life. Thus, actions consistent with the values are deemed attractive, and actions contradict with the values are deemed unattractive to individuals. Individuals are then prone to act by their personal values through performing behaviors to attain their endorsed values and refrain from acting in ways that hinder it (Sagiv & Schwartz, 1995). For example, Dreu & Boles (1998) found that participants who considered cooperation as morally appropriate were more likely to perform prosocial behaviors than participants who thought the competition was more appropriate.

Values affect individuals' cognitions by exerting an influence on the way individuals process and interpret information. Information congruent with individuals' value schema were adequately processed and activate related elements of the schema, thus amplifying individuals' usual responses to the information (Sattler & Kerr, 1991). Value also provides justification and interpretations for individuals' behaviors. Their behaviors can be explained by referring to their values, such as "I obey my parents because I think filial piety is important" (Roccas & Sagiv, 2010).

Values draw individuals' attentions to various aspects of life. It affects the type of things individuals care for, worry about and take time as well as effort to accomplish. For instance, as stated above, a person values filial piety may spend more time with parents, listen to parents' advice and deal the relationship with parents thoughtfully. Schwartz, Sagiv, & Boehnke (2000) demonstrated that value increased participants' attentions and perceived threats related to the motivational goals. Participants with emphasizes on self-transcendence worried more about society and world, whereas participants emphasized on self-enhancement worried more about self and self-related extensions. The focus of attention subsequently affected individuals' decisions and the way they act.

Value-expressive behaviors are investigated in the current research for the following considerations. Firstly, values and behaviors are closely related. It is not meaningful to tease value and behavior apart. Secondly, value affects behavior in multiple ways. Tapping into value as the motivational goal for behavior facilitates understanding of why people perform a certain behavior. Thirdly, many behaviors are value-laden. Behaviors without expression of values, such as reflexive behaviors, are not of our interest construct because of our focus on the examination of conscious mechanism underline norm consistent behaviors. Fourthly, values group behaviors based on their driving forces, which organize a bunch of ruleless and random behaviors. This allows the examination of a systematic and theory-driven behavioral pattern for norm adherence investigation.

Consistent value - behavior relationship have been seen across a large body of researches accompanied with various behaviors or behavioral intentions, such as pro-environmental behaviors, drinking, voting, internet use, course enrollment, negotiation, purchasing behavior and so forth (Brett & Okumura, 1998; Grunert & Juhl, 1995; Nordlund & Garvill, 2002; Poortinga, Steg, & Vlek, 2004). Nevertheless, the lack of correspondence between value and behavior (Barnea & Schwartz, 1998; Feather, 1988) and variant strengths among different value-behavior pairings (Bardi & Schwartz, 2003) have also been dated in the literature. Thus, research is needed to explore how behaviors motivated by different values are affected by other factors, such as norm perceptions.

I adopted Schwartz's basic human values (1992) as the theoretical foundation of valueexpressive behaviors in the present research, because Schwartz's value theory is one of the most comprehensive and robust theories of values. It has been largely studied and widely recognized for its predictive validity. Support for the 10 postulated human value types can be found across a

large number of studies in diverse samples from different countries in the world. The consistent and stable structure is nearly universal (Anderson, John, & Keltner, 2012; Maio, 2010; Schwartz, 1992, 1994; Schwartz & Sagiv, 1995).

Schwartz's theory of basic human values

Building on previous work of Rokeach (1973), Schwartz identified 56 values and further categorized them into 10 "higher-order" value types based on the motivation underlies each of the value. These higher order value types include: power (social status, control over people and resources), achievement (personal success, demonstrate competence), hedonism (pleasure, sensuous gratification for oneself), stimulation (excitement, novelty, and challenge in life), self-direction (independent and choose one's own goal), universalism (social justice and equality), benevolence (care for others, being helpful and honest), tradition (commitment and acceptance of traditional customs or religions), conformity (restraint actions to follow social rules), and security (family safety, social disorder) (Schwartz 1992, Schwartz et al., 2012).

One prominent feature of Schwartz's value theory was that the 10 value types were structured in a circumplex model after examining the psychological or behavioral manifestation of each value type. Adjacent values in the circular structure shared compatible motivational goals with each other, whereas diagonal values reflected their conflicting goals with each other. Grounded on that, value types with shared congruent motivational goals were further consolidated into the same wedge, which formed 5 broader value groups. The 5 broader value groups were organized along two bipolar dimensions for the value groups' conflicting goals. Openness to change contrasted conservation along the dimension of independence versus obedience. *Openness to change*, including value types of stimulation and self-direction, concerns independence of thought, action, and readiness for change. *Conservation*, including value types

of tradition, conformity and security, highlights pursuits of social order, society security and preservation of the custom. As for the second dimension, self-enhancement contrasted self-transcendence along the dimension of self-interests versus the welfare of others. *Self-enhancement*, including value types of power and achievement, emphasizes the pursuit of one's own interests, success, and dominance. *Self-transcendence*, including value types of universalism and benevolence, is characterized by the focus on welfare and interests of others. *Hedonism* is regarded as an independent value as it shared both characteristics of the two adjacent value types – achievement and stimulation (Schwartz 1992, Schwartz et al., 2012).

A contrast between personal focus and social focus of the 5 value groups was subsequently noted based on the two bipolar dimensions. According to Schwartz (1992), personal-focused values primarily serve individual interests by regulating how one expresses personal preferences and characteristics. By contrast, social-focused values primarily serve collective interests by regulating how one relates socially to others and affects their interests. Self-transcendence and conservation were characterized as social-focused values, since selftranscendence concerns other's welfares and conservation concerns social order. They both have focuses on how individuals relate socially to others, how individuals maintain the relationship with others and how they impact others. Self-enhancement, openness to change and hedonism were characterized as personal-focused values, since self-enhancement concerns pursuit of selfinterests, openness to change concerns independence of the self, and hedonism concerns personal gratification. They all have an emphasis on the expression of personal interests and characteristics (Schwartz 1992, Schwartz et al., 2012).

Relationships among value types also applied to their corresponding behaviors. Behaviors expressing Schwartz's 10 basic value types were constructed and found to organize in

accordance with the value circumplex. Bardi and Schwartz (2003) adopted the self-generation approach by asking participants to generate behaviors that express each of the ten values from Schwartz (1992). Across three studies, it was replicated that participants' self-reported behaviors and peer-reported behaviors were found to be related to endorsements of their corresponding value. The correspondence between value and behavior was applicable for all value types, despite variance in strength of the relationship. They also found that tendency to perform those value-expressive behaviors forms a circumplex structure which maps into the structure of values. Behavioral tendencies of adjacent value types were positively correlated, whereas behavioral tendencies of diagonal value types were negatively correlated (Bardi & Schwartz, 2003).

Normative Influences on Value-expressive Behaviors

As discussed before, perceived norm clarity and perceived punishment, two elements featuring tightness of norm, both impose some normative pressures on behaviors. I propose that the normative influence exerted by perceived norm clarity and punishment differ between behaviors expressing social-focused values and personal-focused values.

Impacts of perceived norm clarity and punishment on social-focused value-expressive behaviors

As noted before, social-focused values encompass value groups of self-transcendence and conservation, including value types of benevolence, universalism, security, conformity and tradition. Social-focused values concern how individuals relate socially to others and how individuals impact social others (Schwartz, 1992; Schwartz et al., 2012). Specifically, by performing behaviors with social-focused values expressed, individuals either transcend self-interest or subordinate the self to enhance welfare of others, to develop commitment to positive relations, to meet socially imposed expectations, or to preserve social arrangements, order and

harmonious relationship. Schwartz et al. (2012) described the social-related mechanism underline value theory as to instill values promoting smooth group functioning and elicit corresponding desired behaviors.

To promote harmonious social relationships and perform socially desired behaviors, it is important to think and act according to socially agreeable standards. Therefore, knowing what is deemed as socially appropriate serves as a prerequisite and a critical factor in the behaviors expressing social-focused values. Norm clarity and punishment inform individuals of the socially agreeable standards by either clarifying expectations of behaviors or portraying potential social disapproval for deviance. They both concern others' perceptions of socially shared standards of behaviors, which facilitate behaviors expressing social-focused goals, and thus should be influential in predicting individuals' behaviors. Put it in another way, to achieve the socialfocused motivational goal, individuals need to take others' perceptions and judgments into account, in which perceptions of norm clarity and punishment insert to exert normative influences on behaviors.

Therefore, I hypothesize engagement in behaviors expressing social-focused values would be highly sensitive to others' perceptions and judgments, suggests more susceptibility to normative pressures from the collective. Perceiving a norm being clearly expected (norm clarity) and with severe social disapproval for norm violation (punishment) are supposed to be strong enough to predict decisions in norm adherences.

Meanwhile, I believe the predicted influences of perceived norm clarity and punishment on social-focused behaviors will be observed for all individuals, despite their personal attributes. Situational strength theory helped to support the premise. Norms for behavior pose an important situational pressure. The situation was defined as strong when there were clear and strong norms

to provide uniform rules or expectations of how to behave (Mischel, 1977). Strong situation exerted pressure on all people to follow similar courses of actions with little variation of behavioral patterns across people (Hough & Schneider, 1996; Mischel, 1977; Snyder & Ickes, 1985). Comparably, behaviors expressing social-focused values are supposed to be highly sensitive to others' judgments and highly subjective to normative pressure. Then, the behavioral pattern of social-focused values should be analogous to the behavioral patterns in strong situations. The stronger the normative pressure to act in a particular way, the weaker the influence of individual factors (Shoda, 1999). Therefore, normative influences exerted by clarity and punishment regarding social-focused values should enforce individuals to perform in a similar way, which leaves little room for personal attributes to take effect.

In conclusion, I hypothesize that behaviors expressing social-focused value are supposed to be highly affected by one's perception of shared behavioral expectations. Norm clarity and punishment are supposed to predict behaviors to the same extent for social-focused values as they both concern perception of others. And the effects are supposed to be strong enough to pressure individuals, regardless of their personal attributes, to follow the norm with high norm clarity and punishment.

H1: Both norm clarity and punishment positively predict behaviors expressing *socialfocused values*, regardless of individuals' needs.

Impacts of perceived norm clarity and punishment on personal-focused value-expressive behaviors

Personal-focused values encompass value groups of self-enhancement, hedonism and openness to change, including value types of power, achievement, hedonism, stimulation and self-direction. Personal-focused values concern individuals' expression of personal preferences

and characteristics (Schwartz, 1992; Schwartz et al., 2012). Specifically, by performing personalfocused behaviors, individuals express their own intrinsic interests in novelty and mastery, pursue personal success and high status, or indulge themselves to enjoy personal pleasures. Schwartz et al. (2012) articulated the functionality mechanism underline personal-focused value was for the gratification of self-oriented needs and desires.

That is to say, compared with social-focused values, for behaviors expressing personalfocused values, there is less involvement of relations to others and less demand to take others' opinions into account. Fulfillments of personal needs and achievements of personal interests should be the main focus. Thus, behaviors expressing personal-focused values are supposed to be less sensitive to others' evaluations and also less susceptible to the collective's normative pressures. So I postulate that perceptions of norm clarity and punishment are unable to directly affect behaviors; their influences on behaviors are affected by the extent to fulfill individuals' personal needs.

The argument that individuals' personal needs can play a role in the normative influence is not only supported by its facilitation for personal-focused goal achievement, but also the situational strength theory. The weak situation referred to situations with little pressure on how to behave and few clear and strong cues for appropriate behaviors (Mischel, 1977). In weak situations, individuals' behaviors were diverged, which allowed personal attributes to emerge to affect behaviors. (Hough & Schneider, 1996; Mischel, 1977; Snyder & Ickes, 1985). Individuals in weak have fewer boundaries and more freedom in deciding how to behave, and whether to adhere to the norms should depend on their own will and personal needs. Since behaviors expressing personal-focused values may be less restricted by perceived norm clarity and punishment, the behavioral pattern of personal-focused values should be comparable to the

behavioral patterns in weak situations. Individual factors reveal and affect behaviors with the absence of strong normative pressure (Shoda, 1999). That is to say, to what extents do perceived norm clarity and punishment fulfill individuals' needs affect their effectiveness in predicting behaviors.

In conclusion, norm perceptions are premised to be less influential for behaviors expressing personal-focused value. Therefore, individual characteristics are expressed and they are likely to affect behaviors. For personal-focused values, norm clarity and punishment are proposed to differ because they exert influences through different motivational mechanisms, as explained before. So, their impacts on behaviors are supposed to achieve by fulfilling different personal needs.

H2: Both norm clarity and punishment do not directly predict behaviors expressing *personal-focused values*; their influences are only exerted by fulfilling individuals' personal needs.

I am proposing need for closure as the potential personal need to be fulfilled by norm clarity, and need to belong as the potential personal need to be fulfilled by punishment.

Need for closure as a potential need to be fulfilled by norm clarity. Humans are motivated to respond appropriately to a dynamic social situation in the most effective manner (Cialdini & Goldstein, 2004). Cultural norm serves as ways of reducing uncertainty as it provides guidance of behavior.

Individuals vary in the level of desire to avoid uncertainty and achieve the effectiveness in behaving properly. Need for closure (NFC) refers to the need for firm answers to reduce uncertainty. Research found that those individuals high in need for closure were more likely to perform norm-consistent behaviors (Chao, Zhang, & Chiu, 2010; Chiu, Morris, Hong, & Menon,

2000; Fu et al., 2007; Morris & Fu, 2001). For instance, Fu et al. (2007) examined the cultural resolution styles among Westerners and East Asians. Results suggested that individuals with high need for closure prone to conform to their cultural norm. To be specific, high NFC Westerners adopted the formality style, whereas high NFC Asians adopted the connectedness style. It was argued that high need for closure utilized cultural knowledge as an easily available cue to guide information processing to a much greater extent than those low on need for closure (Fu et al., 2007).

As discussed before, cultural norms with high clarity are perceived to be clearly expected and understood, and allow for less ambiguity of behavioral rules. They provide information about the clear behavioral guidance in given situations as it is known to be appropriate and widely shared by the majority. Thus, the norm with high clarity is supposed to be a better closure provider than norms with low clarity. And contents which promise epistemic clarity should only be valued and preferred by individuals high in need for closure. With that being said, the normative influence of perceived norm clarity on individuals' behaviors should only be observed among individuals with high needs for closure. For individuals with low needs for closure, norm clarity is postulated to not affect behaviors as it lacks the motivation of fulfilling personal needs to make individuals act accordingly.

H2a: Need for closure (NFC) moderate the relationship between norm clarity and behaviors expressing *personal-focused values*. Individuals high in need for closure tend to have higher intentions to adhere to the cultural norm with high (vs. low) clarity. Perceived norm clarity tends to have no effect on behavioral intentions of individuals low in need for closure.

Need to belong as a potential need to be fulfilled by punishment. Humans are motivated to create and maintain meaningful social relationships with others (Cialdini &

Goldstein, 2004). Cultural norm serves social functions as it implies others' reactions to individuals' actions. As suggested by Chiu et al. (2010), knowing what other members in their cultural group believe acted as "useful heuristics for anticipating the normative responses of others" (Chiu et al., 2010; p.4). If individuals behave in ways of which others approve, they would be approved by others. In the same way, if individuals behave in ways of which others disapprove, they would be disapproved by others. Thus, cultural norms enable people to infer how their behavior would affect the relationship with social others.

Individuals vary in the level of desire to maintain a relationship with others and be accepted by the society. Need to belong refers to the need to form and maintain interpersonal relationships. High need to belong will lead norms to be more relevant information for guiding behavior. For instance, Manning (2011) presented a list of behaviors (e.g., going out to a party on a weekend night) to participants and measured whether they view a behavior as being capable of fulfilling the need to belong. Results suggested that when participants perceived the behavior as fulfilling their need to belong, the more they perceive others would perform the particular behavior, the higher the intention to perform such behavior (Manning, 2011). As conforming to norms is a way to improve one's chances of being accepted by a social group, it serves belongingness needs (Baumeister & Leary, 1995). Therefore, the need to belong underlies norm adherence as a motivation mechanism to avoid social disapproval.

Cultural norms with high perceived punishment imply severe social disapproval as consequences of norm violation. Violating the norms with high perceived punishment would result in negative impression, criticism, or even social rejection. When the threat of social rejection was made salient, the social pressure cognitions related to behavior expectation were more relevant for behavioral decisions (Manning 2011). Social rejection causes social pains, and

deprives of the basic need of need to belong (Dewall, Deckman, Pond, & Bonser, 2011). Hence people with higher need to belong are supposed to be more threatened by social disapproval, respond strongly to potential social exclusion, and behave in line with norms with high perceived punishment to avoid social disapproval.

With that being said, violating behaviors with high punishment should be more threatening for individuals with high (vs. low) needs to belong. Individuals with high needs to belong are more likely to perform behaviors with higher perceived punishment. For individuals with low needs to belong, perceived punishment is supposed to have no effect on the behavioral intention for the lack of fulfilled personal needs to motivate behaviors.

H2b: Need to belong (NTB) moderate the relationship between punishment and behaviors expressing *personal-focused values*. Individuals high in need to belong tend to have higher intentions to perform the corresponding behaviors with high (vs. low) perceived punishment. Perceived punishment tends to have no effect on the behavioral intentions of individuals low in need to belong.

Recap of Hypotheses and Overview of Studies

The current research fills the research gap by systematically investigating how perceptions of norm clarity and punishment affect value-expressive behaviors. I posit that for behavioral norms expressing social-focused values, there are main effects of norm clarity and punishment on behaviors. Both norm clarity and punishment positively predict behaviors, regardless of individuals' needs (H1). By contrast, for behavioral norms expressing personalfocused values, norm clarity and punishment are predicted to interact with personal needs to influence behaviors. Both norm clarity and punishment do not directly predict behaviors, and their influences are only exerted by fulfilling individuals' personal needs (H2). H2 could be

further illustrated by hypothesizing that need for closure moderate the relationship between norm clarity and behaviors expressing personal-focused values. Individuals high in need for closure tend to have higher intentions to adhere to cultural norm with high (vs. low) clarity, whereas perceived norm clarity tend to have no effect on the behavioral intentions of individuals low in need for closure (H2a). Need to belong moderate the relationship between punishment and behaviors expressing personal-focused values. Individuals high in need to belong tend to have higher intentions to perform the corresponding behaviors with high (vs. low) perceived punishment, whereas perceived punishment tends to have no effect on the behavioral intentions of individuals low in need to belong (H2b).

Five studies were conducted, and all hypotheses were examined in each of the studies. In Study 1, I developed a list of value-expressive behaviors and tested the hypotheses in the context of Singaporean culture by measuring participants' perceived norm clarity and punishment of each norm, participants' needs for closure and needs to belong, and their intentions to perform each value-expressive behavior. Study 2 replicated the finding of Study 1 with a revised list of value-expressive behaviors and refined measurements of perceptions of norm clarity and punishment. Study 3 extended the findings to the cultural context of the friendship group, which also specified consistent reference groups for norm perception measures and NTB measures. It was achieved by asking participants to think about one friendship group which matters the most to them, and then to rate the norm perceptions of each behavioral norm in their friendship groups as well as their needs to belong to that friendship group. Study 4 adopted almost the same measures used in Study 2 in the context of Singaporean culture, but the only difference was adding one item measuring perceived personal focus and one item measuring perceived social focus of each value. It helped testify whether the personal-social focus dimension was organized

in the same manner with Schwartz's value theory among our target sample, and examine whether the perceived focus of value affects the interplay between norm perceptions and personal needs. Study 5 examined the hypotheses with an experimental design, which manipulated either personal focus or social focus of the norm to be salient. "Order popular dishes in zi char restaurants" was selected as the behavioral norm in Study 5 for investigation. And how popular participants perceived dishes they have ordered was measured as the dependent variable. All of the participants were randomly assigned by the computer to either personal-focus condition (motivated to express their personal tastes) or social-focus condition (motivated to take care of others).

Findings of the studies will facilitate explanation of norm adherence by examining the normative influence of tightness when tightness components are considered as features of specific norms. Gelfand et al. (2017) pointed out compared with tightness variance between cultures, examining tightness specific to norms within the culture would be a valuable future research direction to explore tightness variance within cultures. The current research fills in the research gap and explains norm adherence in the perspective of norm tightness, based on the motivational mechanisms underline their normative influences. This will advance our understanding of the two theoretical constructs of tightness, which has been insufficiently documented before in the literature. Furthermore, most of the extant researches examined conditions for norm adherence to occur with a single norm (e.g., Donaldson, Graham, & Hansen, 1994; Schultz et al., 2007) or a set of behaviors presumed to express one domain of values (Bardi & Schwartz, 1996; Bond & Chi, 1997). Our study extends the research to probe into the

motivational goal of the norm by investigating a wide range of behaviors and their motivated

values.

CHAPTER II: STUDY 1

Study 1 aimed to provide the first evidence of Hypothesis 1 and Hypothesis 2. To test the hypotheses, I generated 28 behaviors that were pretested to express 5 broad value types from Schwartz (1992). Participants rated their perceived norm clarity and punishment of each behavior, and their likelihood of engaging in each behavior. Their need for closure and need to belong were also measured. If H1 holds, we are expected to observe main effects of clarity and punishment on social-focused behaviors. Perceived clarity and punishment positively predicts engagement in behaviors expressing social-focused values, and the effects are independent of individuals' personal needs. If H2a holds, we are expected to observe an interaction between norm clarity and need for closure on personal-focused behaviors. Norm clarity do not directly predict behaviors expressing personal-focused values, but only be apparent when norm clarity fulfills individuals' needs for closure. High (vs. low) in NFC predicts higher chance to perform the corresponding behaviors with high perceived (vs. low) clarity. If H2b holds, we are expected to observe an interaction between punishment and need to belong on personal-focused behaviors. Punishment does not directly predict behaviors expressing personal-focused values, but only exert its influences upon fulfillment of individuals' needs to belong. High (vs. low) in NTB predicts higher chance to perform the corresponding behaviors with high perceived (vs. low) punishment.

Method

Pretest 1: Selecting Value-Expressive Behaviors

The list of value-expressive behaviors measured in the questionnaire was adapted from Bardi & Schwartz (2003). Bardi & Schwartz (2003) adopted the self-generation approach by asking participants to generate behaviors that express each of the ten value types from Schwartz

(1992). The final list of Bardi & Schwartz (2003) consisted of 80 behaviors, 6-10 behaviors for each value, after deleting redundant and unsuitable behaviors. According to them, self-reported behaviors and peer-reported behaviors were found to be significantly corresponded to value endorsement, and the correlations ranged from .30 to .76 (p < .05) (Bardi & Schwartz, 2003). I excluded 16 unsuitable behaviors which were not applicable for the Singapore culture context (e.g. sun bathe on sunny days) and the undergraduate sample (e.g. vote for candidates who are willing to legislate funds to keep nuclear weapons out of terrorists' hands). All of the remaining behaviors were further edited by me to achieve a better representation and reasonable expression of the corresponding values. 5 behaviors were newly added.

A pretest was conducted to test how these behaviors were perceived by our target participants. Sixty-one Singaporean university students, another sample of our target participants, participated in the pretest. As a baseline control of participants' cultural background, three were excluded because they had lived in Singapore for less than ten years. The final sample of 58 participants (17 males) were on average 21.38 years old (SD = 1.89) and had lived in Singapore for an average of 21.12 years (SD = 1.63). Participants rated how frequently did they perform each of the behavior relative the opportunities to do so from 0 (*never*) to 4 (*all the time*), how frequently do Singaporeans perform each of the behavior relative the opportunities to do so from 0 (*never*) to 4 (*all the time*), and how many ways there are to carry out each of the behavior from 1 (*very few*) to 7 (*many ways*). Definitions of Schwartz's 10 values (see Appendix A) (Schwartz, 1992) were also presented to participants, and then participants were asked to choose the value that they think each behavior reflects the most. They were allowed to choose multiple values for a single behavior, but it was encouraged to choose only one value for each behavior.

To select suitable behaviors, the first step was to rule out behaviors that everyone will perform it and behaviors that no-one will perform it in order to avoid ceiling or bottom effect. Behaviors that everyone performs or no one performs restricted variance of individuals' behaviors, which left no room for the hypothesized effects to be observed. Therefore, I excluded all of the behaviors which had average ratings below 1 (*rarely*) or above 3 (*frequently*) in personal behavior engagement measure and cultural behavior engagement measure. Personal behavior engagement concerned how normative behaviors are objectively by aggregating their personal tendencies to perform the behaviors. Cultural behavior engagement measure aggregated individuals' perception of other people's behavioral tendencies to indicate how normative behaviors were subjectively.

The second step was to make sure that all behaviors were at a comparable level of specificity. Specificity refers to the number of ways to carry out behaviors. For certain general behaviors, such as "participate in cultural activities", there are many possible common ways of carrying out the behavior. For certain specific behaviors, such as "saying hello to one's neighbors", there are only one or very few common ways of carrying out the behavior. Specificity needs to be controlled at a comparable level because they might affect individuals' behavioral intentions. Compared with specific behaviors, general behaviors with more ways to perform might be easier for individuals to imagine engaging in that behavior. The average of all pretested behaviors was 4.84 (SD = .53) in specificity measure. So, behaviors with average of specificity measure above 5.37 (+1 SD) or below 4.31 (-1 SD) were eliminated.

The aim of the last step was to validate the value-behavior correspondence. It was ensured that for our target population, the behaviors reflected their corresponding values and did not double-loaded on other values. It is likely that a particular behavior reflects multiple values

or can be interpreted in multiple ways of value-expression. For example, a person who brushes his tooth everyday could be an expression of his favor of health, cleanliness, or both. This kind of value-expressive behavior is not our research focus in the current study. I limited valueexpressive behaviors to behaviors expressing one and only one dominating value for the consideration of the ease of investigation, the interpretability of results and the applicability of theory-driven behavioral patterns.

Therefore, for each behavior, I calculated participants' frequencies of selecting each value as reflecting the behavior the most. Considering the total sample of 61, 36 participants' choices represent opinions from the majority (60%), whereas 16 participants' choices represent opinions from the minority (22%). Behaviors with over 36 frequencies of the corresponding value and below 16 frequencies of the other values were selected for the final list. The selection criteria suggested that about the majority of participants thought certain behavior reflected the value that it was supposed to reflect theoretically and did not reflected any values that it was not supposed to reflect.

The final list included 20 behaviors, 1- 4 behaviors for each value. To be noted, no behavior for value type of tradition and conformity was select failing to meet standards of suitable behaviors. See Appendix B for the full list of behaviors and their corresponding values.

Main Study

Participants

Ninety-nine Singaporean university students participated in the study for partial course credit. According to Green (1991), the minimum required sample size was 89 to detect a medium effect from multiple regression model with 5 predictors for .8 power. Therefore, the sample size in Study 1 met the minimum sample size requirement. The sample of 99 participants

(18 males) was on average 20.81 years old (SD = 2.17). They had lived in Singapore for an average of 20.51 years (SD = 2.10, range from 12 to 26 years. 89 (89.9%) were ethnic Chinese, 1 (1%) were Malays, 6 (6%) were Indians, and 3 (3%) were other ethnicities.

Measures

Value endorsement. Value endorsement included the extent that individuals personally endorse each value, and their perceptions of the extent that Singaporeans in general endorse each value. Before rating the values, participants read the whole list of definitions of Schwartz's 10 values (see Appendix A) (Schwartz, 1992), except tradition value and conformity value, because there were no suitable behavior selected for the two values. Personal endorsement of each value was to rate the importance of each value to the self, measured by the item "*For each of the following values, rate the extent that it is important to you*" on a scale from 1 (*not at all important to me*) to 7 (*very important to me*). Cultural endorsement of each of the following values, rate the extent that it is ingaporeans in general" on a scale from 1 (*not at all important to Singaporeans in general*) to 7 (*very important to Singaporeans in general*). The measurements of value endorsement were included for exploratory purposes, but they were not included in the main analysis.

Norm clarity. Norm clarity was measured by two items "*In Singaporean society, people are clearly expected to*…" and "*It is clear that*…*is a right thing to do in Singaporean society*". The items were constructed based on Gelfand et al.'s tightness scale (2011). Each statement incorporated a behavioral norm for obtaining individuals' rating of every behavioral norm. For example, the complete item was like "In Singaporean society, people are clearly expected to (statement) help one's friends with projects (behavioral norm)." Participants were asked to

indicate their agreement with the statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The two items were significantly and positively correlated (r = .92, p < .01) and averaged to form a clarity score for each behavioral norm.

Perceived punishment. Perceived punishment was measured by two items "*In* Singaporean society, if someone does not..., others will disapprove" and "There is low tolerance for not... in Singaporean society". The items were constructed based on Gelfand et al.'s tightness scale (2011) and AU. & Wan's tightness scale (unpublished). Similarly, each statement incorporated a behavioral norm for obtaining individuals' rating of every behavioral norm. For example, the complete item was like "*In Singaporean societies, if someone does not (statement)* help one's friends with projects (behavioral norm), others will disapprove (statement)." Participants were asked to indicate their agreement with the statement on a scale from 1 (strongly disagree) to 6 (strongly agree). The two items were significantly and positively correlated (r= .98, $p \le .01$) and averaged to form a punishment score for each behavioral norm.

Behavioral intention. Participants estimated the frequency with which they will engage in each behavior, relative to their opportunities to perform it. Taking opportunities into account was because enactment would substantially be affected by opportunities (e.g., Respondents who see their neighbors more often have more opportunities to "say hello to one's neighbors" than those who do not). Participants were instructed to estimate how likely they will engage in the behavior relative to the times they will have an opportunity to do so. Participants responded on a 7-point scale from 1 (*never*) to 7 (*very likely*). Scale labels emphasized frequency of performance relative to opportunity. 1 (*never*) was defined as "*I will never engage in this behavior*", whereas 7 (*very likely*) was defined as "*I will engage in this behavior every time I have an opportunity to*

do so". Ratings of behavioral intention expressing each value were taken on average and formed the behavior indexes for the eight values.

Need for closure. The measurement of NFC was a short version of the revised NFC scale developed by Roets & Van (2011). The NFC scale I was using was firstly developed by Webster & Kruglanski in 1996. We used the short version of Roets & Van's revised scale, which was short and empirically validated. The short version of NFC scale consisted of 15 items. Two sample items were "*I don't like situations that are uncertain*" and "*I dislike questions which could be answered in many different ways*". Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The 15 items reached good reliability ($\alpha = .85$) and were averaged to form a need for closure score. See Appendix C for the full list of items.

Need to belong. I used items from the Leary et al.'s Need to Belong scale (Leary, Kelly, Cottrell, & Schreindorfer, 2007) as a trait measure of the need to belong. The need to belong scale consisted of 10 items. Two sample items were "*I try hard not to do things that will make other people avoid or reject me*" and "*My feelings are easily hurt when I feel that others do not accept me*". Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The 10 items reached good reliability ($\alpha = .84$) and were averaged to form a need to belong score. See Appendix D for the full list of items.

Results

Preliminary Analysis: Value-behavior correlation

Table 1.1 presented the correlations between personal endorsement or cultural endorsement of the eight values and their corresponding behavior sets. Personal value endorsements of hedonism, stimulation, universalism, and security positively and significantly correlated with the corresponding behavior sets, ranged from .230 (p = .022) to .419 (p < .001). However, there was no significant correlation between value of power, achievement, self-direction, benevolence and their behavior sets. Failing to testify correspondence between personal value endorsement and behavior incur concerns about whether behaviors I selected express values they presumed to express. There was no significant relationship between perceived cultural endorsement and behavior for all value types.

Table 1.1Study 1: Value-behavior Correlations

Value	No. of behavior items	Personal value endorsement - behavior correlation	Cultural value endorsement -behavior correlation	
Power	3	.037	.036	
Achievement	4	.119	.162	
Hedonism	3	.282**	.016	
Stimulation	2	.419**	078	
Self-direction	1	.157	.164	
Universalism	3	.382**	.000	
Benevolence	3	.154	079	
Security	1	.230*	026	

p* < .05; *p* < .01

Grouping values

Based on Schwarz's value theory, the 8 value types examined in the study can be further categorized as 5 broad value types, because they shared congruent motivational goals (Schwartz, 1992; Schwartz et al., 2012). Therefore, power value and achievement value were grouped into a

broad value type of self-enhancement, with good internal reliability of norm clarity (14 items; α = .85), perceived punishment (14 items; α = .85) and behavioral intention (7 items; α = .56). In the same manner, stimulation value and self-direction value were grouped into value type of openness to change, indicated by norm clarity (6 items; α = .67), perceived punishment (6 items; α = .71) and behavioral intention (3 items; α = .46). Value type of self-transcendence consisted of universalism value and benevolence value, which reached good internal reliability of norm clarity (12 items; α = .79), perceived punishment (12 items; α = .73) and behavioral intention (6 items; α = .50). Hedonism value was computed as an independent value type with norm clarity (6 items; α = .77), perceived punishment (6 items; α = .77) and behavioral intention (3 items; α = .39). The only behavior expressing security was considered as representing value type of conservation with norm clarity (2 items; α = .78), perceived punishment (2 items; α = .82) and behavioral intention (1 item).

Preliminary Analysis: Norm perception-behavior correlation

Table 1.2 presented the correlations among clarity, punishment and behavior for 5 broad value types. Perceived clarity and punishment were positively and significantly correlated for all values, ranged from .495 (p < .001) to .620 (p < .001). Perceived clarity and behavioral intention were positively and significantly correlated for all values except openness to change, ranged from .218 (p = .030) to .395 (p < .001). Perceived punishment and behavioral intention were positively and significantly correlated only for conservation (r = .438, p < .001), but not for the other 4 values.

Value	Clarity-punishment correlation	Clarity-behavior correlation	Punishment-behavior correlation
Self-enhancement	.620**	.218*	.123
Hedonism	.495**	.224*	.119
Openness to change	.548**	.159	.086
Self-transcendence	.500**	.320**	.129
Conservation	.547**	.395**	.438**

Study 1: Norm perception-behavior Correlations

p* < .05; *p* < .01

Table 1.2

Testing Hypothesis

For each value type, I performed two multiple linear regression models to test the hypotheses for perceived clarity and punishment, respectively. Thus, we were able to differentiate the effects of clarity and punishment on behavioral intention and how they interplay with the two needs. The regression analysis of clarity model was calculated to predict on behavioral intention based on norm clarity (mean-centered), need for closure (mean-centered), need to belong (mean-centered), the interaction between norm clarity and need for closure, and the interaction between norm clarity and need to belong as predictors. All of the predictors were continuous variables, and they were centered at its grand mean to minimize the threat of multicollinearity. I included two needs in the same model to examine the effect of one need after controlling for the other need. The formula of the clarity model was as follows:

 $Behavior = \beta_0 + \beta_1 Z clarity + \beta_2 Z n f c + \beta_3 Z n t b + \beta_4 Z clarity * Z n f c + \beta_5 Z clarity * Z n t b + \epsilon$

Table 1.3 summarized all of the standardized coefficients in clarity model for 5 broader value groups (see Table 1.3).

Table 1.3

<u>Study 1 – Clarity Model: Standardized coefficients predicting behavioral intentions expressing 5</u> <u>value groups</u>

Variables	β					
	Self-	Hedonism	Openness to	Self-	Conservation	
	enhancement		change	transcendence		
Clarity	.21	.04	.16	.38**	.37**	
NFC	05	.04	11	01	.15	
NTB	.03	.01	.00	27**	07	
Clarity × NFC	.23*	.23*	.18	.15	05	
Clarity \times NTB	.06	.05	07	.01	04	

p* < .05; *p* < .01

As for the punishment, a regression analysis involving behavioral intention as the dependent variable and perceived punishment (mean-centered), need for closure (mean-centered), need to belong (mean-centered), the perceived punishment × need for closure interaction, and the perceived punishment × need to belong interaction as predictors was performed. The formula of the punishment model was as follows:

 $Behavior = \beta_0 + \beta_1 Zpunish + \beta_2 Znfc + \beta_3 Zntb + \beta_4 Zpunish*Znfc + \beta_5 Zpunish*Zntb + \epsilon$

Table 1.4 summarized all of the standardized coefficients in punishment model for 5 broader value groups (see Table 1.4).

Table 1.4

Variables β Self-Self-Hedonism Openness to Conservation <u>ch</u>ange enhancement transcendence .18 .42** Punishment .10 .09 .18 NFC -.02 .08 -.12 .06 .15 NTB -.05 -.05 .00 -.22* -.06 Punishment × NFC .05 .23* .04 -.01 -.12 Punishment × NTB .20 -.04 .11 .08 .16

<u>Study 1 – Punishment Model: Standardized coefficients predicting behavioral intentions</u> <u>expressing 5 value groups</u>

p < .05; **p < .01

Participants' gender was further involved to examine how gender affected the behavioral intentions. Male was coded as -1 and female was coded as 1. For the clarity model¹, gender, the gender \times clarity interaction and the gender \times need for closure interaction were further entered as predictors. For the punishment model², gender, the gender \times punishment interaction and the gender \times need to belong interaction were further entered as predictors. The gender effects were examined for exploratory purposes, therefore results were not included in the main analyses.

Testing Hypothesis 1: Social-focused value

Schwartz divided the 5 broader value groups along a theme of social focus versus personal focus. Value groups of self-transcendence and conservation were regarded as social-focus values because both of their motivational goals concerned how individuals relate socially to others (Schwartz, 1992; Schwartz et al., 2012).

Each value group rather than aggregated personal-focused value or social-focused value was examined independently for the following reasons. Theoretically, pairs of value types can be unified because they are motivationally close enough (Schwartz, 2006). For example, benevolence and universalism are integrated to form a higher order value group of selftranscendence because they both concern the welfare of others, close others or all people. However, the category of personal focus or social focus contains a range of distinctive motivational contents. For example, though both serving collective interests, self-transcendence concerns promoting the welfare of others, whereas conservation concerns preserving the social order.

Past research also suggested that the differences among values within the same category of personal focus or social focus were not negligible. The structure of Schwartz's values was verified by using Guttman-Lingoes Smallest Space Analysis (SSA) in the literature. The SSA

analyzed the intercorrelation matrix of Pearson correlations between the importance ratings of the values. Values were represented as points in multidimensional space and regions with substantively related points were then formed 4 distinct regions of self-enhancement, openness to change, self-transcendence and conservation were observed. Hedonism was located somewhere between self-enhancement and openness to change. (Guttman, 1968; Schwartz, 1992; Spini, 2003; Cieciuch & Schwartz, 2012). That's to say, collapsing social-focused values or personalfocused values without consideration of the within-category variance will make the aggregated score meaningless.

Therefore, based on the literature, independent analyses were performed for each higherorder value group. If hypothesis 1 holds, for self-transcendence and conservation, we would expect perceived clarity and punishment to predict behavioral intention, regardless of individuals' needs for closure and needs to belong.

Social-focused value: self-transcendence

Clarity model. A significant regression equation was found (F(5, 93) = 4.172, p = .002), with a R^2 of .183. Consistent with our prediction, the analysis revealed that the main effect of norm clarity was significant ($\beta = .38, t = 3.877, p < .001$). The main effect of need for closure was not significant. The main effect of need to belong was significant ($\beta = .27, t = -2.726, p = .008$), suggesting individuals higher in need to belong were less likely to perform self-transcendence behaviors. The norm clarity × need for closure interaction ($\beta = .15, t = 1.459, p = .148$) and the norm clarity × need to belong interaction ($\beta = .01, t = .127, p = .899$) were both not significant in predicting behavioral intention. Results indicated individuals were more likely to perform the behavior with increased perceived norm clarity, which remained unaffected by individuals' personal needs.

Punishment model. The regression model was not significant (F(5, 93) = 1.267, p= .285), with a R^2 of .094. The main effect of perceived punishment was marginally significant ($\beta = .18, t = 1.689, p = .095$) on behavioral intention. The trend was consistent with H1, but it failed to reach statistical significance. The main effect of need for closure was not significant. The main effect of need to belong was significant ($\beta = .22, t = .1.997, p = .049$), suggesting individuals higher in need to belong were less likely to perform self-transcendence behaviors. As predicted, there was an absence of significant punishment × need for closure interaction ($\beta = .01, t = ..101, p = .920$) and significant punishment × need to belong interaction ($\beta = .08, t$ = .781, p = .437).

Social-focused value: conservation

Clarity model. The regression model was significant (F(5, 93) = 4.118, p = .002), with a R^2 of .181. As predicted, the analysis revealed a significant main effects of norm clarity ($\beta = .37$, t = 3.773, p < .001), suggesting that higher tendency of behaviors was accompanied with higher perceived clarity of the norm. The main effects of need for closure and need to belong were both not significant. There was no significant norm clarity × need for closure interaction ($\beta = -.05, t = -.424, p = .672$) and no significant norm clarity × need to belong interaction ($\beta = -.04, t = -.345, p = .731$).

Punishment model. A significant regression model was revealed (F(5, 93) = 5.800, p < .001), with a R^2 of .238. The main effect of perceived punishment was significant ($\beta = .42$, t = 4.578, p < .001) and in line with my prediction. It supported that individuals were more likely to perform the behavior as they perceive higher punishment of violating the norm. The main effects of need for closure and need to belong were both not significant. The punishment × need for

closure interaction ($\beta = -.12$, t = -1.218, p = .226) and punishment × need to belong interaction ($\beta = .16$, t = 1.571, p = .120) were both not significant.

Testing Hypotheses 2a and 2b: Personal-focused value

Hypothesis 2a predicted that only for individuals with high need for closure, behaviors expressing personal-focused values were predicted by norm clarity. And Hypothesis 2b predicted high perceived punishment relating with more likelihood to perform behaviors expressing personal-focused values among individuals high in need to belong. Based on Schwartz's value theory, the self-enhancement value, hedonism value, and openness to change value all focused on expressing personal characteristics and interests (Schwartz, 1992; Schwartz et al., 2012). Therefore, if hypotheses 2a and 2b holds, for self-enhancement value, hedonism value and openness to change value, we would expect individuals' needs for closure to moderate the relationship between norm clarity and behavioral intention, whereas individuals' needs to belong to moderate the relationship between perceived punishment and behavioral intention. The hypothesis 2a was examined in clarity model, whereas the hypothesis 2b was examined in punishment model.

Personal-focused value: self-enhancement

Clarity model. A significant regression equation was found (F(5, 93) = 2.449, p = .039), with a R^2 of .116. The analysis revealed a marginally significant main effect of norm clarity ($\beta = .21, t = 1.961, p = .053$). As expected, this main effect was qualified by a significant interaction with need for closure ($\beta = .23, t = 1.988, p = .050$), indicating that norm clarity and need for closure interplayed to influence engagement in behaviors. To understand the nature of this two-way interaction, we performed simple slope tests to examine the effects of perceived clarity on behavioral intention when NFC was high (centered at 1 SD above the mean) and when NFC was

low (centered at 1 SD below the mean). Simple slope tests further demonstrated that participants with high need for closure were more likely to perform the behavior as they perceive the norm being clearer ($\beta = .43$, p = .017). However, behavioral intentions of participants with low need for closure were not affected by the norm clarity ($\beta = -.002$, p = .993) (See Figure 1.1.a). The main effects of need for closure and need to belong were both not significant. And the norm clarity × need to belong interaction ($\beta = .06$, t = .519, p = .605) were not significant in predicting behavioral intention. Results supported hypothesis 2a. The direct positive effect of clarity on behavior was not expected, but it did not reach statistical significance.

Punishment model. The regression model was not significant (F(5, 93) = 1.177, p= .326), with a R^2 of .069. The main effect of perceived punishment ($\beta = .10, t = .993, p = .323$) and the perceived punishment × need for closure interaction ($\beta = .05, t = .483, p = .630$) were not significant. The main effects of need for closure and need to belong were both not significant. The analysis revealed a marginally significant perceived punishment × need to belong interaction ($\beta = .20, t = 1.920, p = .058$). The follow-up simple slope tests found that participants high in need to belong (centered at 1 SD above the mean) had higher likelihood to engage in the behaviors with higher perceived punishment ($\beta = .31, p = .041$), whereas for participants low in need to belong (centered at 1 SD below the mean), there was no significant relationship between perceived punishment and behavioral intention ($\beta = ..11, p = .485$) (See Figure 1.1.b). Simple slope results supported H2b. The trend in the interaction between punishment and need to belong was also consistent with H2b, but it failed to reach statistical significance.

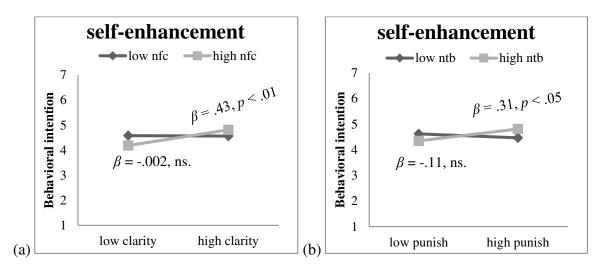


Figure 1.1. Behavioral intention as a function of perceived clarity and need for closure (a) or perceived punishment and need to belong (b) (Study 1; higher score = higher behavioral intention).

Personal-focused value: hedonism

Clarity model. A significant regression equation was found (F(5, 93) = 2.253, p = .055), with a R^2 of .108. The main effect of norm clarity ($\beta = .04$, t = .382, p = .703) was not significant. The main effects of need for closure and need to belong were both not significant. As expected, the norm clarity × need for closure interaction was significant ($\beta = .23$, t = 2.259, p = .026). Simple slope tests further demonstrated that participants with high need for closure (centered at 1 SD above the mean) were more likely to perform the behavior as they perceive the norm being clearer ($\beta = .32$, p = .002). However, behavioral intentions of participants with low need for closure (centered at 1 SD below the mean) were not affected by the norm clarity ($\beta = .008$, p = .898) (See Figure 1.2.a). And the norm clarity × need to belong interaction ($\beta = .05$, t = .455, p = .650) was not significant in predicting behavioral intention. Results supported H2a.

Punishment model. The model was significant (F(5, 93) = 2.545, p = .033), with a R^2 of .129. The main effect of perceived punishment ($\beta = .18$, t = 1.729, p = .102) was not significant in predicting behavioral intention. The main effects of need for closure and need to

belong were both not significant. Hypothesis 2b predicted that individuals' needs to belong moderate the effect of perceived punishment on behavioral intention. However, the analysis revealed a non-significant perceived punishment × need to belong interaction (β = -.04, *t* = -.418, *p* = .667), but a significant perceived punishment × need for closure interaction (β = .23, *t* = 2.675, *p* = .019). The follow-up simple slope tests found that participants high in need for closure (centered at 1 SD above the mean) had higher likelihood to engage in the behaviors with higher perceived punishment (β = .37, *p* = .001), whereas for participants low in need for closure (centered at 1 SD below the mean), there was no significant relationship between perceived punishment and behavioral intention (β = -.100, *p* = .889) (See Figure 1.2.b). Results provided no support for H2b and were inconsistent with H2a.

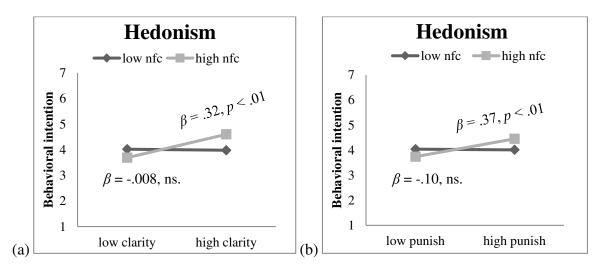


Figure 1.2. Behavioral intention as a function of need for closure and perceived clarity (a) or perceived punishment (b) (Study 1; higher score = higher behavioral intention).

Personal-focused value: openness to change

Clarity model. The regression model was not significant (F(5, 93) = 1.387, p = .236), with a R^2 of .072. The main effects of need for closure and need to belong were not significant. Both of the main effect of norm clarity ($\beta = .16, t = 1.595, p = .114$) and the norm clarity × need

to belong interaction ($\beta = -.07$, t = -.664, p = .508) were not significant in predicting behavioral intention. Results indicated a marginally significant norm clarity × need for closure interaction (β = .18, t = 1.720, p = .089). The follow-up simple slope tests found that participants high in need for closure (centered at 1 SD above the mean) had higher likelihood to engage in the behaviors with higher perceived clarity ($\beta = .32$, p = .033), whereas behavioral intentions of participants with low need for closure (centered at 1 SD below the mean) were not affected by the norm clarity ($\beta = -.001$, p = .940) (See Figure 1.3). Simple slope results supported H2a.The trend in the interaction between clarity and need for closure was also consistent with H2a, but it failed to reach statistical significance.

Punishment model. The regression model was not significant (F(5, 93) = .678, p= .641), with a R^2 of .035. The analysis showed that the main effect of perceived punishment (β = .09, t = .904, p = .368), the perceived punishment × need for closure interaction ($\beta = .04, t$ = .347, p = .729) and the perceived punishment × need to belong interaction ($\beta = .11, t = 1.008, p$ = .316) were not significant. The main effects of need for closure and need to belong were also not significant. There was no support for Hypothesis 2b.

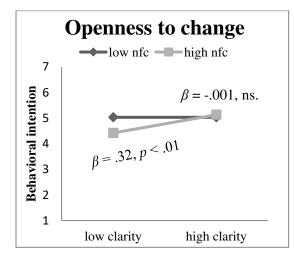


Figure 1.3. Behavioral intention as a function of perceived clarity and need for closure (Study 1; higher score = higher behavioral intention).

Summary

In summary, Hypothesis 1 predicted positive main effects of norm clarity and punishment on two sets of social-focused behaviors. For conservation, Hypothesis 1 was supported that both perceived clarity and punishment positively predicted individuals' behavioral intentions. For self-transcendence, Hypothesis 1 was partially supported that only perceived clarity, but not punishment, positively predicted individuals' behavioral intentions. The direction of perceived punishment's influences on behaviors expressing self-transcendence value was consistent with what I predicted in Hypothesis 1, but it failed to achieve statistical significance.

Hypothesis 2a predicted an interaction between norm clarity and need for closure for three sets of personal-focused behaviors. For self-enhancement and hedonism, Hypothesis 2a was supported that only for individuals with high need for closure, perceived clarity positively predicted individuals' behavioral intentions. For openness to change, Hypothesis 2a was partially supported that the interaction between norm clarity and need for closure failed to reach statistical significance. But the following simple slope tests supported Hypothesis 2a that only for individuals with high need for closure, perceived clarity positively predicted individuals'

Hypothesis 2b predicted an interaction between perceived punishment and need to belong for three sets of personal-focused behaviors. For hedonism and openness to change, Hypothesis 2b was not supported. For self-enhancement, Hypothesis 2b was partially supported that the interaction between perceived punishment and need to belong failed to reach statistical significance. But the following simple slope tests supported Hypothesis 2b that only for individuals with high need to belong, perceived punishment positively predicted individuals' intentions to perform self-enhancement behaviors.

Taken together, results from Study 1 generally suggested that individuals were more likely to perform social-focused behaviors as they perceived higher norm clarity and punishment. For personal-focused behaviors, only individuals with high need for closure were more likely to perform the behaviors as they perceived higher norm clarity. But there was very limited evidence to support the influences of perceived punishment on intentions to perform personal-focused behaviors.

However, there were some flaws with the value-expressive behaviors examined in Study 1. Firstly, the behavior sets were imbalanced for some values. Based on the pretest results, there was only 1 behavior expressing self-direction value and security value, and no behavior expressing tradition value and conformity value. Secondly, behaviors expressing a particular value were supposed to correspond with that value (Bardi & Schwartz, 2003). However, 4 out of 8 behavior sets failed to replicate the positive relationship with their corresponding values. The imbalanced behavior sets and the value-behavior incorrespondence weakened the attribution of observed normative influences to values which motivated behaviors. Therefore, I edited the behaviors and generated a new behavior list to deal with these issues. In Study 2, I aimed to examine whether the pattern of results still holds with a refined list of behaviors.

CHAPTER III: STUDY 2

The main task of study 2 was refining the list of value-expressive behaviors to address the value-behavior correspondence concerns. To achieve this, according to the value-behavior correlations in Study 1, I eliminated or further edited behaviors which did not match their corresponding values. Also, some new behaviors were generated. Study 2 aimed to test Hypothesis 1, Hypothesis 2a and Hypothesis 2b with improved value-behavior correspondence.

Method

Pretest 2: Revising Value-Expressive Behaviors

I examined the correlation between each behavior and its corresponding value in Study 1. Among the mismatched behaviors, 6 behaviors were modified by me to reach a better fit with the values. I also edited 30 behaviors from pretest 1 and generated 6 new behaviors based on the value theory. In total, 42 behaviors were pretested.

Another pretest was conducted to examine the validity of the updated value-expressive behaviors among our target participants. Thirty-three Singaporean university students, another sample of our target participants, participated in the pretest 2. For the same reason as in Pretest 1, one was excluded because she had lived in Singapore for less than ten years. The final sample of 32 participants (7 males) were on average 21.48 years old (SD = 1.65) and had lived in Singapore for an average of 21.23 years (SD = 1.68). Procedures and measures were identical with Pretest 1: participants rated how frequently did they perform each of the behavior and how frequently do Singaporeans perform each of the behavior on a scale from 0 (never) to 4 (all the time), both relative the opportunities to do so. They were also asked to rate how many ways there are to carry out each of the behavior from 1 (very few) to 7 (many ways), and to choose the value

that they think each behavior reflects the most based on definitions of Schwartz's 10 values (see Appendix A) (Schwartz, 1992).

I adopted the three steps in Pretest 1 to select suitable behaviors. The first step was to rule out normative behaviors which had average ratings above 3 (frequently) and non-normative behaviors which had average ratings below 1 (rarely) in personal behavior engagement measure and cultural behavior engagement measure. And all of the pretested behaviors were rated with the average of 4.86 (SD = .83) in specificity measure. The second step was to eliminate behaviors with average of specificity measure above 5.69 (+1 SD) or below 4.03 (-1 SD). The last step was to select behaviors with over 20 frequencies (two thirds of the participants) of the corresponding value and below 10 frequencies (one third of the participants) of other values for the final list.

Pretest 2 selected 20 behaviors for the main study. Along with the validated 14 behaviors in Study 1, the final list included 34 behaviors, 2-5 behaviors for each value. See Appendix E for the full list of behaviors and their corresponding values.

Main Study

Participants

One hundred and twenty-two Singaporean university students participated in the study for partial course credit. The sample size met the minimum requirement of sample size for the multiple regression model analysis with .8 power (Green, 1991). The sample of 122 participants (45 males) was on average 21.98 years old (SD = 2.07). They had lived in Singapore for an average of 21.65 years (SD = 2.32, range from 13 to 30 years). 115 (94.3%) were ethnic Chinese, 4 (3.3%) were Malays, 2 (1.6%) were Indians, and 1 (.8%) were other ethnicities.

Measures

Value endorsement. The measures were identical to Study 1. The item "*For each of the following values, rate the extent that it is important to you*" on a scale from 1 (*not at all important to me*) to 7 (*very important to me*) measured personal endorsement of each value. And the item "*For each of the following values, rate the extent that it is important to Singaporeans in general*" on a scale from 1 (*not at all important to Singaporeans in general*) to 7 (*very important to Singaporeans in general*) measured cultural endorsement of each value.

Norm clarity. Two items measuring norm clarity used in Study 1 were included in Study 2. One additional item "Generally, there are clear guidelines that people should do..... in Singaporean society" was added. Another change I made in Study 2 was to incorporate each statement with a general behavioral form of certain value, instead of multiple specific value-expressive behaviors used in Study 1. The change was made because the general behavioral form of value was at the same specificity level of value endorsement measurement, and enabled the items be less repetitive. For example, as for stimulation value defined as "excitement and challenge in life", the complete item was like "Generally, there are clear guidelines that people should (statement) seek excitement and challenge in life (behavioral phrasing of value) in Singaporean society (statement)." Participants were asked to indicate their agreement with the statement on a scale from 1 (strongly disagree) to 6 (strongly agree). The three items were averaged to form a clarity score for each behavioral norm. See Appendix F for the full list of items.

Perceived punishment. Two items measuring perceived punishment used in Study 1 were included in Study 2. I also added an additional item "*In Singaporean society, not...results in social disapproval*". In line with perceived clarity measurement, each item was incorporated with

a general behavioral form of certain value, instead of multiple specific value-expressive behaviors used in Study 1. For example, the complete item was like "*In Singaporean societies, not (statement) seeking excitement and challenge in life (behavioral phrasing of value) results in social disapprove (statement).*" Participants were asked to indicate their agreement with the statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The three items were averaged to form a punishment score for each behavioral norm. See Appendix F for the full list of items.

Behavioral intention. The behavior measurement was identical with the measures used in Study 1. Participants estimated the likelihoods with which they will engage in each behavior, relative to their opportunities to perform it on a 7-point scale from 1 (*never*) to 7 (*very likely*). Ratings of behavioral intention expressing each value were taken on average and formed the behavior indexes for the ten values.

Need for closure. The 15-item NFC scale used in Study 1 was included in Study 2 (α = .85). Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The 15 items were averaged to form a need for closure score.

Need to belong. The 10-item Need to Belong scale used in Study 1 was included in Study 2 ($\alpha = .88$). Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The 10 items were averaged to form a need to belong score.

Regulatory focus. Higgins et al. (2001)'s scale of regulatory focus was included as a trait measure of participants' promotion focus and prevention focus. The scale consisted of 11 items. One sample item for promotion focus was "*Do you often do well at different things that you*

try?", whereas one sample item for prevention focus was "*How often did you obey rules and regulations that were established by your parents?*". Participants indicated the frequency that specific events actually occur or have occurred in their lives on a scale from 1 (*never or seldom*) to 5 (*very often*). The questionnaire was used to examine whether clarity interplays with promotion focus and punishment interplays with prevention focus on affecting individuals' behavioral intentions. The scale was included for exploratory purposes, therefore results were not included in the main analyses³.

Results

Preliminary Analysis: Value-behavior correlation

Table 2.1 presented the correlations between personal endorsement and cultural endorsement of the ten value types and their corresponding behavior sets. We observed a substantial improvement on personal value endorsement-behavior correspondence compared with Study 1. All of the personal value endorsements positively and significantly correlated with the corresponding behavior sets, ranged from .207 (p = .022) to .495 (p < .001). Perceived cultural endorsement of achievement and universalism significantly and positively correlated with their corresponding behavior sets, but the correlation was not significant for the other 8 value types.

Value	No. of behavior items	Personal value endorsement	Cultural value endorsement	
		-behavior correlation	-behavior correlation	
Power	5	.448**	.039	
Achievement	3	.425**	.209*	
Hedonism	4	.316**	.011	
Stimulation	3	.494**	099	
Self-direction	2	.247**	084	
Universalism	4	.339**	.191*	
Benevolence	4	.429**	.062	
Security	4	.274**	.130	
Conformity	2	.207*	.103	
Tradition	3	.495**	.151	

Table 2.1
Study 2: Value-behavior Correlation

p* < .05; *p* < .01

Grouping values

As discussed in Study 1, based on Schwartz's value theory, the 10 values examined in this study can be further categorized into 5 broader value groups (Schwartz, 1992; Schwartz et al., 2012). Self-enhancement included power and achievement (norm clarity: 6 items, $\alpha = .68$; perceived punishment: 6 items, $\alpha = .75$; behavioral intention: 8 items, $\alpha = .69$). Hedonism value was computed as an independent value type (norm clarity: 3 items, $\alpha = .69$). Hedonism value punishment: 3 items, $\alpha = .72$; behavioral intention: 4 items, $\alpha = .63$). Openness to change included stimulation and self-direction (norm clarity: 6 items, $\alpha = .63$). Openness to change included stimulation and self-direction (norm clarity: 6 items, $\alpha = .80$; perceived punishment: 6 items, $\alpha = .83$; behavioral intention: 5 items, $\alpha = .55$). Self-transcendence included universalism and benevolence (norm clarity: 6 items, $\alpha = .84$; perceived punishment: 6 items, $\alpha = .71$; behavioral intention: 8 items, $\alpha = .76$). Conservation included security, conformity and tradition (norm clarity: 9 items, $\alpha = .80$; perceived punishment: 9 items, $\alpha = .82$; behavioral intention: 9 items, $\alpha = .57$).

Preliminary Analysis: Norm perception-behavior correlation

Table 2.2 presented the correlations among clarity, punishment and behavior for 5 broad value types. Perceived clarity and punishment were positively and significantly correlated for all value types, ranged from .336 (p < .001) to .581 (p < .001). Perceived clarity and behavioral intention were positively and significantly correlated for self-transcendence (r = .228, p = .012) and conservation (r = .200, p = .027), but not for the other 3 values. Perceived punishment and behavioral intention were positively and significantly correlated for hedonism (r = .189, p = .037), self-transcendence (r = .193, p = .033), and conservation (r = .203, p = .025), but not for the other 2 values.

Table 2.2Study 2: Norm perception-behavior Correlations

Value	Clarity-punishment correlation	Clarity-behavior correlation	Punishment-behavior correlation	
Self-enhancement	.373**	.098	.020	
Hedonism	.336**	.054	.189*	
Openness to change	.412**	.169	.011	
Self-transcendence	.510**	.228*	.193*	
Conservation	.581**	.200*	.203*	

p* < .05; *p* < .01

Testing Hypothesis

As in Study 1, I performed two multiple linear regression models for each value type to test the hypotheses for perceived clarity and punishment, respectively. The formula of the clarity model was as follows:

 $Behavior = \beta_0 + \beta_1 Z clarity + \beta_2 Z n f c + \beta_3 Z n t b + \beta_4 Z clarity * Z n f c + \beta_5 Z clarity * Z n t b + \epsilon$

Table 2.3 summarized all of the standardized coefficients in clarity model for 5 broader value groups (see Table 2.3).

Table 2.3

<u>Study 2 – Clarity Model: Standardized coefficients predicting behavioral intentions expressing 5</u> value groups

Variables	β					
	Self-	Hedonism	Openness to	Self-	Conservation	
	enhancement		change	transcendence		
Clarity	.07	.02	.12	.24**	.25**	
NFC	.16	03	19*	25*	.10	
NTB	.13	.37**	12	.20*	.07	
Clarity × NFC	.20*	.27**	.19	15	12	
Clarity \times NTB	.09	08	.08	.13	01	

p* < .05; *p* < .01

The formula of the punishment model was as follows:

 $Behavior = \beta_0 + \beta_1 Zpunish + \beta_2 Znfc + \beta_3 Zntb + \beta_4 Zpunish*Znfc + \beta_5 Zpunish*Zntb + \epsilon$

Table 2.4 summarized all of the standardized coefficients in punishment model for 5 broader value groups (see Table 2.4).

Table 2.4

<u>Study 2 – Punishment Model:</u>	Standardized	coefficients	predicting	behavioral	<i>intentions</i>
expressing 5 value groups					

Variables	β					
	Self-	Hedonism	Openness to	Self-	Conservation	
	enhancement		change	transcendence		
Punishment	02	.13	.03	.17	.29**	
NFC	.17	01	19*	21*	.15	
NTB	.15	.31**	08	.19*	.06	
Punishment × NFC	.02	.10	12	08	11	
Punishment × NTB	.08	.05	.12	.13	.00	

p* < .05; *p* < .01

As in Study 1, participants' gender was further involved to examine how gender affected the behavioral intentions for the clarity model⁴ and the punishment model⁵. The gender effects were examined for exploratory purposes, therefore results were not included in the main analyses.

Testing Hypothesis 1: Social-focused value

As discussed in Study 1, if Hypothesis 1 holds, for self-transcendence value and conservation value, we would expect perceive clarity and punishment to predict behavioral intention, regardless of individuals' needs for closure and needs to belong.

Social-focused value: self-transcendence

Clarity model. A significant regression equation was found (F(5,116) = 4.707, p = .001), with a R^2 of .169. Consistent with H1, the analysis revealed that the main effect of norm clarity was significant ($\beta = .24, t = 2.708, p = .008$). The main effect of need for closure ($\beta = -.25, t = -2.480, p = .011$) and the main effect of need to belong ($\beta = .20, t = 1.831, p = .026$) were significant, suggesting individuals lower in need for closure and higher in need to belong were more likely to perform self-transcendence behaviors. The norm clarity × need for closure interaction ($\beta = -.15, t = -1.617, p = .102$) and the norm clarity × need to belong interaction ($\beta = .13, t = 1.282, p = .202$) were both not significant in predicting behavioral intention.

Punishment model. The regression model was significant (F(5,116) = 4.256, p = .001), with a R^2 of .157. The main effect of perceived punishment was marginally significant ($\beta = .17$, t = 1.866, p = .061) on behavioral intention. The main effect of need for closure ($\beta = -.21$, t = -2.402, p = .018) and the main effect of need to belong ($\beta = .19$, t = 2.110, p = .037) were significant, suggesting individuals lower in need for closure and higher in need to belong were more likely to perform self-transcendence behaviors. As predicted, the punishment × need for closure interaction ($\beta = -.08$, t = -.589, p = .470) and the punishment × need to belong interaction ($\beta = .13$, t = 1.286, p = .173) were not significant. Generally speaking, results suggested that participants were more likely to perform behaviors expressing self-transcendence value as they

perceive the self-transcendence norm being clearer and having more severe punishment for norm violation. However, the effect of punishment failed to reach statistical significance.

Social-focused value: conservation

Clarity model. The regression model was significant (F(5,116) = 2.969, p = .015), with a R^2 of .114. As predicted, the analysis revealed a significant main effect of norm clarity ($\beta = .25, t = 2.779, p = .007$), suggesting that higher perceived clarity of conservation value was accompanied with higher tendency of behaviors expressing the value. The main effects of need for closure and need to belong were both not significant. There were no significant norm clarity × need for closure interaction ($\beta = -.12, t = -.932, p = .266$) and no significant norm clarity × need to belong interaction ($\beta = -.01, t = -.032, p = .951$).

Punishment model. The regression model was significant (F(5,116) = 3.176, p = .010), with a R^2 of .129. The main effect of perceived punishment was significant ($\beta = .29$, t = 3.122, p = .002) and in line with my prediction H1. It supported that individuals were more likely to perform the behavior as they perceive higher punishment of violating the norm. The main effects of need for closure and need to belong were both not significant. The punishment × need for closure interaction ($\beta = ..11$, t = .1.400, p = .228) and punishment × need to belong interaction ($\beta = .00$, t = .170, p = .966) were both not significant.

Testing Hypotheses 2a and 2b: Personal-focused values

As discussed in Study 1, for self-enhancement value, hedonism value and openness to change value, if hypothesis 2a holds, we would expect norm clarity to positively predict behavioral intention among individuals with high (versus low) needs for closure; whereas if hypothesis 2b holds, individuals with high (versus low) needs to belong are supposed to have higher behavioral intentions with higher perceived punishment.

Personal-focused values: self-enhancement

Clarity model. A significant regression equation was found (F(5,116) = 2.572, p = .030), with a R^2 of .100. The main effect of norm clarity ($\beta = .07$, t = .838, p = .404) and the norm clarity × need to belong interaction ($\beta = .09$, t = .708, p = .480) were both not significant in predicting behavioral intention. The main effects of need for closure and need to belong were both not significant. Supporting Hypothesis 2a, results revealed a significant norm clarity× need for closure interaction ($\beta = .20$, t = 1.727, p = .040). Further simple slope tests suggested that participants with high need for closure were more likely to perform the behavior as they perceive the norm being clearer ($\beta = .34$, p = .012). However, behavioral intentions of participants with low need for closure were not affected by the norm clarity ($\beta = .15$, p = .140) (See Figure 2.1).

Punishment model. A significant regression equation was found (F(5,116) = 2.713, p = .023), with a R^2 of .115. The main effects of need for closure and need to belong were both not significant. The main effect of perceived punishment ($\beta = -.02$, t = -.216, p = .829), the perceived punishment × need for closure interaction ($\beta = .02$, t = .223, p = .824) and the perceived punishment × need to belong interaction ($\beta = .08$, t = .838, p = .404) were not significant on behavioral intention. Results did not support H2b.

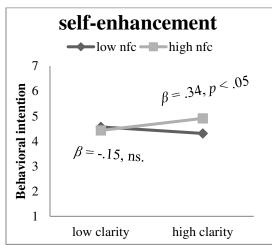


Figure 2.1. Behavioral intention as a function of perceived clarity and need for closure (Study 2; higher score = higher behavioral intention).

Personal-focused values: hedonism

Clarity model. A significant regression equation was found (F(5,116) = 3.482, p = .006), with a R^2 of .136. The main effect of norm clarity ($\beta = .02$, t = .245, p = .807) and the norm clarity × need to belong interaction ($\beta = -.08$, t = -.883, p = .379) were not significant. The main effect of need for closure was not significant. The main effect of need to belong was significant ($\beta = .37$, t = 3.577, p < .001), suggesting individuals higher in need to belong were more likely to perform hedonism behaviors. Supporting H2a, the norm clarity × need for closure interaction was significant ($\beta = .27$, t = 2.689, p = .004). Simple slope tests were performed to examine the effects of perceived clarity on behavioral intention when NFC was high (centered at 1 SD above the mean) and when NFC was low (centered at 1 SD below the mean). Results further manifested that participants with high need for closure were more likely to perform the behavior as they perceive the norm being clearer ($\beta = .38$, p = .011). By contrast, participants with low need for closure were not expected in the hypotheses, though it was not statistically significant.

Punishment model. The regression model was significant (F(5, 116) = 3.314, p = .008), with a R^2 of .135. The main effect of need for closure was not significant. The main effect of need to belong was significant ($\beta = .31, t = 3.291, p = .001$), suggesting individuals higher in need to belong were more likely to perform hedonism behaviors. The main effect of perceived punishment ($\beta = .13, t = 1.412, p = .161$), the perceived punishment × need for closure interaction ($\beta = .10, t = 1.053, p = .295$) and the perceived punishment × need to belong interaction ($\beta = .05, t = .505, p = .615$) were not significant in predicting behavioral intention. Results did not support H2b.

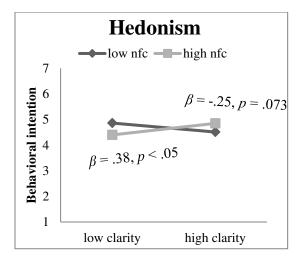


Figure 2.2. Behavioral intention as a function of need for closure and perceived clarity (Study 2; higher score = higher behavioral intention).

Personal-focused values: openness to change

Clarity model. The regression model was marginally significant (F(5,116) = 1.921, p = .096), with a R^2 of .088. Both of the main effect of norm clarity ($\beta = .12, t = 2.470, p = .200$) and the norm clarity × need to belong interaction ($\beta = .08, t = .860, p = .392$) were not significant in predicting behavioral intention. The main effect of need to belong was not significant. The main effect of need for closure was significant ($\beta = .19, t = -2.111, p = .050$), suggesting

individuals higher in need for closure were less likely to perform openness to change behaviors. Results indicated a marginally significant norm clarity × need for closure interaction ($\beta = .19$, t = 1.995, p = .053). The follow-up simple slope tests found that individuals with high NFC (centered at 1 SD above the mean) were more likely to perform the behaviors as they perceive norm being clearer ($\beta = .36$, p = .012). Behavioral intentions of participants with low need for closure (centered at 1 SD below the mean) were not affected by the norm clarity ($\beta = -.009$, p = .842) (See Figure 2.3). Simple slope results supported H2a.The trend in the interaction between clarity and need for closure was also consistent with H2a, but it failed to reach statistical significance.

Punishment model. The regression model was not significant (F(5,116) = 1.232, p = .298), with a R^2 of .054. The main effect of need to belong was not significant. The main effect of need for closure was significant ($\beta = -.19$, t = -2.200, p = .050), suggesting individuals higher in need for closure were less likely to perform openness to change behaviors. The analysis showed that the main effect of perceived punishment ($\beta = .03$, t = .395, p = .727), the perceived punishment × need for closure interaction ($\beta = -.12$, t = -.117, p = .793) and the perceived punishment × need to belong interaction ($\beta = .12$, t = .118, p = .467) were not significant. There was no support for H2b.

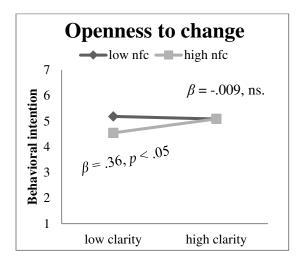


Figure 2.3. Behavioral intention as a function of perceived clarity and need for closure (Study 2; higher score = higher behavioral intention).

Summary

In summary, replicating Study 1, results of Study 2 found consistent evidence supporting Hypothesis 1 and Hypothesis 2a. However, there was no support for Hypothesis 2b as well.

Hypothesis 1 predicted positive main effects of norm clarity and punishment on two sets of social-focused behaviors. For conservation, Hypothesis 1 was supported that both perceived clarity and punishment positively predicted individuals' behavioral intentions. For selftranscendence, Hypothesis 1 was partially supported that only perceived clarity, but not punishment, positively predicted individuals' behavioral intentions. The direction of perceived punishment's influences on behaviors expressing self-transcendence value was consistent with what I predicted in Hypothesis 1, but it failed to achieve statistical significance.

Hypothesis 2a predicted an interaction between norm clarity and need for closure for three sets of personal-focused behaviors. For self-enhancement and hedonism, Hypothesis 2a was supported that only for individuals with high need for closure, perceived clarity positively predicted individuals' behavioral intentions. For openness to change, Hypothesis 2a was partially

supported that the interaction between norm clarity and need for closure failed to reach statistical significance. But the following simple slope tests supported Hypothesis 2a that only for individuals with high need for closure, perceived clarity positively predicted individuals' intentions to perform openness-to-change behaviors.

Hypothesis 2b predicted an interaction between perceived punishment and need to belong for three sets of personal-focused behaviors. Hypothesis 2b was not supported in Study 2.

Generally speaking, results from Study 2 replicated Study 1 that individuals were more likely to perform social-focused behaviors as they perceived higher norm clarity and punishment. For personal-focused behaviors, only individuals with high need for closure were more likely to perform the behaviors as they perceived higher norm clarity. But there was no evidence to support the influences of perceived punishment on intentions to perform personal-focused behaviors.

We suspected that the absence of NTB (need to belong)'s moderation effect might result from that the NTB scale measured individuals' general needs to belong without specifying a certain social group. In punishment measure, participants were asked whether they think not performing certain behavior would be disapproved by social others in Singaporean society. "Social others" represent Singaporeans in general. Comparatively, participants rated to what extent they feel the need to be accepted and belonged to "others". The reference group of "others" in need to belong measure was vague. Referring the "others" to social others might be difficult for participants to imagine how they connect interactively with a group of unknown people. When thinking about relationship with others, individuals naturally consider close others or people surrounding them, instead of social others in general. But if they refer "others" to close

others, there would be a mismatch between the reference group in punishment measure and the

reference group in need to belong measure.

CHAPTER IV: STUDY 3

To resolve the alternative explanation in Study 2, the first task of Study 3 was to investigate whether the absence of moderation effect of need to belong was due to the failure of need to belong scale to specify a certain social group. In order to test that, I conducted Study 3 in the context of friendship group. Friendship groups were characterized as groups of individuals who develop mutual friendships within the group, spend time and engage in activities with one another (Brown, 2004). Individuals within a friendship group become more and more similar in attitudes and behaviors. This increased similarity can be explained by the existence of interpersonal social norms to identify acceptable or desirable behaviors within the friendship group. Group members tend to refer to the shared norm to reduce the discrepancy between themselves and their friendship group (Biddle, Bank, & Marlin, 1980; Prentice & Miller, 1993; Rancourt, Conway, Burk, & Prinstein, 2013). The friendship group was selected as the cultural context for three reasons: firstly, the friendship group was in accordance with our definition of cultural context that it is a collective with shared representations and norms; secondly, the reference group in norm perception measurement and need to belong scale would be consistent by using friendship group; thirdly, friendship group is an applicable context for undergraduate participants.

The second goal was to examine whether results from Study 1 and Study 2 could be generalized to other cultural context or limited only to Singaporean culture. To test that, in study 3, participants were asked to think about one friendship group which matters the most to them, and then rate the norm perceptions of each behavioral norm in their friendship groups and their needs to belong to that friendship group.

Method

Participants

One hundred and five university students participated in the study for partial course credit. The sample size met the minimum requirement of sample size for the multiple regression model analysis with .8 power (Green, 1991). One participant was excluded because he merely described his understanding of friendship group and failed to specify one of his friendship groups. The final sample of 104 participants (30 males) was on average 21.32 years old (SD = 1.65). They had lived in Singapore for an average of 18.97 years (SD = 5.72, range from .4 to 26 years). 86 (82.7%) were ethnic Chinese, 8 (7.7%) were Malays, 4 (3.8%) were Indians, and 6 (5.8%) were other ethnicities.

Procedure

Participants were recruited via the research participation pool of School of Humanities and Social Sciences at NTU. Participants were directed to one of the four individual rooms in the laboratory. Each room had one personal computer. An experimenter instructed participants to give their responses on the personal computers in front of them, focus on their own task and do not use their mobile phones. They were told that the following online research survey was aimed to examine how individuals perceive their friendship groups. Then, participants read a paragraph which described the definition of friendship group. After that, participants were instructed to write a short essay about one of their own friendship groups *"Think about one of your friendship* groups that matters the most to you. In the space below, write a brief description of this friendship group." The following guiding instructions were provided to facilitate their writing: *"For example, you can describe who the members of the group are, the things that the group* usually gets together to do, the group's likes and dislikes, and so forth." The aim of the writing

task was to enable all participants have a shared understanding of the concept "friendship group", and recall one important friendship group as the reference group in the following measures. Appendix G presented the detailed instructions for the friendship writing task. I read the short essays from all participants, and checked whether (1) participants had correct and clear understandings of friendship group, (2) each participant named one and only one specific friendship group, and (3) there were at least three members in the friendship group.

After the writing task, participants responded to measures in the following order: (1) personal value endorsement and cultural value endorsement (counter-balanced), (2) perceived norm clarity and punishment (counter-balanced), (3) behavioral intention, (4) need for closure and (5) need to belong. Finally, they provided their demographic information and were debriefed.

Measures

Value endorsement. The item "For each of the following values, rate the extent that it is important to you" in Study 1 was included to measure personal endorsement of each value. And the item measuring group endorsement of each value changed "Singaporeans in general" to "your friendship group". The complete item was "For each of the following values, rate the extent that it is important to your friendship group".

Norm clarity. Three items measuring norm clarity used in Study 2 were included in Study 3, with "*Singaporean culture*" in all the items changed to "*my friendship group*". It was highlighted to participants that the phrase "*friendship group*" in all the questions referred to the friendship group that they had just described in the writing task. The sample item was "*To my friendship group, a person is clearly expected to (statement) seek excitement and challenge in life (behavioral phrasing of value)*." Participants were asked to indicate their agreement with the

statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The three items were averaged to form a clarity score for each behavioral norm. See Appendix H for the full list of items.

Perceived punishment. Three items measuring perceived punishment used in Study 2 were included in Study 3, with "*Singaporean culture*" in all the items changed to "*my friendship group*". For example "*My friendship group would disapprove if a person does not (statement) seek excitement and challenge in life (behavioral phrasing of value)*." Participants were asked to indicate their agreement with the statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The three items were averaged to form a punishment score for each behavioral norm. See Appendix H for the full list of items.

Behavioral intention. The behavior measurement was identical with the measures used in Study 3. Participants estimated the likelihood with which they would engage in each behavior, relative to their opportunities to perform it on a 7-point scale from 1 (*never*) to 7 (*very likely*). Ratings of behavioral intention expressing each value were taken on average and formed the behavior indexes for the ten values.

Need for closure. The 15-item NFC scale used in Study 1 was included in Study 3 (α = .85). Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The 15 items were averaged to form a need for closure score. The NFC measurement was unchanged because need for closure refers to a person's general need for firm answers to reduce uncertainty across all situations (Chiu, Morris, Hong, & Menon, 2000; Morris & Fu, 2001). Therefore, it was not supposed to be affected by the change of cultural context.

Need to belong. The 10-item Need to Belong scale used in Study 1 was included in Study 3 ($\alpha = .80$), with "other people" in all the items changed to "my friendship group". For example, "It bothers me a great deal when I am not included in plans of my friendship group". Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The 10 items were averaged to form a need to belong score.

Results

Preliminary Analysis: Value-behavior correlation

Table 3.1 presented correlations between personal endorsement and cultural endorsement of the ten value types and their corresponding behavior sets. All of the personal value endorsements positively and significantly correlated with the corresponding behavior sets, ranged from .228 (p = .030) to .527 (p < .001). For value type of power, universalism, benevolence, conformity and tradition, perceived cultural value endorsement significantly and positively correlated with their corresponding behavior sets, but the correlation was not significant for the other 5 value types.

Table 3.1

|--|

Value	No. of behavior items	Personal value endorsement-	Group value endorsement
		behavior correlation	-behavior correlation
Power	5	.346**	.225*
Achievement	3	.419**	.134
Hedonism	4	.234*	.188
Stimulation	3	.527**	.179
Self-direction	2	.314**	026
Universalism	4	.495**	.287**
Benevolence	4	.371**	.286**
Security	4	.228*	.133
Conformity	2	.336**	.258**
Tradition	3	.446**	.390**

p* < .05; *p* < .01

Grouping values

Self-enhancement included power and achievement (norm clarity: 6 items, $\alpha = .81$; perceived punishment: 6 items, $\alpha = .74$; behavioral intention: 8 items, $\alpha = .69$). Hedonism value was computed as an independent value type (norm clarity: 3 items, $\alpha = .81$; perceived punishment: 3 items, $\alpha = .88$; behavioral intention: 4 items, $\alpha = .43$). Openness to change included stimulation and self-direction (norm clarity: 6 items, $\alpha = .70$; perceived punishment: 6 items, $\alpha = .76$; behavioral intention: 5 items, $\alpha = .47$). Self-transcendence included universalism and benevolence (norm clarity: 6 items, $\alpha = .79$; perceived punishment: 6 items, $\alpha = .86$; behavioral intention: 8 items, $\alpha = .75$). Conservation included security, conformity and tradition (norm clarity: 9 items, $\alpha = .90$; perceived punishment: 9 items, $\alpha = .90$; behavioral intention: 9 items, $\alpha = .66$).

Preliminary Analysis: Norm perception-behavior correlation

Table 3.2 presented the correlations among clarity, punishment and behavior for 5 broad value types. Perceived clarity and punishment were positively and significantly correlated for all value types, ranged from .457 ($p \le .001$) to .663 ($p \le .001$). Perceived clarity and behavioral intention were positively and significantly correlated for self-transcendence (r = .288, p = .003) and conservation ($r = .450, p \le .001$), but not for the other 3 values. Perceived punishment and behavioral intention were positively and significantly correlated for self-transcendence (r = .309, p = .001), and conservation ($r = .373, p \le .001$), but not for the other 2 values.

Table 3.2

Value	Clarity-punishment	Clarity-behavior	Punishment-behavior
	correlation	correlation	correlation
Self-enhancement	.457**	057	.117
Hedonism	.494**	.104	.112
Openness to change	.580**	085	.010
Self-transcendence	.663**	.288**	.309**
Conservation	.634**	.450**	.373**

Study 3: Norm perception-behavior Correlations

p* < .05; *p* < .01

Testing Hypothesis

As in Study 1 and Study 2, I performed two multiple linear regression models for each

value type to test the hypotheses for perceived clarity and punishment, respectively. The formula of the clarity model was as follows:

 $Behavior = \beta_0 + \beta_1 Z clarity + \beta_2 Z n f c + \beta_3 Z n t b + \beta_4 Z clarity * Z n f c + \beta_5 Z clarity * Z n t b + \epsilon$

Table 3.3 summarized all of the standardized coefficients in clarity model for 5 broader

value groups (see Table 3.3).

Table 3.3

<u>Study 3 – Clarity Model: Standardized coefficients predicting behavioral intentions expressing 5</u> value groups

Variables			β		
	Self-	Hedonism	Openness to	Self-	Conservation
	enhancement		change	transcendence	
Clarity	04	.13	.00	.27**	.38**
NFC	.21	.02	26**	21*	.26*
NTB	06	.11	.04	.18	.06
Clarity × NFC	.22*	.34**	.23*	08	04
Clarity × NTB	02	22	.06	.03	.01

p* < .05; *p* < .01

The formula of the punishment model was as follows:

 $Behavior = \beta_0 + \beta_1 Zpunish + \beta_2 Znfc + \beta_3 Zntb + \beta_4 Zpunish*Znfc + \beta_5 Zpunish*Zntb + \epsilon$

Table 3.4 summarized all of the standardized coefficients in punishment model for 5

broader value groups (see Table 3.4).

Table 3.4

<u>Study 3 – Punishment Model: Standardized coefficients predicting behavioral intentions</u> <u>expressing 5 value groups</u>

Variables			β		
	Self-	Hedonism	Openness to	Self-	Conservation
	enhancement		change	transcendence	
Punishment	.05	.10	.06	.32**	.33**
NFC	.16	04	26*	28**	.27**
NTB	05	.17	.03	.19	.10
Punishment × NFC	.22*	.09	.17	16	.01
Punishment × NTB	11	.14	09	.06	.04

p < .05; **p < .01

As in Study 1 and Study 2, participants' gender was further involved to examine how gender affected the behavioral intentions for the clarity model⁶ and the punishment model⁷. The gender effects were examined for exploratory purposes, therefore results were not included in the main analyses.

Testing Hypothesis 1: Social-focused values

As discussed in previous studies, if Hypothesis 1 holds, for self-transcendence value and conservation value, we would expect perceive clarity and punishment to predict behavioral intention, regardless of individuals' needs for closure and needs to belong.

Social-focused values: self-transcendence

Clarity model. A significant regression equation was found (F(5, 98) = 3.104, p = .012), with a R^2 of .148. Consistent with our prediction, the analysis revealed that the main effect of norm clarity was significant ($\beta = .27, t = 2.635, p = .010$). The main effect of need to belong was not significant. The main effect of need for closure was significant ($\beta = .21, t = -1.987, p =$

.047), suggesting individuals higher in need for closure were less likely to perform selftranscendence behaviors. The norm clarity × need for closure interaction (β = -.08, t = -.801, p = .425) and the norm clarity × need to belong interaction (β = .03, t = .317, p = .752) were both not significant in predicting behavioral intention.

Punishment model. The regression model was significant (F(5, 98) = 4.754, p = .001) with a R^2 of .178. Consistent with our prediction, the main effect of perceived punishment was significant ($\beta = .32, t = 3.197, p = .002$) on behavioral intention. The main effect of need to belong was not significant. The main effect of need for closure was significant ($\beta = .28, t = -2.974, p = .010$), suggesting individuals higher in need for closure were less likely to perform self-transcendence behaviors. As predicted, the norm clarity × need for closure interaction ($\beta = ..16, t = -1.518, p = .132$) and the norm clarity × need to belong interaction ($\beta = .06, t = .578, p = .564$) were not significant. Supporting Hypothesis 1, results suggested that participants were more likely to perform behaviors expressing self-transcendence value as they perceive the self-transcendence norm being clearer and having more social disapproval for norm violation.

Social-focused values: conservation

Clarity model. The regression model was significant ($R^2 = .32$, F(5, 98) = 9.291, p < .001), with a R^2 of .328. As predicted, the analysis revealed a significant main effect of norm clarity ($\beta = .38$, t = 4.169, p < .001), suggesting that higher tendency of behaviors was accompanied with higher perceived clarity of the norm. The main effect of need to belong was not significant. The main effect of need for closure was significant ($\beta = .26$, t = 2.538, p = .011), suggesting individuals higher in need for closure were more likely to perform conservation behaviors. There were no significant norm clarity × need for closure interaction ($\beta = .04$, t = .04).

.395, p = .694) and no significant norm clarity × need to belong interaction ($\beta = .01$, t = .074, p = .941).

Punishment model. The regression model was significant (F(5, 98) = 8.344, p < .001), with a R^2 of .300. The main effect of perceived punishment was significant ($\beta = .33, t = 3.680, p < .001$) and in line with my prediction. It supported that individuals were more likely to perform the behavior as they perceived higher punishment of violating the norm. The main effect of need to belong was not significant. The main effect of need for closure was significant ($\beta = .27, t = 2.862, p = .007$), suggesting individuals higher in need for closure were more likely to perform conservation behaviors. The punishment × need for closure interaction ($\beta = .01, t = .104, p = .918$) and punishment × need to belong interaction ($\beta = .04, t = .427, p = .670$) were both not significant. Results were in line with Hypothesis 1.

Testing Hypotheses 2a and 2b: Personal-focused values

As discussed in previous studies, for self-enhancement value, hedonism value and openness to change value, if hypothesis 2a holds, we would expect individuals' needs for closure to moderate the relationship between norm clarity and behavioral intention; whereas if hypothesis 2b holds, individuals' needs to belong are supposed to moderate the relationship between perceived punishment and behavioral intention.

Personal-focused values: self-enhancement

Clarity model. A significant regression equation was found (F(5, 98) = 2.475, p = .032), with a R^2 of .126. The analysis found both the main effect of norm clarity ($\beta = -.04, t = -.348, p$ = .729) and the norm clarity × need to belong interaction ($\beta = -.02, t = -.173, p = .863$) were not significant in predicting behavioral intention. The main effects of need for closure and need to belong were both not significant. Supporting H2a, the interaction between perceived clarity and

need for closure was significant ($\beta = .22$, t = 2.029, p = .045). Simple slope tests found that the effects of clarity were not significant among participants with low need for closure (centered at 1 SD below the mean) ($\beta = .18$, p = .109) and participants with high need for closure (centered at 1 SD above the mean) ($\beta = .11$, p = .457) (See Figure 3.1.a). Simple slope tests provided no evidence for H2a.

Punishment model. The regression model was significant (F(5, 98) = 3.446, p = .007) with a R^2 of .150. The main effect of perceived punishment ($\beta = .05$, t = .444, p = .658) and the perceived punishment x need to belong interaction ($\beta = -.11$, t = -1.271, p = .214) were not significant. The main effects of need for closure and need to belong were both not significant. As in the clarity model, the analysis also revealed a significant perceived punishment x need for closure interaction ($\beta = .22, t = 2.162, p = .033$). Simple slope tests of the punishment's effect on different NFC levels found that participants high in need for closure (centered at 1 SD above the mean) had higher likelihood to engage in the behaviors with higher perceived punishment but it was not statistically significant ($\beta = .25$, p = .055), whereas for participants low in need for closure (centered at 1 SD below the mean), there was no significant relationship between perceived punishment and behavioral intention ($\beta = -.16$, p = .288). Comparably, simple slope tests of the NFC's effect on different punishment levels found that individuals' NFC had no effect on behavioral intention among individuals with low perceived punishment (centered at 1 SD below the mean) ($\beta = -.05$, ns.). However, for individuals with high perceived punishment (centered at 1 SD above the mean) ($\beta = .36$, p = .016), there were high likelihoods to engage in the behaviors with the increase in high need for closure (See Figure 3.1.b). Results did not support H2b.

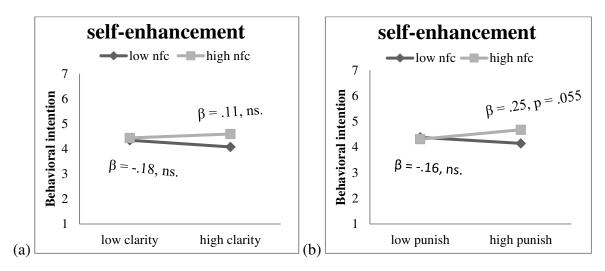


Figure 3.1. Behavioral intention as a function of perceived clarity and need for closure (a) or perceived punishment and need for closure (b) (Study 3; higher score = higher behavioral intention).

Personal-focused values: hedonism

Clarity model. A significant regression equation was found (F(5, 98) = 3.122, p = .008), with a R^2 of .129. The analysis revealed a non-significant main effect of norm clarity ($\beta = .13, t = 1.305, p = .195$) in predicting behavioral intention. The main effects of need for closure and need to belong were both not significant. Supporting H2a, the norm clarity × need for closure interaction was significant ($\beta = .34, t = 2.914, p = .004$), indicating that norm clarity and need for closure interplayed to influence engagement in behaviors. According to the results of follow-up simple slope tests, participants high in need for closure (centered at 1 SD above the mean) were more likely to perform the behaviors with higher perceived clarity ($\beta = .45, p = .004$), whereas for participants low in need for closure (centered at 1 SD below the mean), the behavioral intention was unaffected by perceived clarity ($\beta = .20, p = .165$) (See Figure 3.2).

The norm clarity × need to belong interaction was marginally significant (β = -.22, *t* = - 1.875, *p* = .064). Simple slope tests further showed that there was no significant relationship between norm clarity and behavioral intention among participants high in need to belong

(centered at 1 SD above the mean) ($\beta = -.09$, p = .590). And for participants low in need to belong (centered at 1 SD below the mean), they were more likely to perform the behaviors with higher perceived clarity ($\beta = .32$, p = .032). The trend was unexpected, but it failed to reach statistical significance.

Punishment model. The regression model was significant (F(5, 98) = 2.443, p = .042), with a R^2 of .116. The main effects of need for closure and need to belong were both not significant. The main effect of perceived punishment ($\beta = .10, t = .976, p = .332$), the perceived punishment × need for closure interaction ($\beta = .09, t = .903, p = .369$), and the perceived punishment × need to belong interaction ($\beta = .14, t = 1.355, p = .179$) were not significant in predicting behavioral intention. There was no support for Hypothesis 2b.

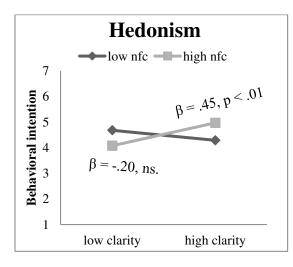


Figure 3.2. Behavioral intention as a function of need for closure and perceived clarity (Study 3; higher score = higher behavioral intention).

Personal-focused values: openness to change

Clarity model. The regression model was significant (F(5, 98) = 3.343, p = .008), with a R^2 of .146. Both of the main effect of norm clarity ($\beta = .00, t = -.005, p = .996$) and the norm clarity × need to belong interaction ($\beta = .06, t = .540, p = .590$) were not significant in predicting

behavioral intention. The main effect of need to belong was not significant. The main effect of need for closure was significant ($\beta = -.26$, t = -2.477, p = .015), suggesting individuals higher in need for closure were less likely to perform openness to change behaviors. Results indicated a significant norm clarity × need for closure interaction ($\beta = .23$, t = 2.160, p = .033). The follow-up simple slope tests of the clarity's effect on different NFC levels found a general trend that participants low in NFC (centered at 1 SD below the mean) were less likely to perform the behavior with higher perceived clarity ($\beta = -.14$, p = .180). Participants high in NFC (centered at 1 SD above the mean) were more likely to engage in the behaviors as having higher perceived clarity ($\beta = .20$, p = .112). The interaction between clarity and need for closure supported H2a. But simple slope results failed to find significant predictive power of norm clarity among high NFC individuals (See Figure 3.3).

Punishment model. The regression model was marginally significant (F(5, 98) = 1.112, p = .059), with a R^2 of .089. The main effect of need to belong was not significant. The main effect of need for closure was significant ($\beta = -.26$, t = -2.392, p = .018), suggesting individuals higher in need for closure were less likely to perform openness to change behaviors. The analysis showed that the main effect of perceived punishment ($\beta = .06$, t = .575, p = .567), the perceived punishment × need for closure interaction ($\beta = .17$, t = 1.729, p = .143) and the perceived punishment × need to belong interaction ($\beta = -.09$, t = -.820, p = .414) were not significant. There was no support for Hypothesis 2b.

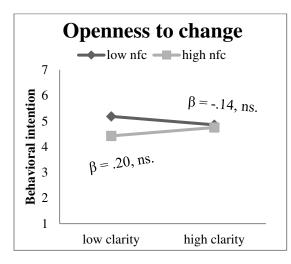


Figure 3.3. Behavioral intention as a function of perceived clarity and need for closure (Study 3; higher score = higher behavioral intention).

Summary

Results from Study 1 and Study 2 were replicated in Study 3.

In summary, Hypothesis 1 predicted positive main effects of norm clarity and punishment on two sets of social-focused behaviors. For both conservation and self-transcendence, Hypothesis 1 was supported that both perceived clarity and punishment positively predicted individuals' behavioral intentions.

Hypothesis 2a predicted an interaction between norm clarity and need for closure for three sets of personal-focused behaviors. For self-enhancement, hedonism, and openness to change, Hypothesis 2a was supported that for individuals with high need for closure, perceived clarity positively predicted individuals' behavioral intentions.

Hypothesis 2b predicted an interaction between perceived punishment and need to belong for three sets of personal-focused behaviors. No evidence was found to support Hypothesis 2b in Study 3.

Across the three studies, we could conclude that Hypothesis 1 was supported. For socialfocused values, but not personal-focused values, individuals were more likely to engage in valueexpressive behaviors as they perceived higher norm clarity and punishment. Also, Hypothesis 2a was supported. For personal-focused values, but not social-focused values, individuals with high need for closure were more likely to perform value-expressive behaviors with higher perceived norm clarity. Generally speaking, we observed that norm clarity only interplayed with need for closure, but not need to belong, to affect intentions of personal-focused behaviors. And compared with perceived punishment, the effect of norm clarity on behavioral intention was largely affected by individuals' needs for closure, and that influence was more stable. Furthermore, the findings were not limited to Singaporean cultural context, but could be generalized to other contexts such as friendship group.

There was a lack of consistent results supporting Hypothesis 2b. And the failure to find evidence supporting Hypothesis 2b in Study 3 ruled out the possibility that it was due to the mismatched reference group in punishment measure and NTB scale.

As we have discussed in Study 1, value groups of self-transcendence and conservation could be grouped into social-focus values because both of their motivational goals concerns how individuals relate socially to others, whereas value groups of self-enhancement, hedonism and openness to change were considered as personal focused values because they were motivated to express personal interests (Schwartz, 1992; Schwartz et al., 2012). However, we lack empirical evidence to ensure that the value groups were organized in that manner in the perceptions of our target samples. Therefore, I added one measure of perceived personal focus and one measure of perceived social focus for each value. And the expected results for Hypothesis 1 and Hypothesis 2 will be discussed in details in Study 4.

CHAPTER V: STUDY 4

In study 4, I used Singaporean culture as the cultural context, which was identical with Study 1 and Study 2. The only change I made in Study 4 was adding one item measuring perceived personal focus and one item measuring perceived social focus of each value. This helped to achieve two goals: 1) testify whether the personal-social focus dimension was organized in the same manner with Schwartz's value theory among our target sample, and 2) examine whether Hypotheses 1 and 2 holds by including perceived personal focus and social focus in the model. Hypothesis 1 predicted main effects of perceived clarity and punishment on intentions to perform behaviors expressing social-focused values. Therefore, if Hypothesis 1 holds, it is expected that for all value groups, both perceived clarity and punishment positively predict behavioral intentions among individuals who perceive the value as being high (versus low) in social focus. And those effects should be independent of individuals' needs. However, Hypotheses 2a and 2b predicted that for personal-focused values, individuals' needs for closure and needs to belong moderated the relationship between norm perceptions and behavioral intention. If Hypotheses 2a and 2b holds, we are supposed to observe a three-way interaction for all value groups. To be specific, norm clarity was expected to interplay with need for closure to affect behavioral intention among individuals who perceive certain value as high (versus low) in personal focus. And if Hypothesis 2b holds, perceived punishment is expected to interplay with need to belong to affect behavioral intention among individuals who perceive certain value as high (versus low) in personal focus.

Method

Participants

One hundred and nineteen Singaporean university students participated in the study for

partial course credit. According to Green (1991), the minimum required sample size was 106 to detect a medium effect from multiple regression model with 7 predictors for .8 power. The sample size met the minimum requirement of sample size. The sample of 119 participants (53 males) was on average 21.96 years old (SD = 1.62). They had lived in Singapore for an average of 21.75 years (SD = 1.98, range from 12 to 29 years). 112 (94.1%) were ethnic Chinese, 3 (2.5%) were Malays, 1 (0.8%) were Indians, and 3 (2.5%) were other ethnicities.

Measures

Value endorsement. The item "For each of the following values, rate the extent that it is important to you" in Study 1 was included to measure personal endorsement of each value. And the item "For each of the following values, rate the extent that it is important to Singaporeans in general" on a scale from 1 (not at all important to Singaporeans in general) to 7 (very important to Singaporeans in general) in Study 1 was included to measure cultural endorsement of each value.

Norm clarity. Three items measuring norm clarity used in Study 2 were included in Study 4. Participants were asked to indicate their agreement with the statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The three items were averaged to form a clarity score for each behavioral norm.

Perceived punishment. Three items measuring perceived punishment used in Study 2 were included in Study 4. Participants were asked to indicate their agreement with the statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The three items were averaged to form a punishment score for each behavioral norm.

Behavioral intention. The behavior measurement was identical with the measures used in Study 2. Participants estimated the likelihood with which they would engage in each behavior,

relative to their opportunities to perform it on a 7-point scale from 1 (*never*) to 7 (*very likely*). Ratings of behavioral intention expressing each value were taken on average and formed the behavior indexes for the ten values.

Personal focus versus social focus. The focus measurement was to test whether individuals perceive value types serve the interests they presumed to serve. To be consistent with norm perception measurements, I adopted general behavioral form of value type in the measurement. Participants were instructed to think about how behaviors can serve various purposes, and then they were asked to rate the extent to which the behaviors serve particular purposes. The items were developed based on Schwartz's definition of personal focus and social focus (Schwartz, 1992). Therefore, perceived personal focus of each value was measured by the item "How much do the following behaviors focus on allowing people to express their personal characteristics, feelings and preferences?" on a scale from 1 (not at all) to 7 (very much). And perceived social focus of each value was measured by the item "How much do the following behaviors focus on allowing people to build relationships with others and impact others' lives?" on a scale from 1 (not at all) to 7 (very much).

Need for closure. The 15-item NFC scale used in Study 1 was included in Study 4 (α = .84). Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The 15 items were averaged to form a need for closure score.

Need to belong. The 10-item Need to Belong scale used in Study 1 was included in Study 4 (α = .87). Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The 10 items were averaged to form a need to belong score.

Results

Preliminary Analysis: Value-behavior correlation

All of the personal value endorsements positively and significantly correlated with the corresponding behavior sets, ranged from .189 (p = .039) to .658 (p < .001) (See Table 4.1). For value type of achievement, universalism and tradition, perceived cultural value endorsement significantly and positively correlated with their corresponding behavior sets, but the correlation was not significant for the other 7 value types.

Table 4.1Study 4: Value-behavior Correlation

Value	No. of behavior items	Personal value endorsement- behavior correlation	Cultural value endorsement- behavior correlation
Power	5	.396**	.094
Achievement	3	.611**	.339**
Hedonism	4	.397**	.008
Stimulation	3	.658**	.156
Self-direction	2	.329**	.032
Universalism	4	.337**	.186*
Benevolence	4	.367**	.168
Security	4	.260*	001
Conformity	2	.189*	.152
Tradition	3	.354**	.185*

p* < .05; *p* < .01

Grouping values

Self-enhancement included power and achievement (norm clarity: 6 items, $\alpha = .65$; perceived punishment: 6 items, $\alpha = .75$; behavioral intention: 8 items, $\alpha = .69$). Hedonism value was computed as an independent value type (norm clarity: 3 items, $\alpha = .66$; perceived punishment: 3 items, $\alpha = .82$; behavioral intention: 4 items, $\alpha = .50$). Openness to change included stimulation and self-direction (norm clarity: 6 items, $\alpha = .81$; perceived punishment: 6 items, $\alpha = .86$; behavioral intention: 5 items, $\alpha = .60$). Self-transcendence included universalism

and benevolence (norm clarity: 6 items, $\alpha = .70$; perceived punishment: 6 items, $\alpha = .80$; behavioral intention: 8 items, $\alpha = .73$). Conservation included security, conformity and tradition (norm clarity: 9 items, $\alpha = .78$; perceived punishment: 9 items, $\alpha = .73$; behavioral intention: 9 items, $\alpha = .59$).

Preliminary Analysis: Norm perception-behavior correlation

Table 4.2 presented the correlations among clarity, punishment and behavior for 5 broad value types. Perceived clarity and punishment were positively and significantly correlated for all value types, ranged from .557 (p < .001) to .731 (p < .001). Perceived clarity and behavioral intention were positively and significantly correlated for self-enhancement (r = .234, p = .011) and conservation (r = .213, p = .021), but not for the other 3 values. Perceived punishment and behavioral intention were positively and significantly correlated for self-enhancement (r = .208, p = .023), and conservation (r = .212, p = .020), but not for the other 2 values.

Table 4.2Study 4: Norm perception-behavior Correlations

Value	Clarity-punishment correlation	Clarity-behavior correlation	Punishment-behavior correlation
Self-enhancement	.578**	.234*	.208*
Hedonism	.557**	.163	.113
Openness to change	.731**	.140	.097
Self-transcendence	.622**	.167	.128
Conservation	.694**	.213*	.212*

p < .05; **p < .01

Testing Hypothesis

Personal focus versus social focus

To testify whether the values were actually organized in the theoretical personal focus versus social focus dimension, I performed paired sample T-tests to compare individuals' perceptions of personal focus and social focus for the values. As discussed before, according to

Schwartz's (1992) personal versus social focus categorization, value types of power, achievement, hedonism, stimulation and openness to change can be categorized into personalfocus values. Comparably, value types of benevolence, universalism, security, conformity and tradition can be categorized into social-focused values. I took average of all personal-focused values and social-focused values in the personal-focus measure and social-focus measure. Results found that the average of personal-focused values (M = 5.73, SD = .78) scored significantly higher than social-focused values (M = 4.75, SD = .96) on the personal-focus measure (t = 9.125, p < .001, d = 1.12), and the average of social focused values (M = 5.61, SD= .81) scored higher than personal-focused value (M = 4.38, SD = 1.01) in the social-focus measure (t = -10.522, p < .001, d = 1.27). Paired sample T-test between personal-focus measure (PF) and social-focus measure (SF) has also been performed for each value (See Table 4.3).

Table 4.3Study 4: Paired-sample t-test between personal-focus measure (PF) and social-focus measure(SF)

Value	F	ΥF	S	F	t
	М	SD	М	SD	_
Power	4.88	1.81	3.50	1.81	7.22**
Achievement	5.67	1.19	5.15	1.34	4.37**
Hedonism	6.05	1.11	4.39	1.53	9.64**
Stimulation	5.92	1.12	4.63	1.37	8.94**
Self-direction	6.14	1.15	4.21	1.71	10.11**
Universalism	5.09	1.34	5.57	1.25	-3.73**
Benevolence	5.74	1.08	6.40	.94	-6.68**
Security	4.67	1.30	5.55	1.18	-6.64**
Conformity	3.50	1.80	4.92	1.39	-6.74**
Tradition	4.76	1.38	5.62	1.38	-7.94**

p* < .05; *p* < .01

To test Hypotheses 1 and 2, four multiple linear regression models were performed for every value type. For each value type, the effects of perceived personal focus and social focus were examined respectively with either norm clarity and need for closure entered or perceived

punishment and need to belong entered. All of the variables were mean-centered. In previous studies, how norm perceptions and personal needs jointly affect behaviors were independently tested for either personal-focused value or social-focused value. To keep consistency, the clarity model and punishment model were separately performed for the two focuses without considering their reciprocal impacts. Formulas of the four models were as follows:

Examining effects of perceived social focus:

Model 1-Clarity Model

$$Behavior = \beta_0 + \beta_1 Z clarity + \beta_2 Z n f c + \beta_3 Z S F + \beta_4 Z clarity * Z n f c + \beta_5 Z clarity * Z S F + \beta_6$$

(1)

$$Znfc*ZSF + \beta_7 Zclarity*Znfc*ZSF + \epsilon$$

Model 2-Punishment Model

$$Behavior = \beta_0 + \beta_1 Zpunish + \beta_2 Zntb + \beta_3 ZSF + \beta_4 Zpunish * Zntb + \beta_5 Zpunish * ZSF + \beta_6$$
$$Zntb * ZSF + \beta_7 Zpunish * Zntb * ZSF + \varepsilon$$
(2)

Examining effects of perceived personal focus:

Model 3-Clarity Model

$$Behavior = \beta_0 + \beta_1 Z clarity + \beta_2 Z n f c + \beta_3 Z P F + \beta_4 Z clarity * Z n f c + \beta_5 Z clarity * Z P F + \beta_6 Z Clarity * Z n f c * Z P F + \epsilon$$
(3)

Model 4-Punishment Model

$$Behavior = \beta_0 + \beta_1 Zpunish + \beta_2 Zntb + \beta_3 ZPF + \beta_4 Zpunish*Zntb + \beta_5 Zpunish*ZPF + \beta_6$$
$$Zntb*ZPF + \beta_7 Zpunish*Zntb*ZPF + \epsilon$$
(4)

Participants' gender was further involved to examine how gender affected the behavioral intentions for each model. Male was coded as -1 and female was coded as 1. For the 1^{st} model⁸, gender, the gender × clarity interaction, the gender × need for closure interaction and the gender × social focus interaction were further entered as predictors. For the 2^{nd} model⁹, gender, the

gender × punishment interaction, the gender × need to belong interaction and the gender × social focus interaction were further entered as predictors. For the 3^{rd} model¹⁰, gender, the gender × clarity interaction, the gender × need for closure interaction and the gender × personal focus interaction were further entered as predictors. For the 4^{th} model¹¹, gender, the gender × punishment interaction, the gender × need to belong interaction and the gender × personal focus interaction were further entered as predictors. The gender effects were examined for exploratory purposes, therefore results were not included in the main analyses.

Testing Hypothesis 1: effects of perceived social focus

As discussed before, if Hypothesis 1 holds, we are supposed to observe significant twoway interactions between norm perceptions and perceived social focus on behavioral intentions for all value groups. That is to say, individuals who perceive the value as high (versus low) in social focus would be more likely to perform the value-expressive behaviors with high (versus low) perceived clarity and punishment. And the effects should not be affected by individuals' personal needs.

Model 1, as described above, was performed to test the interplay of social focus and norm clarity on behavioral intentions for all value groups. Table 4.4 summarized the standardized coefficients of the predictor variables in Model 1 for 5 broader value groups (see Table 4.4). As shown in the table, the Clarity × SF interaction was not significant on behaviors expressing hedonism value ($\beta = -.12$, t = -1.113, p = .218), openness to change value ($\beta = -.02$, t = -.300, p= .599) and self-transcendence value ($\beta = -.001$, t = -.125, p = .989). The Clarity × SF interaction was marginally significant in predicting behavioral intentions expressing self-enhancement value ($\beta = -.20$, t = -1.819, p = .067), and was significant for conservation value ($\beta = -.26$, t = -2.794, p= .007). However, the direction of the effects was not consistent with what was predicted in

Hypothesis 1. Further analysis revealed that among individuals who view the values as low in social focus, their behavioral intentions were positively predicted by perceived clarity for self-enhancement value ($\beta = .30$, p = .018) and conservation value ($\beta = .38$, p = .004). By contrast, behavioral intentions of individuals with low perceived social focus were not affected by norm clarity for self-enhancement value ($\beta = .04$, p = .755) and conservation value ($\beta = .11$, p

= .413).

Table 4.4

<u>Study 4 - Model 1: Standardized coefficients predicting behavioral intentions expressing 5 value</u> <u>groups</u>

Variables	β					
-	Self-	Hedonism	Openness to	Self-	Conservation	
	enhancement		change	transcendence		
Clarity	.13	.16	.10	.14	.14	
NFC	.11	04	30**	19	.10	
SF	.27**	.18	.26**	.26*	.02	
Clarity × NFC	02	04	02	.12	08	
Clarity × SF	20	12	06	00	26**	
NFC × SF	.13	.11	.13	21	02	
Clarity \times NFC \times SF	06	.24*	.14	07	.17	

p < .05; **p < .01

Model 2 was aimed to examine the interaction of social focus and perceived punishment on behavioral intentions for 5 broader value groups. All of the standard coefficients in Model 2 for 5 broader value groups were listed in Table 4.5 (see Table 4.5). Regression analysis revealed non-significant Punishment × SF interaction for 5 broader value groups, including selfenhancement (β = -.08, t = -.921, p = .432), hedonism (β = .05, t = .782, p = .575), openness to change (β = -.10, t = -1.003, p = .304), self-transcendence (β = .04, t = .422, p = .666), and conservation (β = -.09, t = -1.121, p = .435). Based on the results of Model 1 and Model 2, there was no support for Hypothesis 1.

Table 4.5

Variables		β					
	Self-	Hedonism	Openness to	Self-	Conservation		
	enhancement		change	transcendence			
Punishment	.12	00	.13	.12	.22*		
NTB	.05	.08	14	14	05		
SF	.24*	.26**	.24*	.28**	.08		
Punishment × NTB	.05	13	.02	.01	.02		
Punishment × SF	08	.05	10	.04	09		
$NTB \times SF$	11	.05	13	06	04		
Punishment × NTB	02	.17	.01	14	.04		
× SF							

<u>Study 4 - Model 2: Standardized coefficients predicting behavioral intentions expressing 5 value</u> groups

p* < .05; *p* < .01

Testing Hypothesis 2a: effects of perceived personal focus in clarity model

If Hypothesis 2a holds, we are supposed to observe a three-way interaction for all value groups that among individuals with high (versus low) need for closure, norm clarity was expected to positively predict behavioral intention at high (versus low) level of perceived personal focus. Model 3 was performed to test Hypothesis 2a, and all of the standardized coefficients for 5 broader value groups were summarized in Table 4.6 (see Table 4.6). The Clarity × NFC × PF interaction was not significant for hedonism value (β = -.09, t = -.988, p = .551), openness to change value (β = -.18, t = -1.912, p = .108), self-transcendence value (β = -.14, t = -1.513, p = .143) and conservation value (β = -.03, t = -.420, p = .761).

Table 4.6

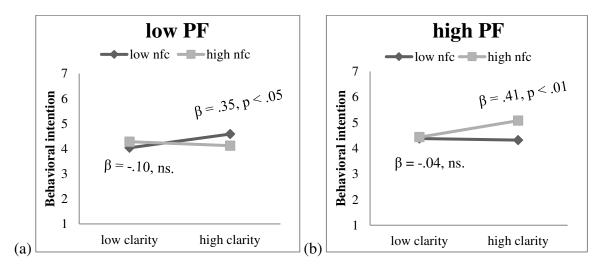
Variables			β		
	Self-	Hedonism	Openness to	Self-	Conservation
	enhancement		change	transcendence	
Clarity	.15	.21*	.16	.16	.13
NFC	.09	01	28**	15	.16
PF	.19*	.15	.14	.20*	.10
Clarity × NFC	.00	.03	.12	.08	05
Clarity \times PF	.03	07	.06	.05	03
$NFC \times PF$.18*	09	01	16	09
Clarity \times NFC \times	.26**	09	18	14	03
PF					

<u>Study 4 - Model 3: Standardized coefficients predicting behavioral intentions expressing 5 value</u> groups

p* < .05; *p* < .01

However, a significant Clarity × NFC × PF interaction was significant on behaviors expressing self-enhancement value ($\beta = .28$, t = 3.125, p = .005). Further simple slope tests examined the interplay of clarity and need for closure (NFC) on behavioral intentions at different levels of perceived persona focus (PF). Results showed that at a low perceived PF level (centered at 1 SD below the mean), individuals with low NFC (centered at 1 SD below the mean) were more likely to perform the behavior as they perceived the norm with higher clarity ($\beta = .35$, p= .012), whereas behavioral intentions of individuals with high NFC (centered at 1 SD above the mean) were not affected by their perceived clarity ($\beta = .10$, p = .609) (See Figure 4.1.a). And at a high perceived PF level (centered at 1 SD above the mean), there was no relationship between perceived clarity and behavioral intentions among individuals with low NFC (centered at 1 SD below the mean) ($\beta = .04$, p = .833), whereas individuals with high NFC (centered at 1 SD above the mean) have higher likelihoods to engage in the behaviors with the increase in perceived clarity ($\beta = .41$, p = .016) (See Figure 4.1.b). The results of self-enhancement supported Hypothesis 2a, but it was unexpected that we also observed the positive predicting

effect of norm clarity on behavioral intentions among individuals with low NFC who perceived



the value as low in personal focus.

Figure 4.1. Behavioral intention expressing self-enhancement value as a function of perceived clarity and need for closure at a low level of perceived focus (a) or a high level of perceived personal focus (b) (Study 4; higher score = higher behavioral intention).

Testing Hypothesis 2b: effects of perceived personal focus in punishment model

If Hypothesis 2b holds, a three-way interaction is expected for all value groups that among individuals with high (versus low) need to belong, perceived punishment is expected to positively predict behavioral intention at high (versus low) level of perceived personal focus. I performed the Model 4 to test Hypothesis 2b, and Table 4.7 summarized all of the standardized coefficients for 5 broader value groups (see Table 4.7). The Punishment × NTB × PF interaction was not significant for self-enhancement value ($\beta = .14$, t = 1.511, p = .193), hedonism value (β = -.12, t = -1.273, p = .279) and conservation value ($\beta = .12$, t = 1.333, p = .221).

Table 4.7

Variables			β		
	Self-	Hedonism	Openness to	Self-	Conservation
	enhancement		change	transcendence	
Punishment	.16	.12	.19*	.09	.19*
NTB	05	.14	21*	09	06
PF	.16	.04	.18	.20*	.13
Punishment × NTB	.01	05	04	.16	03
Punishment × PF	04	21	10	.07	.05
$NTB \times PF$.02	03	03	02	.03
Punishment × NTB	.14	12	.22*	23*	.12
× PF					

<u>Study 4 - Model 4: Standardized coefficients predicting behavioral intentions expressing 5 value</u> groups

p* < .05; *p* < .01

The analysis revealed a significant Punishment \times NTB \times PF interaction (β = .22, t = 2.246, p = .033) for openness to change value, which was originally a personal-focused value type. Simple slope tests further manifested that at a low perceived PF level (centered at 1 SD below the mean), perceiving the norm as high in punishment increased the gap between low NTB (centered at 1 SD below the mean) individuals and high NTB (centered at 1 SD above the mean) individuals on behavioral intentions by raising behavioral intentions of individuals with low NTB ($\beta = .54$, p = .004). By contrast, there was no effect of perceived punishment on behavioral intentions among individuals with high NTB ($\beta = .03$, p = .889) (See Figure 4.2.a). At a high perceived PF level (centered at 1 SD above the mean), high perceived punishment decreased the gap between low NTB (centered at 1 SD below the mean) individuals and high NTB (centered at 1 SD above the mean) individuals on behavioral intentions by boosting intentions of individuals with high NTB to engage in the behaviors ($\beta = .26, p = .086$). Behavioral intentions of individuals with low NTB were independent of their perceived punishment ($\beta = -.09$, p = .574) (See Figure 4.2.b). Results of openness to change value type were consistent with Hypothesis 2b. However, we did not expect perceived punishment to

positively predict behavioral intentions among individuals with low NTB and low perceived

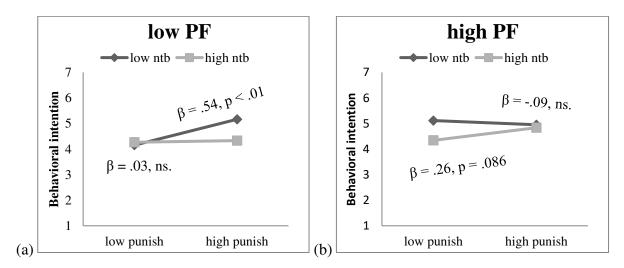


Figure 4.2. Behavioral intention expressing openness to change value as a function of perceived punishment and need to belong at a low level of perceived personal focus (a) or a high level of perceived personal focus (b) (Study 4; higher score = higher behavioral intention).

A significant Punishment × NTB × PF interaction ($\beta = -.23$, t = -2.178, p = .031) was also observed for self-transcendence value, which was originally a social-focused value type. Unlike openness to change value, simple slope tests for self-transcendence demonstrated another direction of the three-way interaction. At a low perceived PF level (centered at 1 SD below the mean), there was a trend that individuals with low NTB (centered at 1 SD below the mean) had lower behavioral intentions as they perceived the norm with higher punishment, but the effect did not reach the significance level in statistics ($\beta = -.36$, p = .108). By contrast, behavioral intentions of individuals with high NTB (centered at 1 SD above the mean) were positively predicted by their perceived punishment ($\beta = .38$, p = .078) (See Figure 4.3.a). At a high perceived PF level (centered at 1 SD above the mean), there was no effect of perceived punishment on behavioral intentions among individuals with low NTB (centered at 1 SD below the mean) ($\beta = .22$, p = .113) and high NTB (centered at 1 SD above the mean) ($\beta = .11$, p

personal focus.

= .578) (See Figure 4.3.b). The results contradicted Hypothesis 2b that the positive effect of perceived punishment on behavioral intentions among individuals with high need to belong appeared at a low level of perceived personal focus instead of high personal focus.

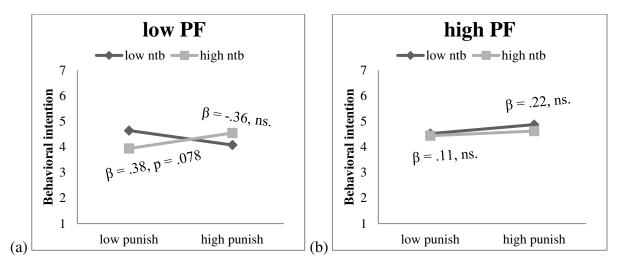


Figure 4.3. Behavioral intention expressing self-transcendence value as a function of perceived punishment and need to belong at a low level of perceived personal focus (a) or a high level of perceived personal focus (b) (Study 4; higher score = higher behavioral intention).

Summary

Based on the results of Study 4, it could be safely concluded that the perceptions of personal focus and social focus towards all values were in accordance with Schwartz's theoretical personal-social focus dimension among our target sample. However, we found no support for Hypothesis 1, only weak supports for Hypotheses 2a and 2b, and some contradicting findings for the hypotheses.

In summary, Hypothesis 1 predicted an interaction between norm clarity and perceived social focus for all 5 sets of behaviors. No evidence was found to support Hypothesis 1.

Hypothesis 2a predicted an three-way interaction among norm clarity, need for closure and perceived personal focus for all 5 sets of behaviors. Hypothesis 2a was only supported for self-enhancement behaviors that among individuals who perceive self-enhancement values with

high personal focus, norm clarity guided individuals' behavioral intentions more as they have higher need for closure. No evidence for the other 4 sets of behaviors was found to support Hypothesis 2a.

Hypothesis 2b predicted a three-way interaction among perceived punishment, need to belong and perceived personal focus for all 5 sets of behaviors. Hypothesis 2b was only supported for openness-to-change behaviors. And among individuals who perceive openness-tochange values with high personal focus, perceived punishment guided individuals' behavioral intentions more as they have higher need to belong. But this effect failed to reach statistical significance. No evidence for the other 4 sets of behaviors was found to support Hypothesis 2b.

One possible explanation for the lack of supporting evidence in Study 4 could be that all of the Schwartz's values were oriented in personal-social focus dimension inherently because of their strong motivational goals. And only measuring perceptions of each value's personal or social focus may results insufficient variances of the two focuses to have strong effects on the interplay of norm perceptions and individuals' needs. To address the issues, study 5 was conducted with a norm neutral in personal-social focus dimension. That is to say, the norm could be manipulated to be either personal focus or social focus.

CHAPTER VI: STUDY 5

Study 5 further examined Hypotheses 1 and 2 with an experimental design, which manipulated either personal focus or social focus to be salient by changing the motivational goal of the behavioral norm. "Order popular dishes in zi char restaurants" was selected as the behavioral norm in Study 5 for investigation. And how popular participants perceived dishes they had ordered was measured as dependent variable.

Selecting the particular behavioral norm was for the following considerations: firstly, food choice is neutral in personal-social focus dimension that individuals can either order food for themselves or for other people, that is to say, food choice is able to be manipulated in personal versus social focus; secondly, ordering food in a restaurant is a daily life scenario which should be familiar and easy to imagine for all of the participants; thirdly, the restaurants in the behavioral norm was specified to zi char restaurant because there is no atmosphere of sharing in some restaurants, such as French restaurants. Zi char restaurant is a Hokkien term used to describe the most representative and popular local Singaporean restaurants which provides a wide selection of common home-cooked dishes. There is very little difference among the dish options provided by different zi char restaurants. In zi char restaurants, individuals normally order their own dish paired with rice or order some dishes and share with a group of people. In other words, being a widely-accepted category of restaurants in Singapore enables the situation to be applicable for our target Singaporean sample, the wide selection of food ensures the variance in measuring dishes participants choose, being similar in the menus provides the possibility to create a hypothetical but reality-based menu works for any zi char restaurant, and the dining style in zi char restaurants allows the atmosphere of both individual dining and group sharing.

Method

Participants

One hundred and forty-six Singaporean university students enrolled in Nanyang Technological University (NTU) participated in the study for either partial course credit (n = 95) or 5 Singapore Dollars (n = 51). Four participants were excluded because they had never been in a zi char restaurant in Singapore and they were not at all familiar with zi char restaurants in Singapore. The final sample of 142 participants (51 males) was on average 21.69 years old (SD =1.52). They had lived in Singapore for an average of 21.44 years (SD = 1.92, range from 13 to 27 years). 136 (95.8%) were ethnic Chinese, 4 (2.8%) were Malays, 1 (0.7%) were Indians, and 1 (0.7%) were other ethnicities. According to Cohen (1992), a two-group ANOVA required 64 participants per group to detect a medium effect size at .8 power. The total final sample of 142 also met the minimum sample size of 105 for multiple regression model with 7 predictors at .8 power (Green, 1991).

Procedure

Participants were recruited via either the research participation pool of School of Humanities and Social Sciences at NTU or the posters to recruit participants in NTU. Participants were directed to one of the four individual rooms in the laboratory. Each room had one personal computer. An experimenter instructed participants to give their responses on the personal computers in front of them, focus on their own task and do not use their mobile phones. They were told that the following online research survey was aimed to examine how individuals order food in the restaurants and how they perceive some daily life behaviors.

At the beginning, all of the participants were randomly assigned by the computer to one of the two conditions: personal-focus condition (n = 71) (motivated to express their personal

tastes) or social-focus condition (n = 71) (motivated to take care of others). After the manipulation, all participants went through measures in the following order: (1) read a menu of the restaurant and ordered 5 dishes; each dish was selected among six flavors (2) responded to perceived popular dishes measurement and personal preference dish measurement (counterbalanced) (3) rated the perceived norm clarity and punishment (counter-balanced), (4) responded to need for closure measures (5) need to belong measures and (6) familiarity checks. Finally, they provided their demographic information and were debriefed.

Personal versus social focus manipulation

All participants were asked to imagine that they have just joined a club in NTU for the new academic year and instructed to read an email from the club concerning the club's welcome dinner. In the email, participants were told that the club had reserved tables in advance for the welcome dinner at Good Chef Zi Char Restaurant, which was a made-up restaurant. They were also given the information that since the welcome dinner was for all members in the club, the club arranged 8 people to sit at a table and 8 dishes would be ordered for each table. The club had already decided 3 dishes, and each table would need to decide the remaining 5 dishes. The setting of new club welcome dinners was chosen not only because participants had no need to take price issues into account, but also in the scenario they would have dinner with people they did not know, which means participants had no information about other people's appetites. The scenario was completely identical for participants in both personal focus condition and social focus condition.

Then, all participants were asked to take a look at the menu items of the restaurant (see Appendix I) and order 5 remaining dishes; the only difference between conditions was the motivation of food ordering. Schwartz divided all of the values along the personal-social focus

dimension because some values shared congruent motivational goals focused either on personal aspects or social aspects. According to him, personal-focused values concerned expressing personal interests and characteristics, whereas social-focused values concentrated on maintaining social relationship with others and how their behaviors might impact on others (Schwartz, 1992; Schwartz et al., 2012). To be aligned with Schwartz's personal-social focus dimension, I manipulated the motivational goal of food ordering to be either expressing themselves or considering for others.

In the personal-focus condition, participants were asked to choose the dishes that they would order for themselves and the following personal-focused motivational goal was manipulated to be salient to them – *"it is a good opportunity for you to let us know your personal taste by choosing the dishes that you will enjoy"*. They were also informed that the final order for each table would be decided based on everyone's personal choices. That is to say, individuals' choices only reflected their own preferences with little impact on the final order of the table, which suggested little impact on other people at the same table.

By contrast, participants in the social-focus condition were instructed to choose the dishes that they would order for those at their tables with the salient social-focused motivational goal that *"it is a good opportunity for you to take care of others at your table by choosing the dishes that they will enjoy"*. They were also aware that the final order for their tables will be decided based on their choices for the table, thus strengthening how their choices might affect others. Appendix J presented the detailed instructions for both conditions.

Measures

Food orders. Participants made their food choices either with the reminder that "*now*, *please choose the 5 dishes that you would order for yourself*" (personal-focus condition) or

"now, please choose the 5 dishes that you would order for those at your table" (social-focus condition). Participants in both conditions received the instructions to "choose one dish from each category by checking the dish that you would like to order". Appendix K presented the detailed instructions for both conditions. The five menu categories were the commonly-ordered food categories in Zi char restaurants, including pork ribs, beef, shrimp, sotong and omelette. Within each category, participants chose one dish among six flavors (see Appendix I for the full list of dish choices). The six flavors were selected from the menus of most Zi char restaurants after deleting some unpopular items that people seldom order. It was aimed to keep all of the menu items at a comparable level of popularity and ensure the variance in participants' food choice for the expected effects to appear. For example, under the category of "beef", the following menu items were presented to participants "stir-fried beef, black pepper beef, curry beef, dried chili beef, sambal beef, and ginger onion beef".

Popular dishes ranking. In this measure, participants were asked to identify items that they think were most popular and most frequently ordered by other customers in the restaurant. Their task was to rank the dishes (see Appendix I for the full list of dish choices) based on their perceptions of the dishes' popularity in Singapore for each category of dishes on a scale from "1" (*the dish you think is the most popular and frequently ordered*) to "6" (*the dish you think is least popular and frequently ordered*). Appendix L presented the detailed instructions. The dishes' popularity ranking was aimed to examine how popular were the dishes ordered by participants. Our study focused on whether participants ordered the dishes that they thought were popular instead of whether the dishes were popular objectively. Therefore, with the reference of the popularity ranking for each dish, participants' food choices were coded to form a popularity score for each dish they have ordered. For example, if a participant orders "black pepper beef"

and he ranks the dish "black pepper beef" as no.2 in popularity ranking of beef category, the popularity score of this dish he ordered would be 2. Thus, for every participant, there would be a popularity score for each of the 5 dishes they have chosen. All of the popularity scores were reverse-coded, so higher score suggested higher perceived popularity for the ordered dishes.

Personal preference ranking. Participants were also asked to identify items that they like the most in the restaurant. Their task was to rank the dishes (see Appendix I for the full list of dish choices) based on their personal tastes for each category of dishes on a scale from "1" (the *dish you like the most*) to "6" (the *dish you like the least*). Appendix L presented the detailed instructions. The aim of the personal preference ranking was to examine to what extent do participants order dishes they personally like. In the same manner, referring to the personal preference ranking of each dish, participants' food choices were also coded to form a personal preference score for each dish they have ordered. For example, if a participant orders "black pepper beef" and he ranks the dish "black pepper beef" as no.4 in personal preference ranking of beef category, the personal preference score of this dish he ordered would be 4. All of the personal preference scores were reverse-coded, so higher score suggested higher personal preference for the ordered dishes.

Norm clarity. The measurement of norm clarity was phrased to examine how individuals perceive certain behaviors in a zi char restaurant. Three items measuring norm clarity used in Study 2 were included in Study 5, with the behavioral norms changed to "*order popular dishes*", "*be polite to servers*" and "*give tips*". Among the three behavioral norms, perceived clarity of "*order popular dishes*" was our target items for analysis, whereas the other two behavioral norms were the filler items to disguise the targeted measurements. The sample item was "In a zi char restaurant, people are clearly expected to (statement) order popular dishes (behavioral

norm)." Participants were asked to indicate their agreement with the statement on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The three items for the targeted behavioral norm were averaged to form a norm clarity score ($\alpha = .78$). See Appendix M for the full list of items.

Perceived punishment. Likewise, the section of perceived punishment was also described as to measure individuals' perceptions of certain behaviors in a zi char restaurant. Three items measuring perceived punishment used in Study 2 were included in Study 5, with the behavioral norm changed to "*order popular dishes*", "*be polite to servers*" and "*give tips*". Items measuring perceived punishment of "order popular dishes" were our target items for analysis, whereas items for the other two behavioral norms were the filler items. The sample item was "*In a zi char restaurant, if someone does not (statement) order popular dishes (behavioral norm), others will disapprove (statement)*". Participants were asked to indicate their agreement with the statement on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The three items for the targeted behavioral norm were averaged to form a perceived punishment score ($\alpha = .87$). See Appendix M for the full list of items.

Need for closure. The 15-item NFC scale used in Study 1 was included in Study 5 (α = .85). Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). The 15 items were averaged to form a need for closure score.

Need to belong. The 10-item Need to Belong scale used in Study 1 was included in Study 5 (α = .83). Participants indicated the extent that they agree or disagree with each statement on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The 10 items were averaged to form a need to belong score.

Familiarity checks. Two items were used to measure individuals' familiarity of the zi char restaurant described in the scenario. The first item was asking *"Have you ever been in a zi char restaurant in Singapore?"*, and participants chose between the options *"yes"* or *"no"*. Participants also responded to the second item *"How familiar are you with zi char restaurants in Singapore?"* on a scale from 1 (*not at all familiar*) to 7 (*very familiar*). The two items were used to prescreen participants' experiences of zi char restaurants and rule out unqualified participants with no experience at all. The second item also formed a familiarity score for each participant, which was included in the analysis.

Results

Preliminary analysis

Table 5.1 presented the descriptive statistics including means, standard deviations, and correlation coefficients of the 5 dish categories for popularity score and personal preference score. Any differences among dish categories was not an interest of my research, so I decided to compute an average score of popularity and an average score of personal preference for all dish categories. As shown in the table, the dish category of shrimp and sotong did not significantly correlate with any other dish category on popularity measure, and the dish category of shrimp did not significantly correlate with any other dish category of order_popularity score (5 items, $\alpha = -.15$) or self-preference score (5 items, $\alpha = .43$). Therefore, they were not included in future analysis. Popularity scores of pork rib, beef and omelette were averaged to form an order_popularity score (3 items, $\alpha = .32$). Personal preference scores of pork rib, beef, sotong and omelette were averaged to form an order_self-preference score (4 items, $\alpha = .50$).

Table 5.1

	Popularity score					Personal preference score				
	1	2	3	4	5	1	2	3	4	5
1. Pork rib	_					_				
2. Beef	.20*					.17*				
3. Shrimp	01	08				.01	05	_		
4. Sotong	13	.04	11			.13	.33**	.09		
5. Omelette	.13	.23**	11	00	_	.15*	.34**	.04	.19*	
Mean	4.92	4.89	5.33	4.41	4.81	5.60	5.34	5.45	5.00	5.43
(SD)	(1.34)	(1.20)	(1.01)	(1.56)	(1.44)	(0.88)	(1.08)	(1.02)	(1.49)	(1.06)

<u>Study 5: Means, Standard Deviations and Intercorrelations of 5 dish categories for popularity</u> score and personal preference score

p < .05, p < .01

Table 5.2 summarized the descriptive statistics including means, standard deviations, and

correlation coefficients for all measures in Study 5.

Table 5.2	
Study 5: Means, Standard Deviations and Intercorrelations for	or all measures

		1	2	3	4	5	6	7
1.	Order_popularity	_						
2.	Order_self-preference	.13						
3.	Norm clarity	.00	24**					
4.	Perceived punishment	.09	.03	.37**				
5.	Need for closure	10	03	.18*	.20*			
6.	Need to belong	17*	03	.16	.11	.38**		
7.	Familiarity	.01	.02	.08	01	08	07	
	Mean	4.85 (0.90)	5.32	3.73	3.39	4.02	3.4	5.39
	(SD)		(0.64)	(1.27)	(1.23)	(0.63)	(0.63)	(1.24)

*p < .05, **p < .01

Effects of the personal versus social focus manipulation

Independent-sample *t*-tests were conducted to compare the order's popularity score and self-preference score in personal-focus condition (coded as 0) and social-focus condition (coded as 1). The difference in the popularity score for personal-focus condition (M = 4.73, SD = .90) and social-focus condition (M = 4.98, SD = .90) was not significant; t (140) = -1.54, p = .126.

Though it was not statistically significant, the trend was consistent with our expectation that participants in the social-focus condition ordered food with higher perceived popularity than participants in the personal-focus condition. There was a significant difference in the personal preference score for personal-focus condition (M = 5.58, SD = .46) and social-focus condition (M = 5.14, SD = .72); t (140) = 4.36, p < .001. This suggested that the personal focus manipulation successfully made participants order food they personally like more than participants who received the social focus manipulation.

Testing Hypotheses 1 and 2

Hypothesis 1 predicted no interaction between norm perceptions and personal needs for social-focused value, whereas Hypotheses 2a and 2b predicted a significant interaction between norm perceptions and personal needs for personal-focused values. Therefore, if Hypotheses 1 and 2a hold, we are expected to observe the interaction between clarity and need for closure differ between conditions. And if Hypotheses 1 and 2b hold, the interaction between punishment and need to belong are predicted to differ between conditions.

To test Hypotheses 1 and 2a, I conducted a Condition × Clarity × Need for closure General Linear Model (GLM) on the perceived popularity of food orders (the dependent variable). Condition was between-participant factor, and Clarity and Need for closure were continuous predictors centered at its grand mean to minimize the threat of multicollinearity. Participants' familiarity with the zi char restaurant was also included as the control variable because their familiarity level might affect their likelihoods to order popular dishes. Individuals who are more familiar with zi char restaurants probably have a better knowledge of the tasty flavors, it is likely that they rely less on the perceived popularity of each dish. The model yielded no significant main effect, a marginally significant Condition × Clarity interaction (F(1, 129) =

3.83, p = .053), a significant Clarity × NFC interaction (F(1, 129) = 4.67, p = .031), and a marginally significant Clarity × NTB interaction (F(1, 129) = 3.86, p = .052). But the expected Condition × Clarity × NFC interaction was not significant (F(1, 129) = 2.57, p = .113). All of the other interactions were not significant. There was no evidence found for Hypotheses 1 and 2a.

To test Hypotheses 1 and 2b, I conducted a Condition × Punishment × Need to belong General Linear Model (GLM) on the perceived popularity of food orders (the dependent variable). Condition was between-participant factor, and Clarity and Need for closure were continuous predictors centered at its grand mean. Participants' familiarity with the zi char restaurant was included as the control variable. Results only revealed a main effect of condition (F(1, 129) = 4.29, p = .041), suggesting that participants in the social-focus condition ordered dishes with higher perceived popularity than participants in the personal-focus condition. The expected Condition × Punishment × NTB interaction was not significant (F(1, 129) = .30, p= .592). All of the other interactions were not significant, either. There was no support for Hypotheses 1 and 2b.

Non-significant three-way interactions provided no support for all hypotheses. Multiple regression models were then performed for each condition to whether the interplay of norm perceptions and personal needs differ between conditions.

Testing Hypothesis 1: social-focus condition

If Hypothesis 1 holds, we are expected to observe positive prediction effects of both norm clarity and perceived punishment on food orders' popularity among participants in the social-focus condition. And no interaction between norm perceptions and personal needs were expected.

As in Study 1, Study 2 and Study 3, I performed two multiple linear regression models

for perceived clarity and punishment, respectively. Individuals' familiarity with zi char restaurants had been added as a control variable. The regression analysis of clarity model was calculated to predict on the food order's popularity based on norm clarity (mean-centered), need for closure (mean-centered), need to belong (mean-centered), familiarity (mean-centered), the interaction between norm clarity and need for closure, and the interaction between norm clarity and need to belong as predictors.

As for the perceived punishment, a regression analysis involving the food order's popularity as dependent variable and perceived punishment (mean-centered), need for closure (mean-centered), need to belong (mean-centered), familiarity (mean-centered), the perceived punishment × need for closure interaction, and the perceived punishment × need to belong interaction as predictors was performed.

Participants' gender was further involved to examine how gender affected the behavioral intentions in the social-focus condition and personal-focus condition. Male was coded as -1 and female was coded as 1. For the clarity model¹², gender, the gender \times clarity interaction and the gender \times need for closure interaction were further entered as predictors. For the punishment model¹³, gender, the gender \times punishment interaction and the gender \times need to belong interaction were further entered as predictors. The gender effects were examined for exploratory purposes, therefore results were not included in the main analyses.

Participants' participation reward (course credits or remuneration) was further involved to examine whether participation reward affected the behavioral intentions in the social-focus condition and personal-focus condition. Course credit was coded as -1 and remuneration was coded as 1. For the clarity model¹⁴, the reward type, the reward × clarity interaction and the reward × need for closure interaction were further entered as predictors. For the punishment

model¹⁵, the reward type, the reward \times punishment interaction and the reward \times need to belong interaction were further entered as predictors. The effects of participation rewards were examined for exploratory purposes, therefore results were not included in the main analyses.

Clarity model. The regression model was not significant (F(6, 64) = 1.36, p = .246), with a R^2 of .111. Supporting Hypothesis 1, multiple regression analysis only revealed a main effect of norm clarity ($\beta = .31, t = 2.519, p = .017$) on food order's popularity, suggesting that individuals in the social-focus condition who perceived ordering popular dishes as a clearer norm in zi char restaurants were more likely to order popular dishes. The other main effects, the Clarity × NFC interaction ($\beta = .05, t = .426, p = .697$), the Clarity × NTB interaction ($\beta = -.07, t = -.552, p$ = .577) were not significant.

Punishment model. The regression model was not significant (F(6, 64) = .97, p = .456), with a R^2 of .084. The multiple regression analysis only revealed a main effect of perceived punishment ($\beta = .26, t = 1.919, p = .046$) on food order's popularity, which were aligned with Hypothesis 1. The results demonstrated that individuals in the social-focus condition were more likely to order popular dishes with higher perceived punishment of not ordering popular dishes in zi char restaurants. The other main effects, the Punishment × NFC interaction ($\beta = -.09, t = -.448, p = .551$), the Punishment × NTB interaction ($\beta = -.05, t = -.415, p = .759$) were not significant.

Testing Hypotheses 2a and 2b: personal-focus condition

If Hypothesis 2a holds, no direct main effect of clarity but a positive prediction effect of clarity among individuals high in need for closure on the order's popularity was expected in personal-focus condition. And if Hypothesis 2b holds, we are supposed to observe no direct main effect of punishment but a positive prediction effect of punishment among individuals high in need to belong on the order's popularity in personal-focus condition.

The regression models conducted for personal-focus condition were identical with the models for social-focus condition. The clarity model was aimed to test Hypothesis 2a, whereas performing the punishment model was for testing Hypothesis 2b.

Clarity model. A significant regression equation was found (F(6, 64) = 2.403, p = .019), with a R^2 of .184. The regression model revealed no significant main effect, a significant Clarity × NFC interaction ($\beta = .34, t = 2.592, p = .012$) and a significant Clarity × NTB interaction ($\beta = .25, t = -2.176, p = .035$). Simple-slope tests were performed to examine the effect of norm clarity on the order's popularity at low level of need for closure (centered at 1 SD below the mean) and high level of need for closure (centered at 1 SD above the mean). Results found that participants high in need for closure tended to order food which they thought were more popular with higher perceived norm clarity ($\beta = .30, p = .032$), whereas for participants low in need for closure, the higher popularity food ranking was accompanied with lower perceived clarity ($\beta = ..41, p = .021$) (See Figure 5.1). This interaction supported Hypothesis 2a that among individuals with high need for closure, more popular dishes were ordered with the increase in perception that ordering popular dishes was clearly expected in zi char restaurants. But it was unexpected that individuals low in need for closure tended to order less popular dishes as they perceived ordering popular dishes being a clearer norm in zi char restaurants.

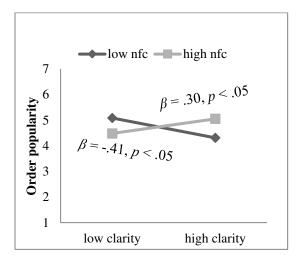


Figure 5.1. Order popularity as a function of need for closure and perceived clarity (Study 5; higher score = higher perceived popularity of food order).

Next, I performed additional simple slope analyses to further understand the Clarity × NTB interaction. No matter when participants' need to belong was high (centered at 1 SD above the mean) or low (centered at 1 SD below the mean), there was no significant relationship between norm clarity and order popularity. But there was a trend that participants high in need to belong tended to order less popular dishes with higher perceived clarity ($\beta = -.30$, p = .096), whereas participants low in need to belong tended to order more popular dishes with higher perceived clarity ($\beta = .19$, p = .26) (See Figure 5.2). The interaction was unexpected and in the opposite direction of the interaction between norm clarity and need for closure.

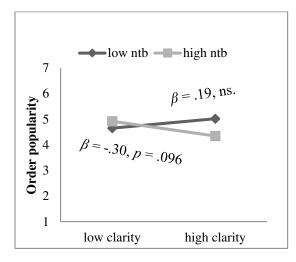


Figure 5.2. Order popularity as a function of need to belong and perceived clarity (Study 5; higher score = higher perceived popularity of food order).

Punishment model. The regression model was not significant (F(6, 64) = .957, p = .462), with a R^2 of .801. The main effect of perceived punishment ($\beta = .04, t = .240, p = .777$), the Punishment × NFC interaction ($\beta = .21, t = 1.489, p = .130$), and the Punishment × NTB interaction ($\beta = .18, t = -1.325, p = .187$) were not significant in predicting the order's popularity. There was no support for Hypothesis 2b.

Table 5.3 summarized the clarity models' multiple regression analyses predicting order popularity in personal-focus condition and social-focus condition. And Table 5.4 summarized the punishment models' multiple regression analyses predicting order popularity in personal-focus condition and social-focus condition.

Table 5.3

<u>Study 5 - Clarity model: Summary of Multiple Regression Analysis for Order Popularity in Two</u> <u>Conditions</u>

Conditions		Social-focus $(n = 71)$	Personal-focus $(n = 71)$			
	В	SE (B)	β	В	SE (B)	β
Clarity	.28	.11	.31*	05	.13	05
NFC	11	.12	13	.04	.12	.04
NTB	.03	.13	.04	10	.11	12
Familiarity	.03	.11	.03	.01	.11	.01
\hat{C} larity × NFC	.05	.12	.05	.34	.13	.34*
Clarity \times NTB	06	.10	07	24	.11	25*
R^2		.34			.18	
F		1.36			2.403	

* p < .05, ** p < .01

Table 5.4

<u>Study 5 – Punishment model: Summary of Multiple Regression Analysis for Order Popularity in</u> <u>Two Conditions</u>

Conditions		Social-focus $(n = 71)$	Personal-focus $(n = 71)$			
	В	SE (B)	β	В	SE (B)	β
Punishment	.25	.12	.26*	03	.11	04
NFC	10	.13	12	.00	.12	.00
NTB	.02	.14	.02	12	.11	14
Familiarity	.10	.11	.12	05	.11	06
Punishment × NFC	09	.15	09	.19	.12	.21
Punishment × NTB	04	.14	05	15	.12	18
R ²		.08			.08	
F		.965			.957	

* p < .05, ** p < .01

Summary

Results of Study 5 provided some evidences to support Hypotheses 1 and 2a, and no support for Hypothesis 2b.

In summary, Hypothesis 1 predicted an interaction between norm clarity and condition, and an interaction between perceived punishment and condition, because effects of norm clarity and punishment on behaviors were supposed to differ depending the driving focus of the

behavior. There was partial support for the interaction between norm clarity and condition, but the effect failed to reach statistical significance. No evidence supported the interaction between perceived punishment and condition. However, supporting Hypothesis 1, influences of norm clarity and punishment on behaviors were found to differ between conditions when the influences in each condition was compared. When the norm was manipulated to be social focus, both norm clarity and perceived punishment positively predicted behavioral tendency, regardless of individuals' personal needs. By contrast, when the personal focus of the norm was manipulated to be salient, both clarity and punishment did not have a direct prediction effect on individuals' behavioral tendencies.

Hypothesis 2a predicted an interaction among norm clarity, need for closure and condition, because the interplay of norm clarity and need for closure on behaviors were supposed to differ depending on the driving focus of thee behavior. No evidence supported the three-way interaction. However, supporting Hypothesis 2a, the interplay of norm clarity and need for closure on behaviors were found to differ between conditions when the interplay in each condition was compared. When the personal focus of the norm was manipulated to be salient, norm clarity positively predicted behavioral tendency by fulfilling individuals' needs for closure that high (versus low) need for closure individuals were more likely to perform the behavior with higher norm clarity. When the social focus of the norm was manipulated to be salient, there was not such a pattern.

Hypothesis 2b predicted the interplay of perceived punishment and need to belong on behaviors were supposed to differ depending on the driving focus of thee behavior. But there was no evidence found for the moderation effect of need to belong on the relationship between

perceived punishment and behavioral tendency. Unexpected findings will be deliberated in the

discussion section.

CHAPTER VII: GENERAL DISCUSSION

The current research proposed two different patterns of normative influences from clarity and punishment on social-focused behaviors and personal-focused behaviors. For behaviors expressing social-focused values, including value groups of self-transcendence and conservation, I predicted that both norm clarity and punishment positively affected behaviors, regardless of individuals' needs (H1). All hypotheses were examined in each of the five studies, but they differed in the ways by which was independently examined or jointly examined.

Hypothesis 1 was independently tested in Studies 1, 2 and 3. The three studies were conducted with almost the same experimental design. Key differences across the three studies were as follows: Study 2 was conducted with a revised list of value-expressive behaviors and refined measurements of perceptions of norm clarity and punishment; Study 3 extended the findings of the previous 2 studies to the cultural context of friendship group. Generally speaking, results from the three studies supported Hypothesis 1 with reliable replications. I found that individuals were more intended to perform behaviors expressing social-focused values, as they perceived the social-focused norm to be higher in perceived norm clarity or punishment. And the effects were not affected by individuals' needs for closure and needs to belong. However, the supports were limited. The general pattern of how perceived punishment affected self-transcendence behaviors was consistent with the hypothesis, but it was not strong enough to be statistically significant in both Study 1 and Study 2.

For personal-focused values, including value groups of self-enhancement, hedonism and openness to change, I predicted both norm clarity and punishment did not directly predict behaviors, and their influences are affected by the extent to fulfill individuals' personal needs (H2). H2 could be further illustrated by hypothesizing that need for closure moderate the

relationship between norm clarity and behaviors expressing personal-focused values. Individuals high in need for closure were expected to have higher intention to adhere to cultural norm with higher perceived clarity, whereas there was supposed to be no relationship between behavioral intention and perceived norm clarity among individuals low in need for closure (H2a). Hypothesis 2a was also independently tested in Studies 1, 2 and 3. Supporting Hypothesis 2, results from the three studies revealed the absence of direct predicting effects of perceived clarity and punishment on personal-focused behaviors. The general patterns from the three studies supported Hypothesis 2a that the predictive power of clarity on personal-focused behaviors was qualified by fulfilling individuals' needs for closure. Specifically, in general, individuals with high need for closure were more likely to perform personal-focused behaviors with higher perceived clarity. And behavioral intentions of individuals with low need for closure were not affected by the perceived clarity. However, the pattern of need for closure qualifying normative influence from perceived clarity was only partially supported because of the lack of significant need for closure's moderation effect with respect to openness to change in Studies 1 and 2. The direction was consistent with what we predicted, but the interplay of norm clarity and need for closure was not strong enough. I believe a possible explanation for that is by nature, individuals high in need for closure prefer restricted order and seek firm answers to get closure and certainty in daily life (Fu et al., 2007; Kruglanski et al., 2006). They are less likely to engage in openness to change behaviors which emphasize novelty, independent thought, actions and self-mastery. The negative relationship between need for closure and openness to change behaviors was supported by Schwartz's value theory (1992, 2012) and the negative main effects of need for closure found in three of our studies. Thus, fulfilling individuals' needs for closure may not be strong enough to motivate adherence to clear norms.

I also predicted that need to belong moderate the relationship between punishment and behaviors expressing personal-focused values. Individuals high in need to belong were supposed to have higher intention to perform the corresponding behaviors with high higher perceived punishment, whereas there was supposed to be no relationship between behavioral intention and perceived punishment among individuals low in need to belong (H2b). Hypothesis 2b received no support for the three studies. Possible reasons for the lack of support will be discussed in the following sections.

All hypotheses suggested that the interplay of norm perceptions and personal needs differed between personal-focused behaviors and social-focused behaviors. Therefore, Hypotheses 1 and 2, including 2a and 2b, were jointly tested in Study 4 by including items measuring perceived personal focus social focus of each value type. For all value groups, if Hypothesis 1 holds, we are expected to observe perceived clarity and punishment positively predict behavioral intentions among individuals who perceive the value as being high in social focus. And norm perceptions were expected to interplay with personal needs to affect behavioral intention among individuals who perceive high personal focus in Hypotheses 2a and 2b. Study 4 provided no support for Hypothesis 1, and very limited support for Hypothesis 2a in selfenhancement and for Hypothesis 2b in openness to change. I reasoned that the lack of supports in Study 4 could be that all of the Schwartz's values have inflexible preconceived personal focus or social focus. The values were oriented in personal-social focus dimension inherently because of their strong motivational goals. For example, it may be odd for individuals to perceive "indulge oneself in pleasure" as social focus and "do good for nature and society" as personal focus. Only measuring perceptions of each value's personal or social focus may results insufficient variances

of the two focuses to have strong effects on the interplay of norm perceptions and individuals' needs.

Study 5 examined adherence to the norm of "order popular dishes in zi char restaurants" and manipulated the personal focus or social focus of the norm by making corresponding motivational goal salient. Hypothesis 1 suggested main effects of norm clarity and punishment on social focused behaviors without moderation effects of personal needs, whereas Hypothesis 2, including 2a and 2b, suggested no main effect from clarity and punishment, but moderating effects of personal needs on strengthening the influences of clarity and punishment on personalfocused behaviors. That is to say, all hypothesis jointly predicted interactions between norm perceptions and personal needs differed between personal focus and social focus. All hypotheses were jointly examined by comparing predicted patterns between conditions through three-way interactions among condition, norm perceptions and personal needs. The omnibus tests found that the joint influence from clarity and need for closure, as well as punishment and need to belong did not differ significantly between conditions. Meanwhile, Hypotheses 1 and 2, including 2a and 2b, were independently examined by observing the interaction between norm perceptions and personal needs in each condition. Results however revealed different patterns when the patterns were examined in each condition. Individuals ordered more popular dishes as they perceived the norm as having high clarity and punishment when the norm was manipulated to be social focus. When the personal focus of the norm was manipulated to be salient, only individuals with high need for closure were more likely to order popular dishes with high perceived clarity. Though different patterns of how norm perceptions interacted with personal needs on personal-focused norm and social-focused norm were not testified statistically, the

general pattern was found to have some differences when compared in each condition. Study 5 provided some supports for Hypotheses 1 and 2a, but no support for Hypothesis 2b.

Taken together, there were some inconsistencies in the results, but the general patterns in Studies 1, 2, 3 and 5 supported with the present research's propositions that perceived norm clarity and punishment guided individuals' social-focused behaviors regardless of their personal needs (H1). Perceived norm clarity only exerted its normative influences on personal-focused behaviors upon fulfilling individuals' needs for closure (H2a). The effects were applicable in Singaporean culture and friendship group culture. Study 4 complemented the conclusion by setting the prerequisite for the effects that the personal or social driving focus need to be inherently embedded or saliently manipulated. Perceptions of personal focus versus social focus with low variance were not enough to drive the effects. Across 5 studies, there was no evidence supporting that need to belong affects the relationship between punishment and norm adherence.

Gender effects had been explored in Studies 1 to 5. Generally speaking, males and females did not differ in intentions to perform personal-focused behaviors and social-focused behaviors. However, some effects of the interplay between gender and other constructs on behavioral intentions were found in the studies. Males in Study 1 were found to be more likely to perform the self-transcendence behavior, which belongs to the social-focused behavior, as they perceive the norm being clearer. By contrast, males in Study 2 were slightly less likely to perform the openness to change behavior, which belongs to the personal-focused behavior, as they perceive the norm having more punishment for norm violation. In Study 5, males with higher perceived clarity and punishment were less likely to order popular dishes when ordering popular dishes was manipulated to be personal-focused. Males in Study 4 were found to be more likely to perform the openness to change behavior, which originally belongs to the personal-focused at the personal-focused clarity and punishment were less likely to order popular dishes when ordering popular dishes was manipulated to be personal-focused. Males in Study 4 were found to be more likely to perform the openness to change behavior, which originally belongs to the personal-focused behavior to be more likely to perform the openness to change behavior.

focused behavior, as they perceive the behavior being higher in social focus. However, the effects were not observed for females. Females in Study 2 were slightly more likely to perform the openness to change behavior, which belongs to the personal-focused behavior, as they perceive the norm having more punishment for norm violation. And in Study 4, females were found to be more likely to perform the self-transcendence behavior, which originally belongs to the social-focused behavior, as they perceive the behavior being higher in personal focus.

I predicted social-focused behavioral intentions to be positively affected by clarity and punishment in Hypothesis 1, and personal-focused behavioral intentions not to be affected by clarity and punishment in Hypothesis 2. Contradicting Hypotheses 1 and 2, among females, intentions to perform self-transcendence behavior in Study 1 were not affected by clarity, but intentions to perform openness to change behavior in Study 2 were slightly positively predicted by punishment. Meanwhile, there was a reactance trend that among males, intentions to perform personal-focused behaviors in Study 2 and 5 were negatively predicted by clarity and punishment, which was not predicted.

Besides, in Study 3, females, but not males, were more likely to perform conservation behaviors as having higher needs for closure. In study 4, both males and females were less likely to perform conservation behaviors as having higher needs to belong, but the effect was stronger for male participants than for female participants. Nevertheless, none of the gender effect was replicated and remained stable across all 5 studies.

Unified Effects on Social-Focused Behaviors and Divergent Effects on Personal-Focused Behaviors

The significance of the current research lies in the major finding that norm clarity and punishment both positively predicted intentions to perform social-focused behaviors but differed

in their motives to strengthen their insufficient influences on personal-focused behaviors.

For behaviors expressing personal-focused values, clearly expected norms motivated individuals to behave accordingly by fulfilling individuals' needs for closure. Norms with high clarity are closure providers because they inform individuals of clear behavioral guidance and clear standards of appropriate behaviors. However, influences of perceived punishment on behaviors were not affected by individuals' needs for closure in general, compared with norm clarity. In other words, punishment did not affect individuals' behaviors by the same motivational goal as norm clarity. As presumed in the introduction, I contend that norm clarity exerts its influences on individuals' behaviors. And punishment exerts its influences on individuals' behaviors. And punishment exerts its influences on individuals' behaviors motivated by normative path to suggest severity of potential social disapproval for deviance. There was generally no evidence to support the normative motivation of punishment's influences. However, the differentiated motivational mechanism could be inferred from the informational path of clarity's normative influences, but not punishment.

For behaviors expressing social-focused values, perceived norm clarity and punishment both satisfied individuals' needs to consider for others. Social-focused values concern how individuals relate socially to others and how individuals impact social others (Schwartz, 1992; Schwartz et al., 2012). To achieve social-focused motivational goal, individuals need to take others' perceptions and judgments into account, I speculate that norm pressures imposed by high clarity and high punishment both satisfied individuals' needs to care for others' opinions, and thus motivating individuals to behave accordingly. Individuals' characteristics can hardly be revealed in the process. The pattern was also in line with the situational strength theory that strong situation with clear and powerful norms pressured individuals to follow similar courses of

actions and behave in a similar way with little reflection of their personal attributes (Mischel, 1977).

The strong normative influence on social-focused behaviors and relatively weak normative influence on personal-focused behaviors suggested that clarity and punishment, as two elements of tightness, were not always effective in regulating all behaviors. This was in accordance with the literature that even tight societies allowed some deviant behaviors. For example, excessive drinking was randomly criticized in Japan (Gelfand & Harrington, 2015), and tight provinces in China had a high tolerance of LGBT (lesbian, gay, bisexual and transgender) community (Chua, Huang, & Jin, 2019). Meanwhile, the gap between the strength of normative influence on different behaviors came from the motive to relate socially to others. For social-focused behaviors with high motive to relate socially with others, tightness restricted individuals' behaviors because individuals need to take others' opinions into account. However, for personal-focused behaviors with low motive to relate socially to others, there was not such a strong and direct normative influence of tightness. The finding sheds light on a recent study about effects of tightness on online emotional expression (Liu, Chan, Qiu, Tov, & Tong, 2018). Researchers found that in tight states but not loose states of the U.S., compared with individuals with sparse network, individuals with dense network were more likely to follow the norm of upholding a positive self-image by expressing more positive emotions than negative emotions. The findings can be explained by the high need to maintain interpersonal relationship in dense network rather than sparse network, therefore, high tightness regulates individuals' emotional expression to a large extent (Liu et al., 2018).

The literature in cultural tightness-looseness considered norm clarity and punishment as two elements featuring how norms generally in a culture are enforced, without differentiating the

two elements in their effectiveness in regulating individuals' behaviors (Pelto, 1968; Gelfand et al., 2011). The current research found a consistent and stable relationship between clarity and punishment for all value-expressive behaviors investigated in 5 studies, which implied a construct overlap between the two elements. That's to say, individuals who perceive a norm to be clear were likely to perceive the norm to have severe punishment for deviance. It was not surprising, because clear norms clarified what constitutes deviance, and low tolerance for deviance also signaled clarity of the norm. However, the construct relatedness did not assume the homogeneity between the two constructs, and was also not yet illustrative on whether the two constructs enforced their normative influences by the same motivational mechanism.

The current findings advance the theoretical understandings of the two constructs by stating that norm clarity and punishment share the same motivation mechanism for social-focused behaviors, because they both provide individuals of others' perceptions of what are clearly expected and how severe are the punishment for failing to reach others' expectations. Fulfilling individuals' needs to take others' opinions into account, both norm clarity and punishment were unified and effective in regulating social-focused behaviors. By contrast, norm clarity and punishment differed with regards to the motives to fulfill personal needs, resulting in the divergent effects on personal-focused behaviors. For behaviors expressing personal-focused values, norm clarity, but not punishment, affected behaviors by fulfilling individuals' needs for closure.

Lacking Moderating Effect of Need to Belong

Hypothesis 2b predicted that the influence of perceived punishment on personal-focused behaviors depended on the extent to which perceived punishment could fulfill individuals' needs to belong. That is to say, individuals with high need to belong were expected to be more likely to

perform the personal-focused behaviors with higher perceived punishment, whereas individuals with low need to belong were expected to decide their behaviors without considering perceived punishment of the norm. Across all 5 studies, there was no support for the moderating role of need to belong, no matter it was referring to a general need to belong to others or a specified need to belong to one's important friendship group.

I am proposing a possible explanation for the lack of moderating effect of need to belong that avoiding the threats to individuals' needs to belong does not mean fulfilling their needs to belong. The rationale underlines the moderating role of need to belong was that norms with high perceived punishment implied severe social disapproval for norm violation, and severe social disapproval deprived the basic need of need to belong (Dewall et al., 2011). Hence norms with high perceived punishment were expected to be more threatening for people high in need to belong. Then they were supposed to behave in line with norms with perceived severe punishment to avoid potential social disapproval.

Noted, an antecedent for the effect to work on personal-focused behaviors was fulfilling individuals' personal needs or desires, which motivated personal-focused behaviors. However, the motive to avoid threats to individuals' needs to belong does not guarantee the motive to fulfill individuals' needs to belong. Forming and maintaining social bonds are achieved through gaining approval from social groups (Baumeister & Leary, 1995). High perceived punishment only suggest social disapproval as negative consequences that may impede gratification of personal needs to belong, without aiding in need fulfillment substantially. Some studies even found the threatens of social approval or social rejection rendered individuals to violate social norms or behaved in anti-social manner because of the negative emotions aroused from fears to be socially excluded (Twenge, Baumeister, Tice, & Stucke, 2001; Van Beest & Williams,

2006).Thus, high perceived punishment with threatened need to belong may be ineffective in driving personal-focused behaviors.

Limitations and Future Directions

Looking solely at personal needs potentially fulfilled by norm clarity and punishment may not provide a complete picture for norm adherence. In the current studies, need for closure and need to belong were proposed as two personal needs which could qualify perceived norm clarity or punishment's impacts on personal-focused behaviors. But human's behaviors are complicated and driven by multiple motivational mechanism, I believe more personal needs, especially personal needs suppressed by strong norm perceptions, and how fulfilled needs and suppressed needs interact with each other in affecting personal-focused behaviors are worth exploration in the future research. For example, Brewer (1991) dated the need for differentiation as a competing personal need in group processing. Individuals seek the balance between conforming to group norms and also preserving their personal attributes and distinctiveness (Asch, 1956; Brewer, 1991; Reno, Cialdini, & Kallgren, 1993). Holding perceptions of high clarity and punishment empower a norm with clear guidance of how to behave in line with the group and severe social disapproval for failing to behave accordingly, which is likely to suppress individuals' needs to keep distinctive from others. Future studies could consider the impacts of personal needs suppressed by perceived norm clarity and punishment on personal-focused behaviors.

Meanwhile, besides need for closure and need to belong, it is worthwhile exploring other relevant personality traits which potentially result in individuals' differences in the extent to which their behaviors are affected by norm clarity and punishment. For example, self-monitoring is a possible trait to influence individuals' sensitivity to the perceived clarity and punishment of a

norm. Self-monitoring refers to individuals' ability to monitor and regulate their self-presentation and expressive behaviors, which derived from individuals' need to acquire social approval and get rid of social disapproval. Compared with individuals with low self-monitoring, individuals with high self-monitoring paid more attention to cues regarding social appropriateness, concerned more with whether their self-expression were socially appropriate, and were more able to regulate there expressive behaviors according to socially accepted standard (Snyder, 1974). Therefore, it is very likely that for behaviors focusing on expressing themselves, high self-monitoring individuals take much count of norm clarity and punishment in guiding their behaviors because the two informed social appropriateness about what is clearly expected and the strength of social disapproval for norm violation. Future studies could consider exploring more relevant constructs to further explain the motivation mechanism underline norm clarity and punishment.

The phrasing of perceived clarity measurement used in all 5 studies may raise the concern for the conflation of clarity and personal norm endorsement. By asking the extent to which participants personally agree that the norm is clearly expected by the public, it was possible that participants rated the norm clarity based on to what extent that they personally agreed with the norm or not. In that case, it was unclear whether clarity measurements reflected participants' perceptions of the norms or their personal likes and dislikes. Based on the results, personal norm endorsement was positively related with all revised behavioral sets from Study 2 onwards. Therefore, if the normative influence of clarity came from participants' personal endorsement, we are supposed to observe a consistent relationship between their perceived clarity and behavioral intentions for all value types. However, perceived clarity was only positively correlated with the two social-focused behavioral sets, but not the three personal-focused

behavioral sets in Study 2 and Study 3. In Study 4, the relationship was positive for selfenhancement and conservation, but not the other three value types. Even though findings from the current studies ruled out the alternative explanation of personal norm endorsement, future endeavors could be made to refine the norm perception measure with less self-involvement.

There was a lack of manipulation check in Study 5, which resulted from the consideration to disguise the purpose of the study. Study 5 motivated individuals to either order dishes to express their personal preferences (personal-focused condition) or consider for others at the same table (social-focused condition). However, due to the absence of manipulation check, it was unknown if the targeted motivations were successfully manipulated in both conditions. The effectiveness in personal motivation versus social manipulation could be inferred from the main effect of condition that individuals motivated to express their personal preferences (personalfocused condition) were more likely to choose dishes they liked. By contrast, there was a trend that individuals motivated to consider for others (social-focused condition) were more likely to choose popular dishes, but the effect received very limited statistical support. I contend it was because a social situation of gathering with a group of people was preset to the same for both conditions. Thus, social-considering motive manipulated to be salient in the social-focused condition may be less obvious in distinguishing the two conditions. Even though the effectiveness of manipulation could be inferred from individuals' food choices, the absence of manipulation check may raise concerns for potential confounding variables in the manipulation. I would suggest adding an indirect measure of individuals' sensitivity to personal cues or social cues as a manipulation check in future studies. For example, individuals' sensitivity to social cues could be measured through their accuracy in identifying others' vocal tones or facial expressions (Pickett, Gardner, & Knowles, 2004).

The preceding four studies only tapped into individuals' intentions to perform each behavior, and Study 5 also measured individuals' behavioral decisions in a hypothetical situation. None of the study examined individuals' actual behaviors. Theory of planned action (Fishbein & Ajzen, 1975) claimed behavioral intention as an antecedent of actual behavior which indicated how readiness individual were to perform certain behavior. However, despite behavioral intention, individuals' actual behavioral tendencies were also affected by individuals' behavioral control. In other words, even though a person is highly intended to engage in certain behavior, whether or not the behavior is performed or not may also depend on the person's ability to successfully execute on the behavior and other tempting incentives in real life. Our results are only applied to behavioral intentions or behaviors in a hypothetical scenario. Future studies on actual behaviors could take individual's behavior control into consideration.

All our participants were Singaporean participants, and findings of the current studies were only limited to the recruited sample. In the cultural tightness-looseness dimension, Singapore was dated among the tight cultures with generally clearer norms, severe punishments for deviance and more social regulation (Gelfand et al., 2011). It was unexamined whether the regulating effects of perceived norm clarity and punishment on individuals' behaviors are affected by the high degree of social regulation that exists at the societal level or not. The results may only apply to a tight culture like Singapore. But I expect the perceived norm clarity and punishment's impacts on personal-focused behaviors and social-focused behaviors to be the same for loose cultures. Motivational goals driving the normative influences of norm clarity and punishment are deemed to be the key forces of the effect, which were recognized throughout all major cultures (Schwartz, 1992, 1994). Therefore, the effects should be independent of the social regulation level in the culture. However, future studies are needed to testify the premise.

Lastly, studies failed to find the proposed moderating role of need to belong on the relationship between individuals' perceived punishment and intentions to perform personal-focused behaviors. However, it was yet to be explored whether there is any other motivation mechanism enable perceived punishment to influence individuals' personal-focused behaviors.

Conclusions

The present research adapted norm clarity and punishment, two elements featuring cultural tightness, to featuring perceived tightness of each norm. I examined the influences of perceived norm clarity and punishment on behaviors expressing social-focused value, which are motivated to maintain social relationship with others, and behaviors expressing personal-focused value, which are motivated to express and achieve personal interests and desires. Norm clarity refers to perceptions of whether there is clear expectation of behavior, whereas punishment refers to how severe individuals perceive the social disapproval is for norm violation. Results found that norm clarity and punishment both guided social-focused behaviors through the motivation to consider for others, but they differed in the influences on personal-focused behaviors. Perceived norm clarity exerted its normative influences on personal-focused behaviors by fulfilling individuals' needs for closure. There was not such a influence motivation for perceived punishment, however. The research sheds lights on the motivational mechanism underline the impact of perceived norm clarity and punishment on value-expressive behaviors.

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FOOTNOTES

¹ In the clarity model, results showed that males and females did not differ in the behavioural intentions of all 5 value types, including self-enhancement ($\beta = .08, t = .699, p$ = .486), hedonism (β = .01, t = .112, p = .911), openness to change (β = .09, t = .844, p = .401), self-transcendence ($\beta = -.08$, t = -.759, p = .450) and conservation ($\beta = -.08$, t = -.735, p = .464). The gender \times clarity interaction was significant for the value type of self-transcendence ($\beta = -.23$, t = -2.036, p = .045). Simple slope tests further demonstrated that unlike female participants (β = .23, p = .144), male participants ($\beta = .51$, p = .001) were more likely to perform the selftranscendence behavior as they perceive the norm being clearer. However, the gender \times clarity interaction was not significant for the other 4 value types, including self-enhancement ($\beta = .01, t$ = .013, p = .990), hedonism ($\beta = -.12$, t = -.915, p = .362), openness to change ($\beta = -.15$, t = -.15, -.895, p = .373) and conservation ($\beta = .02$, t = .144, p = .886). The gender x need for closure interaction was not significant for all 5 value types, including self-enhancement ($\beta = .04, t$ = .301, p = .764), hedonism ($\beta = .10$, t = .694, p = .489), openness to change ($\beta = .16$, t = 1.145, p= .255), self-transcendence (β = .13, t = 1.070, p = .287) and conservation (β = .09, t = .690, p =.492).

² In the punishment model, results showed that males and females did not differ in the behavioural intentions of all 5 value types, including self-enhancement ($\beta = .04$, t = .381, p = .704), hedonism ($\beta = .01$, t = .041, p = .967), openness to change ($\beta = .07$, t = .557, p = .579), self-transcendence ($\beta = -.11$, t = -.936, p = .352) and conservation ($\beta = -.06$, t = -.537, p = .592). The gender × punishment interaction was not significant for all 5 value types, including self-enhancement ($\beta = -.09$, t = -.492, p = .624), hedonism ($\beta = -.05$, t = -.336, p = .738), openness to change ($\beta = .03$, t = .171, p = .865), self-transcendence ($\beta = -.23$, t = -1.309, p = .194) and

conservation ($\beta = -.06$, t = -.386, p = .700). The gender × need to belong interaction was not significant for all 5 value types, including self-enhancement ($\beta = -.01$, t = -.090, p = .930), hedonism ($\beta = .06$, t = .402, p = .688), openness to change ($\beta = .12$, t = .773, p = .441), self-transcendence ($\beta = -.01$, t = -.075, p = .940) and conservation ($\beta = -.06$, t = -.359, p = .720).

³ For each value type, I performed two multiple linear regression models to test how individuals' promotion focus and prevention focus, respectively, affected their behavioral intentions. The regression analysis of the promotion model was calculated to predict on behavioral intention based on clarity (mean-centered), promotion focus (mean-centered), and the interaction between norm clarity and promotion focus as predictors. The main effect of promotion focus was significant for the 4 value types, including self-enhancement ($\beta = .41, t =$ 5.412, p < .001), hedonism ($\beta = .35$, t = 4.344, p < .001), openness to change ($\beta = .39$, t = 4.629, $p \le .001$) and self-transcendence ($\beta = .20, t = 2.216, p = .029$), but not significant for conservation ($\beta = .14, t = 1.447, p = .151$), suggesting that participants with higher promotion focus were more likely to perform behaviors expressing value types of self-enhancement, hedonism, openness to change and self-transcendence. Results found no significant clarity × promotion interaction for all 5 value types, including self-enhancement ($\beta = .11, t = 1.395, p$ = .166), hedonism (β = .05, t = .583, p = .561), openness to change (β = -.01, t = -.066, p = .948), self-transcendence ($\beta = .07, t = .800, p = .425$) and conservation ($\beta = -.02, t = -.186, p = .853$), suggesting that promotion focus did not interplay with perceived clarity to affect behavioral intentions. As for the prevention model, a regression analysis involving behavioral intention as the dependent variable and punishment (mean-centered), prevention focus (mean-centered) and the interaction between punishment and prevention focus as predictors was performed. The main effect of prevention focus was significant for conservation ($\beta = .23, t = 2.583, p = .011$) and self-

enhancement ($\beta = -.23$, t = -2.767, p = .007), marginally significant for hedonism ($\beta = -.16$, t = -1.973, p = .051), but not significant for openness to change ($\beta = -.06$, t = -.740, p = .461) and self-transcendence ($\beta = -.02$, t = -.253, p = .801). Results suggested that participants with higher pevention focus were more likely to perform conservation behaviors, less likely to perform self-enhancement behaviors, and slightly less like to perform hedonism behaviors. The analysis also revealed no significant punishment × prevention interaction for all 5 value types, including self-enhancement ($\beta = .10$, t = 1.179, p = .241), hedonism ($\beta = -.05$, t = -.658, p = .512), openness to change ($\beta = -.08$, t = -.943, p = .348), self-transcendence ($\beta = -.08$, t = -.926, p = .356) and conservation ($\beta = .05$, t = .595, p = .553), suggesting that prevention focus did not interplay with perceived punishment to affect behavioral intentions.

⁴ In the clarity model, results suggested males were slightly more likely to perform selfenhancement behaviors ($\beta = ..17$, t = .1.829, p = .067), but they did not differ in behavioral intentions of the other 4 value types, including hedonism ($\beta = .02$, t = .258, p = .797), openness to change ($\beta = .04$, t = .393, p = .695), self-transcendence ($\beta = .10$, t = 1.116, p = .267) and conservation ($\beta = -.04$, t = .372, p = .711). The gender × clarity interaction was not significant for all 5 value types, including self-enhancement ($\beta = .12$, t = 1.289, p = .200), hedonism (β = .11, t = 1.214, p = .227), openness to change ($\beta = .07$, t = .624, p = .534), self-transcendence (β = -.08, t = -.838, p = .404) and conservation ($\beta = .09$, t = .893, p = .374). The gender × need for closure interaction was significant for hedonism ($\beta = -.193$, t = -2.124, p = .036). Simple slope tests further demonstrated that though in different directions, the hedonism behavioral intentions of both males ($\beta = .14$, p = .296) and females ($\beta = -.21$, p = .157) were not affected by their needs for closure. However, the gender × need for closure interaction was not significant for the other 4 value types, including self-enhancement ($\beta = -.06$, t = -.674, p = .502), openness to change (β

= .02, t = .216, p = .830), self-transcendence (β = .04, t = .384, p = .702) and conservation (β = .02, t = -.191, p = .849).

⁵ In the punishment model, results showed that males and females did not differ in the behavioural intentions of all 5 value types, including self-enhancement ($\beta = -.15$, t = -1.620, p = .110), hedonism (β = .03, t = .317, p = .752), openness to change (β = -.003, t = -.029, p = .977), self-transcendence (β = .04, t = .384, p = .701) and conservation (β = -.05, t = -.565, p = .573). The gender \times punishment interaction was significant for openness to change (β = .28, t = 2.835, p = .005). Simple slope tests further demonstrated that males ($\beta = -.23$, p = .094) with higher perceived punishment were slightly less likely to perform openness to change behaviors, whereas females ($\beta = .25$, p = .067) with higher perceived punishment were slightly more likely to perform openness to change behaviors. However, the gender × punishment interaction was not significant for the other 4 value types, including self-enhancement ($\beta = .15$, t = 1.469, p = .145), hedonism ($\beta = -.01$, t = -.049, p = .961), self-transcendence ($\beta = -.14$, t = -1.320, p = .190) and conservation ($\beta = .12, t = 1.266, p = .208$). The gender x need to belong interaction was not significant for all 5 value types, including self-enhancement ($\beta = -.01$, t = -.087, p = .931), hedonism ($\beta = .03, t = .367, p = .714$), openness to change ($\beta = .02, t = .223, p = .824$), selftranscendence ($\beta = .06, t = .612, p = .542$) and conservation ($\beta = .01, t = .111, p = .912$).

⁶ In the clarity model, results showed that males and females did not differ in the behavioural intentions of all 5 value types, including self-enhancement ($\beta = -.03$, t = -.247, p = .805), hedonism ($\beta = .05$, t = .529, p = .598), openness to change ($\beta = -.02$, t = -.156, p = .876), self-transcendence ($\beta = -.03$, t = -.316, p = .753) and conservation ($\beta = -.09$, t = -1.061, p = .291). The gender × clarity interaction was not significant for all 5 value types, including self-enhancement ($\beta = .18$, t = 1.762, p = .109), hedonism ($\beta = .05$, t = .475, p = .636), openness to

change ($\beta = .13$, t = .933, p = .353), self-transcendence ($\beta = -.03$, t = -.274, p = .784) and conservation ($\beta = .06$, t = .609, p = .544). The gender × need for closure interaction was significant for conservation ($\beta = .26$, t = 2.810, p = .006). Simple slope tests further demonstrated that unlike male participants ($\beta = -.09$, p = .723), female participants with higher needs for closure were more likely to perform conservation behaviors ($\beta = .41$, p = .005). However, the gender × clarity interaction was not significant for the other 4 value types, including selfenhancement ($\beta = .17$, t = 1.620, p = .114), hedonism ($\beta = .12$, t = 1.183, p = .240), openness to change ($\beta = .16$, t = 1.546, p = .125) and self-transcendence ($\beta = .06$, t = .493, p = .623).

⁷ In the punishment model, results showed that males and females did not differ in the behavioural intentions of all 5 value types, including self-enhancement ($\beta = .05, t = .518, p = .606$), hedonism ($\beta = .05, t = .489, p = .626$), openness to change ($\beta = -.07, t = .744, p = .459$), self-transcendence ($\beta = -.02, t = -.235, p = .814$) and conservation ($\beta = -.12, t = -1.245, p = .216$). The gender × punishment interaction was not significant for all 5 value types, including self-enhancement ($\beta = .06, t = .599, p = .550$), hedonism ($\beta = .16, t = 1.527, p = .125$), openness to change ($\beta = .15, t = 1.259, p = .211$), self-transcendence ($\beta = .04, t = .341, p = .734$) and conservation ($\beta = .03, t = .274, p = .785$). The gender × need to belong interaction was not significant for all 5 value types, including self-enhancement ($\beta = .07, t = .711, p = .479$), openness to change ($\beta = -.06, t = -.544, p = .588$), self-transcendence ($\beta = .02, t = .234, p = .816$) and conservation ($\beta = -.06, t = .599, p = .512$).

⁸ In Model 1, results showed that males and females did not differ in the behavioural intentions of all 5 value types, including self-enhancement ($\beta = .10, t = 1.052, p = .295$), hedonism ($\beta = .15, t = 1.594, p = .129$), openness to change ($\beta = .03, t = .292, p = .770$), self-transcendence ($\beta = .06, t = .635, p = .527$) and conservation ($\beta = .01, t = .112, p = .911$). The

gender × clarity interaction was not significant for all 5 value types, including self-enhancement (β = -.01, *t* = -.133, *p* = .895), hedonism (β = -.02, *t* = -.204, *p* = .839), openness to change (β = -.09, *t* = -.887, *p* = .377), self-transcendence (β = .06, *t* = .583, *p* = .561) and conservation (β = -.01, *t* = -.080, *p* = .936). The gender × need for closure interaction was not significant for all 5 value types, including self-enhancement (β = .00, *t* = .002, *p* = .998), hedonism (β = .01, *t* = .157, *p* = .876), openness to change (β = .11, *t* = 1.105, *p* = .272), self-transcendence (β = .15, *t* = 1.624, *p* = .107) and conservation (β = .06, *t* = .638, *p* = .525). The gender × social focus interaction was significant for openness to change (β = -.23, *t* = -2.409, *p* = .018). Simple slope tests further demonstrated that unlike female participants (β = -.09, *p* = .596), male participants with higher perceived social focus were more likely to perform openness to change behavior (β = .37, *p* = .011). But the gender × social focus interaction was not significant for the other 4 value types, including self-enhancement (β = -.13, *t* = -1.271, *p* = .207), hedonism (β = .12, *t* = -1.205, *p* = .231), self-transcendence (β = .09, *t* = .824, *p* = .412) and conservation (β = .10, *t* = 1.021, *p* = .309).

⁹ In Model 2, results showed that the main effect of gender was not significant for all 5 value types, including self-enhancement ($\beta = .08$, t = .830, p = .408), hedonism ($\beta = .16$, t = 1.682, p = .109), openness to change ($\beta = .08$, t = .801, p = .425), self-transcendence ($\beta = .14$, t = 1.488, p = .140) and conservation ($\beta = .04$, t = .421, p = .674). The gender × punishment interaction was not significant for all 5 value types, including self-enhancement ($\beta = .08$, t = .807, p = .421), hedonism ($\beta = -.04$, t = -.378, p = .706), openness to change ($\beta = -.05$, t = -.526, p = .600), self-transcendence ($\beta = .01$, t = .064, p = .949) and conservation ($\beta = .10$, t = .951, p = .344). The gender × need to belong interaction was significant for conservation ($\beta = .24$, t = 2.521, p = .013). Simple slope tests further demonstrated that male participants ($\beta = .24$, t = 2.521, p = .013).

-.60, p = .001) with higher needs to belong were less likely to perform conservation behavior. Similarly, female participants ($\beta = ..26$, p = .069) with higher needs to belong were slightly less likely to perform conservation behavior, but the effect was weaker compared with males. The gender × need to belong interaction was not significant for the other 4 value types, including self-enhancement ($\beta = .02$, t = .203, p = .840), hedonism ($\beta = .12$, t = 1.303, p = .196), openness to change ($\beta = .01$, t = .077, p = .939) and self-transcendence ($\beta = .11$, t = 1.195, p = .235). The gender × social focus interaction was significant for openness to change ($\beta = -.24$, t = -2.243, p = .027), Simple slope tests further demonstrated that unlike female participants ($\beta = -.07$, p = .690), male participants with higher perceived social focus were more likely to perform openness to change behavior ($\beta = .32$, p = .035). The gender × social focus interaction was not significant for the other 4 value types, including self-enhancement ($\beta = -.17$, t = -1.625, p = .108), hedonism ($\beta = ..10$, t = -.922, p = .359), self-transcendence ($\beta = .11$, t = 1.077, p = .284) and conservation ($\beta = .14$, t = 1.425, p = .157).

¹⁰ In Model 3, results showed that the main effect of gender was not significant for all 5 value types, including self-enhancement ($\beta = .11$, t = 1.203, p = .232), hedonism ($\beta = .16$, t = 1.636, p = .110), openness to change ($\beta = -.02$, t = -.249, p = .804), self-transcendence ($\beta = .01$, t = .133, p = .894) and conservation ($\beta = .01$, t = .064, p = .949). The gender × clarity interaction was not significant for all 5 value types, including self-enhancement ($\beta = -.10$, t = -1.116, p = .267), hedonism ($\beta = -.01$, t = -.106, p = .916), openness to change ($\beta = -.04$, t = -.454, p = .650), self-transcendence ($\beta = .05$, t = .494, p = .622) and conservation ($\beta = .01$, t = .115, p = .908). The gender × need for closure interaction was not significant for all 5 value types, including solf solutions ($\beta = .02$, t = .170, p = .866), openness to change ($\beta = .02$, t = .240, p = .811), self-transcendence ($\beta = .165$, t = 1.834, p = .081)

and conservation ($\beta = .07$, t = .680, p = .498). The gender × personal focus interaction was significant for self-transcendence ($\beta = .20$, t = 2.124, p = .036). Simple slope tests further demonstrated that unlike male participants ($\beta = .01$, p = .936), female participants with higher perceived personal focus were more likely to perform self-transcendence behavior ($\beta = .32$, p = .025). But the gender × personal focus interaction was not significant for the other 4 value types, including self-enhancement ($\beta = -.05$, t = -.486, p = .628), hedonism ($\beta = -.14$, t = -1.275, p = .205), openness to change ($\beta = -.10$, t = -1.004, p = .318) and conservation ($\beta = -.01$, t = -.058, p = .954).

¹¹ In Model 4, results showed that the main effect of gender was not significant for all 5 value types, including self-enhancement ($\beta = .14$, t = 1.409, p = .162), hedonism ($\beta = .12$, t =1.378, p = .258), openness to change ($\beta = .09$, t = 1.006, p = .317), self-transcendence ($\beta = .08$, t = .876, p = .383) and conservation ($\beta = .03$, t = .345, p = .731). The gender \times punishment interaction was not significant for all 5 value types, including self-enhancement ($\beta = -.03$, t =-.263, p = .793), hedonism ($\beta = -.01, t = -.053, p = .958$), openness to change ($\beta = -.10, t = -.10,$ 1.037, p = .302), self-transcendence ($\beta = -.01$, t = -.099, p = .922) and conservation ($\beta = .11$, t = -.01, t = -.1.057, p = .293). The gender × need to belong interaction was significant for conservation (β = .24, t = 2.356, p = .020), Simple slope tests further demonstrated that both male participants (β = -.59, p = .008) and female participants ($\beta = -.28$, p = .048) with higher needs to belong were less likely to perform conservation behavior, but the effect was stronger for males than for females. But the gender \times need to belong interaction was not significant for the other 4 value types, including self-enhancement ($\beta = .05$, t = .523, p = .602), hedonism ($\beta = .11$, t = 1.210, p= .229), openness to change (β = .10, t = 1.106, p = .271) and self-transcendence (β = .16, t = 1.598, p = .113). The gender × personal focus interaction was significant for self-transcendence

 $(\beta = .22, t = 2.054, p = .042)$, Simple slope tests further demonstrated that unlike male participants ($\beta = .03, p = .899$), female participants with higher perceived personal focus were more likely to perform self-transcendence behavior ($\beta = .30, p = .034$). But the gender × personal focus interaction was not significant for the other 4 value types, including self-enhancement ($\beta =$ -.16, t = -1.599, p = .113), hedonism ($\beta = -.02, t = -.165, p = .869$), openness to change ($\beta = -.07, t = -.678, p = .499$) and conservation ($\beta = -.05, t = -.395, p = .694$).

¹² In the clarity model, results showed that the main effect of gender was not significant in both social-focused condition ($\beta = .07$, t = .576, p = .567) and personal-focused condition ($\beta =$ -.11, t = -.902, p = .371). The gender × clarity interaction was not significant in social-focused condition ($\beta = -.06$, t = -.470, p = .640), but it was significant in personal-focused condition (β = .31, t = 2.699, p = .009). Simple slope tests further demonstrated that in the personal-focused condition, unlike female participants ($\beta = .16$, p = .223), male participants with higher perceived clarity were less likely to order popular dishes in zichar restaurants ($\beta = -.33$, p = .021). The gender × need for closure interaction was not significant in both social-focused condition ($\beta =$ -.11, t = -.801, p = .426) and personal-focused condition ($\beta = -.10$, t = -.737, p = .464).

¹³ In the punishment model, results showed that the main effect of gender was not significant in both social-focused condition ($\beta = .06$, t = .455, p = .650) and personal-focused condition ($\beta = -.15$, t = -1.429, p = .156). The gender × punishment interaction was not significant in social-focused condition ($\beta = -.13$, t = -.919, p = .361), but it was significant in personal-focused condition ($\beta = .36$, t = 2.540, p = .014). Simple slope tests further demonstrated that in the personal-focused condition, unlike female participants ($\beta = .11$, p = .457), male participants with higher perceived clarity were less likely to order popular dishes in zichar restaurants ($\beta = -.30$, p = .029). The gender × need to belong interaction was not significant in

both social-focused condition ($\beta = -.02$, t = -.123, p = .902) and personal-focused condition ($\beta = .04$, t = .322, p = .749).

¹⁴ In the clarity model, results showed that the main effect of reward was not significant in both social-focused condition ($\beta = -.09$, t = -.753, p = .454) and personal-focused condition (β = .07, t = .556, p = .580). The reward × clarity interaction was not significant in both socialfocused condition ($\beta = .16$, t = 1.177, p = .244) and personal-focused condition ($\beta = -.11$, t =-.871, p = .387). The reward × need for closure interaction was not significant in both socialfocused condition ($\beta = -.16$, t = -1.279, p = .206) and personal-focused condition ($\beta = -.04$, t =-.277, p = .783).

¹⁵ In the punishment model, results showed that the main effect of reward was not significant in both social-focused condition ($\beta = -.12$, t = -.928, p = .357) and personal-focused condition ($\beta = .11$, t = .895, p = .374). The reward × punishment interaction was not significant in both social-focused condition ($\beta = .01$, t = .093, p = .926) and personal-focused condition ($\beta = .09$, t = .545, p = .588). The reward × need to belong interaction was not significant in both social-focused condition ($\beta = .04$, t = .291, p = .772) and personal-focused condition ($\beta = -.09$, t = -.728, p = .469).

APPENDICES

Appendix A Definitions of Schwartz's 10 Values

Instructions: Values reflect the desired goals that individuals would like to achieve through their behaviors. Below are 10 major values that individuals might achieve through their behaviors. Please take some time to go through the meaning of each value.

Power (social status and prestige, control or dominance over people and resources)

Achievement (ambitious, successful, capable, demonstrate competence)

Hedonism (pleasure, enjoying life, self-indulgent, sensuous gratification for oneself)

Stimulation (daring, excitement, novelty, and challenge in life)

Self-direction (creativity, freedom, choosing own goals, curious, independent)

Universalism (broadminded, social justice, equality, world at peace, world of beauty, unity with nature, wisdom, protecting the environment)

Benevolence (helpful, honest, forgiving, responsible, loyal, true friendship, mature love)

Security (family security, clean, reciprocation of favors, social order)

Conformity (restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms)

Tradition (respect, commitment, and acceptance of the customs and ideas that one's culture or religion provides)

Appendix B Value-expressive Behaviors List in Study 1

- Achievement value type Reach high standards when getting things done Take on many commitments Put a lot of energy into things primarily to win competitions Spend time networking with people who have influence
- Power value type Take the lead in organizing activities Dominate conversations Take charge of things in work groups
- Hedonism value type Relax at aesthetically pleasing spots Get a massage for relaxation Consume food or drinks just because one enjoys them, even when one's not hungry or

thirsty

- Stimulation value type Take thrill rides at amusement park look for stimulating activities that break up one's routine
- 5. Self-direction value type make one's own decisions
- Benevolence value type Help one's friends with projects Lend things to people one knows Do one's friends and family favors without being asked
- Universalism value type Recycle recyclable materials appropriately Express one's willingness to pay higher price for environmentally friendly products Participate in projects to protect the environment
- 8. Security value type Use safety gear such as seat belt even when it's optional

Appendix C

Need for Closure Scale

Instructions: Read each of the following statements and decide how much you agree with each according to your beliefs and experiences. Please respond according to the following scale.

- 1 = strongly disagree
- 2 = moderately disagree
- 3 = slightly disagree
- 4 = slightly agree
- 5 = moderately agree
- 6 = Strongly agree
- 1. I don't like situations that are uncertain.
- 2. I dislike questions which could be answered in many different ways.
- 3. I find that a well ordered life with regular hours suits my temperament.
- 4. I feel uncomfortable when I don't understand the reason why an event occurred in my life.
- 5. I feel irritated when one person disagrees with what everyone else in a group believes.
- 6. I don't like to go into a situation without knowing what I can expect from it.
- 7. When I have made a decision, I feel relieved.
- 8. When I am confronted with a problem, I'm dying to reach a solution very quickly.
- 9. I would quickly become impatient and irritated if I would not find a solution to a problem immediately.
- 10. I don't like to be with people who are capable of unexpected actions.
- 11. I dislike it when a person's statement could mean many different things.
- 12. I find that establishing a consistent routine enables me to enjoy life more.
- 13. I enjoy having a clear and structured mode of life.
- 14. I do not usually consult many different opinions before forming my own view.
- 15. I dislike unpredictable situations.

Appendix D

Need to Belong Scale

Instructions: For each of the statements below, indicate the degree to which you agree or disagree with the statement by writing a number in the space beside the question using the scale below:

- 1 = Strongly disagree
- 2 = Moderately disagree
- 3 = Neither agree nor disagree
- 4 = Moderately agree
- 5 =Strongly agree
- 1. If other people don't seem to accept me, I don't let it bother me.
- 2. I try hard not to do things that will make other people avoid or reject me.
- 3. I seldom worry about whether other people care about me.
- 4. I need to feel that there are people I can turn to in times of need.
- 5. I want other people to accept me.
- 6. I do not like being alone.
- 7. Being apart from my friends for long periods of time does not bother me.
- 8. I have a strong need to belong.
- 9. It bothers me a great deal when I am not included in other people's plans.
- 10. My feelings are easily hurt when I feel that others do not accept me.

Appendix E

Value-expressive Behaviors List in Studies 2, 3 and 4

- Achievement value type
 Put a lot of energy into things primarily to succeed
 Try one's best to reach high standards when getting things done
 Take on commitments one excels in
- Power value type
 Take the lead in organizing activities (e.g., social gathering, formal events)
 Dominate conversations
 Influence others to get what one wants
 Insist that others do what one wants
 Make others go along with one's own opinions
- Hedonism value type Get a massage for relaxation Relax at aesthetically pleasing spots Consume food or drinks just because one enjoys them, even when one is not hungry or

thirsty

Indulge oneself by getting things that one likes but does not need

- Stimulation value type Participate in exciting activities Look for stimulating activities that break up one's routine Take thrill rides at amusement park
- 5. Self-direction value type Rely on one's own way of seeing things as the basis for action Make one's own decisions
- Benevolence value type
 Do one's friends and families favors without being asked
 Help one's friends with projects
 Lend things to one's friends
 Forgive one's friends when they have hurt one's feelings

7. Universalism value type

Pay higher price for environmentally friendly productsRecycle recyclable materials appropriatelyParticipate in projects to protect the environmentSupport human rights causes through contributions

 Security value type
 Use safety gear such as seat belt even when it's optional Refuse to go to dangerous places and neighborhoods

Think and check before answering the door Support crime-prevention actions

- 9. Conformity value type Refrain from questioning an exam or project's grade even if one thinks it is unfair Obey social rules and regulations
- 10. Tradition value typeObserve traditional customs on holidaysPractice one's cultural traditionsLearn more about the history of one's culture

Appendix F

Clarity Items and Punishment Items in Studies 1, 2 and 4

Instructions: On the following page, you will be presented with a series of behaviors. Your task is to evaluate how these behaviors are perceived in Singaporean society. Please indicate the extent to which you agree or disagree with the following sentences.

- 1 = strongly disagree
- 2 = moderately disagree
- 3 = somewhat disagree
- 4 = neither agree nor disagree
- 5 =somewhat agree
- 6 = moderately agree
- 7 =strongly agree

Clarity items:

- 1. In Singaporean societies, people are clearly expected to (perform certain behavior).
- 2. It is clear that (performing certain behavior) is a right thing to do for people in Singaporean Society.
- 3. Generally, there are clear guidelines that people should (perform certain behavior) in Singaporean society.

Punishment items:

- 1. In Singaporean society, if someone does not (perform certain behavior), others will disapprove.
- 2. There is low tolerance for not (performing certain behavior) in Singaporean society.
- 3. In Singaporean society, not (performing certain behavior) results in social disapproval.

Note. Items 1 and 2 were used in Studies 1, 2 and 4. Item 3 was used in Studies 2 and 4.

Appendix G Instructions for Friendship Writing Task

Friends often enjoy doing things together, count on each other for support when they need it, and talk with each other about their everyday lives, problems, concerns, ideas, and intimate thoughts. Instead of hanging out with our friends individually, we often have a group of a few friends that we get together with regularly, be it inside or outside of school. A group of friends that you regularly get together with forms a friendship group. Friendship groups are characterized as groups of individuals who spend time and engage in activities with one another, and who form friendship bonds within the group.

Think about one of your friendship groups that matters the most to you. In the space below, write a brief description of this friendship group. For example, you can describe who the members of the group are, the things that the group usually gets together to do, the group's likes and dislikes, and so forth.

In the following, we would like to know more about the friendship group that you have just described. You will be presented with a series of questions concerning the values and behaviors of you and others in your friendship group. Note that the phrase "friendship group" in all the questions refers to the friendship group that you have just described on the previous page.

Appendix H Clarity Items and Punishment Items in Study 3

Instructions: On the following page, you will be presented with a series of behaviors. Your task is to evaluate how these behaviors are perceived in your friendship group.

- 1 = strongly disagree
- 2 =moderately disagree
- 3 = somewhat disagree
- 4 = neither agree nor disagree
- 5 = somewhat agree
- 6 = moderately agree
- 7 = strongly agree

Clarity items:

- 1. To my friendship group, a person is clearly expected to (perform certain behavior).
- 2. To my friendship group, it is clear that (performing certain behavior) is a right thing to do.
- 3. In my friendship group, there is clear understanding that a person should (perform certain behavior).

Punishment items:

- 1. My friendship group would disapprove if a person does not (perform certain behavior).
- 2. My friendship group has low tolerance of a person not (performing certain behavior).
- 3. In my friendship group, not (performing certain behavior) would result in social disapproval.

Appendix I Restaurant Menu

Instructions: Here are the menu items for your ordering later. Please take a look at it.

MENU	
Pork Rib	Sotong
Salted Egg Pork Rib	Thai Style Sotong
Mongolia Pork Rib	Cereal Sotong
Sweet Sour Pork Rib	Butter Sotong
Marmite Pork Rib	Deep Fried Sotong
Coffee Pork Rib	Salted Egg Sotong
Cheese Pork Rib	Sambal Sotong
Beef	Omelette
Stir-Fried Beef	Prawn Omelette
Black Pepper Beef	Chai-Poh Omelette
Curry Beef	Minced Meat Omelette
Dried Chili Beef	Bitter Gourd Omelette
Sambal Beef	Foo Yong Omelette
Ginger Onion Beef	Onion Omelette
Prawn	
Butter Prawn	
Cereal Prawn	
Fragrant Prawn	
Salted Egg Prawn	
Sambal Hotplate Prawn	

Appendix J

Instructions for Manipulations of Social-focused Condition and Personal-focused Condition

Social-focused condition:

Imagine that you have just joined a club in NTU for the new academic year. The club has sent you the following email concerning the club's welcome dinner.

"Hi!

Welcome to the club! We are organizing a get-together cum welcome dinner for all members of the club. We have reserved tables for the dinner at Good Chef Zi Char Restaurant. Given the size of our group, we are planning to reserve dishes for the tables in advance. With 8 people at a table, we will order 8 dishes per table. We have already decided on chili crab, prawn paste chicken, and sambal kang kong for all tables. For the remaining 5 dishes, we would like to let each table decide.

Now, we would like you to take a look at the menu items of the restaurant and then choose the dishes that you would order for those at your table. It's a good opportunity for you to take care of others at your table by choosing the dishes that they will enjoy. Please choose 5 dishes for your table. The final order for each table will be decided based on **people's choices** for the table."

Personal-focused condition:

Imagine that you have just joined a club in NTU for the new academic year. The club has sent you the following email concerning the club's welcome dinner. "Hi!

Welcome to the club! We are organizing a get-together cum welcome dinner for all members of the club. We have reserved tables for the dinner at Good Chef Zi Char Restaurant. Given the size of our group, we are planning to reserve dishes for the tables in advance. With 8 people at a table, we will order 8 dishes per table. We have already decided on chili crab, prawn paste chicken, and sambal kang kong for all tables. For the remaining 5 dishes, we would like to let each table decide.

Now, we would like you to take a look at the menu items of the restaurant and then choose the dishes that you would order for yourself. It's a good opportunity for you to let us know your personal taste by choosing the dishes that you will enjoy. Please choose 5 dishes for yourself. The final order for each table will be decided based on **people's personal choices**."

Appendix K

Instructions for Food Orders Measures of Social-focused Condition and Personal-focused Condition

Social-focused condition:

Now, please choose the 5 dishes that you would **order for those at your table. It's a good opportunity for you to take care of others at your table by choosing the dishes that they will enjoy.**

Please choose one dish from each category by checking the dish that you would like to order.

Personal-focused condition:

Now, please choose the 5 dishes that you would **order for yourself. It's a good opportunity for you to let us know your personal taste by choosing the dishes that you will enjoy.** Please choose one dish from each category by checking the dish that you would like to order.

Appendix L

Instructions for Popular Dishes Ranking and Personal Preference Ranking

Popular dishes ranking:

In every restaurant, there are certain popular menu items that are more frequently ordered by customers. We would like you to identify items that **you think are most popular and most frequently ordered by other customers in the restaurant.**

For each category of dishes, please rank the dishes based on the dishes' popularity in Singapore. To do so, you simply need to move the dishes up and down so that a number "1" indicates the dish that you think is most popular (most frequently ordered), and the number "6" indicates the dish that you think is the least popular (least frequently ordered).

Personal preference ranking:

Individuals have their own taste preferences for food. We would like you to identify items that **you like the most in the restaurant.**

For each category of dishes, please rank the dishes based on your personal tastes. To do so, you simply need to move the dishes up and down so that a number "1" indicates the dish that you like the most, and the number "6" indicates the dish that you like the least.

Appendix M Clarity Items and Punishment Items in Study 5

Instructions: The following statements concern how you perceive certain behaviors in a zi char restaurant. Please read each statement and indicate how much you agree or disagree with the statement. There are no right or wrong answers. Please simply respond according to your feelings.

- 1 = strongly disagree
- 2 = moderately disagree
- 3 = somewhat disagree
- 4 = neither agree nor disagree
- 5 = somewhat agree
- 6 = moderately agree
- 7 =strongly agree

Clarity items:

- 1. In a zichar restaurant, people are clearly expected to (order popular dishes).
- 2. It is clear that (ordering popular dishes) is a right thing to do for people in a zichar restaurant.
- 3. Generally, there are clear guidelines that people should (order popular dishes) in a zichar restaurant.
- 4. In a zichar restaurant, people are clearly expected to (be polite to servers).
- 5. It is clear that (being polite to servers) is a right thing to do for people in a zichar restaurant.
- 6. Generally, there are clear guidelines that people should (be polite to servers) in a zichar restaurant.
- 7. In a zichar restaurant, people are clearly expected to (give tips).
- 8. It is clear that (giving tips) is a right thing to do for people in a zichar restaurant.
- 9. Generally, there are clear guidelines that people should (give tips) in a zichar restaurant.

Punishment items:

- 1. In a zichar restaurant, if someone does not (order popular dishes), others will disapprove.
- 2. There is low tolerance for not (ordering popular dishes) in a zichar restaurant.
- 3. In a zichar restaurant, not (ordering popular dishes) results in social disapproval.
- 4. In a zichar restaurant, if someone does not (be polite to servers), others will disapprove.
- 5. There is low tolerance for not (being polite to servers) in a zichar restaurant.
- 6. In a zichar restaurant, not (being polite to servers) results in social disapproval.
- 7. In a zichar restaurant, if someone does not (give tips), others will disapprove.
- 8. There is low tolerance for not (giving tips) in a zichar restaurant.
- 9. In a zichar restaurant, not (giving tips) results in social disapproval.

Note.

Items 1-3 are target items. Items 4-9 are filler items.