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by

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Abstract

Past research on the need to belong in groups has largely examined the circumstances under which individuals go against their personal preferences and conform to group norms. The current research examines how the need to belong may shape the things people view as important for happiness, and what makes their lives complete. Two studies tested the main hypothesis that after activating belongingness needs, participants will be more likely to emphasize the importance of things valued by society (e.g., a lot of money, a successful career, etc.). In Study 1, the need to belong was activated by asking participants to recall a time when they engaged in an action that enabled them to gain social approval from others (vs. doing what they wanted), following which they rated the extent to which different pathways were key to their happiness. The results did not support the hypothesis that activating the need to belong would heighten the preference for what society saw as important for happiness. We identified two limitations in Study 1, which we sought to rectify in Study 2. First, it is possible that actions taken to gain social approval and following personal preferences may not be mutually exclusive despite how it is often examined in the literature. Therefore, in Study 2, we changed the manipulation to ask participants to recall a time in which they faced social rejection (to activate the need to belong) vs. a time which they experienced social acceptance. We also added a non-social, negative valence

control group (i.e., failure) to test whether all negative experiences will have a similar effect on the dependent measure. The second limitation we identified was that people may have a preconceived idea of what is important for happiness that cannot be easily changed by activating belongingness needs. Therefore, we asked participants what would make their lives complete instead, something which may be less subject to preconceived notions. The results showed that contrary to expectations, participants in the social rejection condition did not evince a preference for societal completeness items as compared to those in the social acceptance and failure conditions. Various limitations and improvements for future research are discussed.

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Introduction

"No man is an island, entire of itself."

- John Donne (1975)

Human beings are social animals, characterized by a strong and pervasive desire to form and maintain positive interpersonal relationships. According to (Baumeister & Leary, 1995), this need to belong is characterized by a desire for frequent personal contact or interactions with other people, where the relationships in question are perceived as stable, involve affective concern, and as continuing into the foreseeable future.

Looking solely at belongingness needs however, may not provide a complete picture of our social engagements. According to Brewer (1991), the need to belong is balanced by a competing need, the need for differentiation. In her widely cited paper, Brewer (1991) outlines a model of optimal distinctiveness, where people seek to balance the opposing needs of inclusion and differentiation by identifying with groups that can satisfy both (i.e. optimally distinct groups).

The operation of these two competing needs is most evidently displayed in group processes. While individuals in a group often conform to group consensus, they also simultaneously seek to hold on to their personal convictions (Asch, 1951; Asch, 1956; Cialdini, Kallgren, & Reno, 1991; Reno, Cialdini, & Kallgren, 1993). For example, numerous studies employing Asch's (1951) conformity paradigm found that participants sought social approval by regularly conforming to obviously incorrect answers given by confederates rather than go against the majority and risk social sanctions (see Bond & Smith, 1996 for a review).

However, when given the choice to remain anonymous in their responses, participants responded according to what they perceived (e.g. Deutsch & Gerard, 1955).

More generally, the operation of these two needs is likely to affect societal processes as well. By and large, individuals have personal goals. Whether it is setting up a family, or working towards their dream job, these goals are likely to be chronically accessible as they actively work towards achieving them. These personal goals serve to differentiate an individual from others in society. On the other hand, the society which these individuals live in may value another set of goals. As individuals interact with other members of society, they are exposed to the social norms which influence the setting of these societal goals. These norms are powerful in that they motivate behavior by rewarding socially approved behaviors and punishing socially disapproved ones (Reno et al., 1993). This may result in individuals pursuing societally endorsed goals at the expense of their own personal goals in order to fit in. For example, people may be pressured into pursuing careers which offer them high salaries instead of doing what they enjoy.

While these two sets of goals may be distinct, the goals which an individual chooses to pursue (societally endorsed vs. personal) may depend on which is more accessible at that point of time. Due to the chronic accessibility of personal goals and individuals' ability to differentiate the self from others, personal goals should to be accessible most of the time, especially when the need for differentiation is active. Conversely, due to their ability to gain social approval from others, societally endorsed goals may be more accessible when the need to belong is active. Extending on this, the present research aims to examine the effects of the activation of the need to belong and the need for differentiation

on individuals' goals in the form of what they view as important for happiness and

things that will make their lives complete.

Literature Review

The Need to Belong

The need to belong is defined as the desire for frequent social interactions with other people, where the relationships in question are perceived as stable, involve affective concern, and as continuing into the foreseeable future (Baumeister & Leary, 1995). This need is described as a fundamental need that underlies and explains much of human behavior (Leary & Cox, 2008). That humans are naturally driven towards establishing and sustaining a sense of belonging can be traced to their evolutionary past. In the environment of evolutionary adaptedness where food was scarce and dangers abounded, individuals who were inclined to form social coalitions were likely to have enjoyed a significant advantage over others who chose to eke it out on their own. Membership in these social coalitions would have given these individuals access to food, protection against external dangers, access to mates, and help in caring for their offspring, translating into sizable gains in their survival and reproductive fitness. Over time, adaptations allowing these individuals to be suited for living in a social collective (e.g. being cooperative) would have been selected for, and mechanisms ill-suited for group-living (e.g. being deviant from group norms) selected against (Brewer & Caporael, 1990; Buss, 1995). Consequently, human beings are likely to have evolved a set of internal mechanisms that greatly prioritize the formation and maintenance of meaningful and lasting interpersonal relationships (Baumeister & Leary, 1995).

To qualify as a fundamental need, the need to belong should significantly impact cognition, emotion, and behavior. Firstly, in the cognitive domain, the

activation of belongingness needs increases cognitive focus on social and interpersonal factors such as positive-tone vocalizations in speech (Gardner, Pickett, Jefferies, & Knowles, 2005; Pickett, Gardner, & Knowles, 2004), resulting in decreased processing of complex stimuli in other non-social domains (Baumeister, Twenge, & Nuss, 2002; Chen, Williams, Fitness, & Newton, 2008). In the emotion domain, threats to the need to belong has been found to be related to anxiety (Barden, Garber, Leiman, Ford, & Masters, 1985), anger (Chow, Tiedens, & Govan, 2008; Mendes, Major, McCoy, & Blascovich, 2008), sadness (Chow et al., 2008), and loneliness (Wheeler, Reis, & Nezlek, 1983). Lastly, in the behavioral domain, activating belongingness needs has been found to elicit antisocial responses (see Leary, Twenge, & Quinlivan, 2006 for a review). For example, Twenge, Baumeister, Tice, & Stucke (2001) led a group of participants to believe they were facing a future alone then provided them with bogus negative feedback on an essay they had written. These participants were then told to evaluate the person who had given them the feedback for a research assistant job. Results showed that participants in this condition gave significantly more negative evaluations than did participants in other conditions (Study 1 and 2). However, in a subsequent study, Twenge and colleagues' (2001) found that participants who were given future alone feedback, and received positive (instead of negative) feedback on their essay gave vastly more positive feedback than those in the future alone, negative feedback condition (Study 3). Presumably, the prospect of future unmet belongingness needs only increased participants' hostility towards a social rejection when an avenue for meaningful social connection was not provided (Gere & MacDonald, 2010).

Taken together, the desire for meaningful social relationships is something ingrained into the human psyche, and is manifested in our cognitions, emotions, and behaviors. When belongingness needs are threatened, we pay more attention to social stimuli to the exclusion of all else, experience negative affective states, and react in ways which remediate current circumstances.

The Competing Need for Differentiation

The need for differentiation is defined as the desire to establish and maintain a sense of distinction from others (Vignoles, Chryssochoou, & Breakwall, 2000). This need usually arises when individuals perceive themselves as too similar to others (Brewer, 1991; Snyder & Fromkin, 1980). Although research on the evolutionary underpinnings of the need for differentiation is scarce, evidence for this need can be found by examining its impact on our cognition, emotion, and behavior. Firstly, in the cognitive domain, differentiation needs have been found to motivate people to protect their perceptions of self-uniqueness by discounting threatening information and focusing on available uniqueness-affirming information (e.g. Markus & Kunda, 1986), increase their perceptions of in- and out-group homogeneity (Pickett & Brewer, 2001), and engage in more self-stereotyping (Pickett, Bonner, & Coleman, 2002). In the emotion domain, participants who were led to believe that they were highly similar to other respondents reported less positive moods than did those who received moderate similarity feedback (Fromkin, 1972). Lastly, in the behavioral domain, participants whose differentiation needs were activated persisted longer and performed better at a task when it was framed as being indicative of uniqueness (Gray & Rios, 2012).

It thus seems that like the need to belong, the need for differentiation significantly impacts our cognitions, emotions, and behavior. How then do these two competing needs combine to affect human interaction? Research on group and societal processes can be instructive.

Belongingness and Differentiation Needs in Groups and Society

Various models of social influence highlight the role of belongingness and differentiation needs in group processes (e.g. Nail, 1986; Nail, MacDonald, & Levy, 2000; Willis, 1963). For example, Nail and colleagues (2000) identify being socially accepted as a key motive for conformity and establishing or projecting one's uniqueness as a motive for not conforming. Group norms provide information on the kind of goals that a group aims to achieve (Cialdini, Kallgren, & Reno, 1991). Actions taken to further these goals are typically rewarded, and actions which detract from them, punished, giving rise to a powerful motivation to conform to group consensus (Reno, Cialdini, & Kallgren, 1993). By moving from a position of conflict to a position of agreement with the group, group members are able to gain social approval and satisfy their belongingness needs.

On the other hand, individuals may resist conformity and strive to achieve their own personal goals. According to Nail and colleagues (2000), this typically arises when individuals are motivated to differentiate themselves and/or maintain their self-concept. For example, Arndt, Schimel, Greenberg, and Pyszcznski (2002) found that participants who were asked to focus on an important aspect of themselves displayed less conformity than those who were asked to focus on a past achievement or a neutral event. Presumably, thinking about something that

was important to their self-concept primed participants' differentiation needs, leading to a fall in conformity.

Similarly, the need to belong and the need for differentiation can be observed in societal processes as well. As with the case in groups, societal interactions are also governed by a set of norms. These norms influence the behavior of individuals by providing them with a "socially approved guide" on how to behave and what goals to pursue. As social approval is central in the fulfilment of the need to belong, individuals motivated by belongingness needs are likely to behave according to societal norms and pursue goals that society values. On the other hand, individuals also have their own chronically accessible goals that they actively work towards achieving. The achievement of these personal goals set them apart from others in society. As individuation is central in the fulfilment of the need for differentiation, individuals motivated by differentiation needs are likely to lean towards pursuing goals they personally value.

Extending from this, the activation of the need to belong and the need for differentiation is likely to affect the relative dominance of societally endorsed and personal goals. When the need to belong is activated, societally endorsed goals which aid in its fulfilment may be more dominant. Conversely, when the need for differentiation is activated, personal goals which aid in its fulfilment may be more dominant.

The Pursuit of Happiness as an Important Goal

One area which may show the effects of the activation of these competing needs is the pursuit of happiness. The desire for happiness is virtually universal (Diener, 2000). In a survey of more than 7,000 respondents in 42 countries,

Diener (2000) found that participants from practically all the societies surveyed rated happiness as very important and as something they thought about often. While there may be some cultural variation in the relative importance of what predicts happiness, research has demonstrated the universality of many correlates of happiness (e.g. Diener, Oishi, & Ryan, 2013). For example, cross-cultural longitudinal research on large representative samples, have found that married people are, on average, happier than non-married, and once married people (Diener, Gohm, Suh, & Oishi, 2000). More importantly, while there are norms governing what it means to be happy in each society, individual differences exist as well (Diener et al., 2013). Goals such as having a successful career may be valued by society, while goals such as having good health may be deemed as more important for happiness on an individual level. As discussed in the previous section, individuals are thus likely to have separate representations of societally endorsed and personal goals which are seen as more important in the pursuit of happiness.

The Present Research

The present research thus aims to examine the effects of activating the need to belong vs. the need for differentiation on the things that participants view as important for happiness. Individuals are likely to have a set of things they deem as important to have to be happy. This arises from their unique experiences as they navigate and respond to the various circumstances in their lives. On the other hand, society is also likely to have a set of things it deems as important to have to be happy. This arises through the process of socialization, where children are exposed to societal norms transmitted to them from their parents and reinforced through their interaction with other members of society (Tam, Lee, Kim, Li, & Chao, 2012).

As such, individuals should be aware of what is important for happiness on both a personal and societal level. What they deem as more important for happiness however, may depend on which set is more dominant at that point of time. When the need to belong is active, the desire to fit in and be socially approved by others may increase the dominance of the societal set, making them rate things corresponding to it as more important for happiness. In contrast, when the need for differentiation is active, the desire to stand out and be different may increase the dominance of the non-societal set. However what is perceived as important for happiness is likely to differ from individual to individual. As such, activating the need for differentiation may not result in a noticeable pattern of results.

With this in mind, Study 1 manipulated the salience of the need to belong vs. the need for differentiation to observe their impact on the things participants

saw as important for happiness. Specifically, Study 1 hypothesized that participants' whose belongingness needs were activated will rate themselves as happier if they had things which correspond to what society deems as important for happiness than those whose differentiation needs were activated. Happiness ratings on things which did not correspond to what society deems as important for happiness were not expected to differ across conditions.

Study 1

Methods

  Participants. One hundred and twenty participants were recruited via Singapore Management University's Subject Pool System. A total of 14 participants were excluded, one for giving the same response (i.e., "7" on a 7-point scale) to all the items, one for not completing the manipulation, and 12 for the failure to follow instructions (i.e., generating incorrect examples, such as writing about doing what others wanted instead of doing what he or she wanted in the *belongingness* condition). This leaves a final sample of 106 participants (32 male, $M_{age} = 21.52$, $SD_{age} = 2.24$). The sample was ethnically diverse: 80.2% Chinese, 3.8% Malay, 10.4% Indian, and 5.7% others.

  Measures and procedures. Participants were randomly assigned to either the *belongingness* condition or *differentiation* condition. After reading the informed consent form, participants were asked to recall and describe a time consistent with the instructions provided below. Upon completing the recall task, participants were then asked to rate how happy they would be if they had certain things.

  Belongingness and differentiation activation. Belongingness needs were activated by asking participants to "think about a time where you chose the course of action that enabled you to gain social approval from others (rather than doing what you wanted)". Differentiation needs were activated by asking participants to "think about a time where you chose the course of action that you wanted (rather than the one that would gain you social approval)". Participants in both conditions (henceforth referred to as the belongingness and differentiation

conditions) were then asked to take the next five minutes to describe the recalled situation in as much detail as they could.

Happiness ratings. After participants' belongingness and differentiation needs were activated, participants were asked to rate how happy they would be if they had certain things (1 = *extremely unhappy*, 7 = *extremely happy*). Things important for happiness were obtained via a literature search on the correlates and predictors of happiness examined in Diener's (e.g. Diener et al., 2013; Diener, Suh, Lucas, & Smith, 1999) research (e.g. "better off than others" and "able to work towards and achieve your goals"; refer to Appendix A for the full list). As things that are valued, what society deems as important for happiness is likely to comprise things that confer social status on members of society who obtain them. For example, things like being rich or having a good education may be seen as ways in which one can be happy. Despite having a priori hypotheses on what is deemed as important for happiness on societal and non-societal levels, the present research adopts a data driven approach to categorize them, and an exploratory factor analysis was conducted to examine their factor loadings.

Results

Factor analysis. A principle axis factoring analysis was conducted on the responses to examine whether the loadings for the happiness items were as hypothesized. The Kaise-Meyer-Olkin (KMO) measure of sampling accuracy was .73, falling within the acceptable range, suggesting that the correlations between the items was appropriate for factor analysis. Over a few iterations, items with initial communalities of less than .30 were dropped. On the first iteration, five items ("outgoing and enjoyed the company of others", "religious", "a lot of

friends", "basic necessities", and "control over your outcomes") were excluded and the factor analysis was run again. On the second iteration, the initial communalities of two more items ("a lot of leisure time" and "positive sense of self-worth") fell below .30, and were excluded as well. On the third iteration, one more item ("married") was excluded. Subsequent iterations revealed that the initial communalities of the remaining items all fell within the moderate range (above .30).

As recommended by Fabrigar, MacCallum, Wegener, and Strahan (1999), factor extraction was determined by using the scree test and parallel analysis using eigenvalues from the reduced correlation matrix, giving rise to a two-factor solution. A principle axis factoring analysis with oblimin rotation (to allow for correlation between the factors) was then conducted specifying the extraction of two factors (refer to Appendix B for the factor loading matrix). Six items loaded onto Factor 1 and appeared to fit into the a priori hypothesized societal set with items such as "a lot of money" and "good job". Three items loaded onto Factor 2 and appeared to fit into the a priori hypothesized non-societal (personal) set with items such as "good health" and "family". The internal reliability of each set of items was examined using Cronbach's alpha, returning acceptable alphas of .77 for the societal set, and .70 for the non-societal set. Further elimination of items from any of the sets did not result in any substantial increases in alpha.

Happiness ratings. Composite scores were then created for each dependent measure (i.e. societal and non-societal sets) based on the results of the factor analysis. Higher scores indicated a higher level of self-rated happiness if they had that set of items in their life. Two separate independent samples *t*-test were conducted with condition (belongingness vs. differentiation) as the grouping

variable, and the societal and non-societal sets as the two separate dependent variables.

Participants in the belongingness condition were hypothesized to rate themselves as happier if they had things which corresponded with what society viewed as important for happiness than those in the differentiation condition. Results of the first t-test showed that contrary to expectations, participants in the belongingness condition ($M = 6.22$, $SD = .54$) did not rate themselves as happier if they had status items than did those in the differentiation condition ($M = 6.37$, $SD = .39$), $t(104) = 1.57$, $p = .12$. Happiness ratings on the non-societal set were not expected to differ between conditions. Results from the second t-test appeared to support this assertion, showing that happiness ratings on the non-societal set did not differ between the belongingness ($M = 6.50$, $SD = .88$), and the differentiation ($M = 6.52$, $SD = .52$) conditions, $t(104) = -.10$, $p = .92$.

Discussion

Study 1 examined the effects of the activation of belongingness and differentiation needs on the things individuals saw as important for happiness. Contrary to expectations, happiness ratings on societal items did not differ across conditions. Participants in the belongingness condition did not rate themselves as happier, if they had items which society deemed as important for happiness, than those in the differentiation condition. While the secondary hypothesis that happiness ratings on the non-societal (personal) items would not differ across conditions was supported, this null finding could be due to other reasons discussed below.

Reasons for the unsupported hypotheses can be threefold. Firstly, the failure to find the hypothesized results may be due to the sample size being too small to run an adequate factor analysis. According to recommendations made by Fabrigar and colleagues (1999), under conditions of moderate communalities (between .30 and .70) and overdetermined factors as per Study 1, a sample of 200 or more is advisable. This may have resulted in inflated error rates or unstable factor loadings. This limitation was addressed in Study 2 by recruiting more than 200 participants.

Secondly, actions taken to gain social approval and achieve personal goals may not always be mutually exclusive. An analysis of participants' responses revealed that at times, doing things which were socially approved did not necessarily conflict with their personal choices (and vice versa). For example, one participant wrote about how he went along with his groupmates' idea for a project, instead of pushing for his own, as he felt that it was somewhat similar to his. In this case, although he made a choice to gain social approval, it was not really in opposition to what he wanted to do in the first place. This may have weakened the effect of the activation of the need to belong. This limitation was addressed in Study 2 by adopting other manipulations to activate the need to belong and the need for differentiation.

Lastly, another reason for the null finding may be due to the nature of the dependent variable. Each person may have their own preconceptions of what can make them happy. Each time he or she engages in an action which bring them happiness, this definition of happiness is reinforced. Over time, these preconceptions of happiness may become difficult to shift. Study 2 thus examined

things which would make life complete, something which may be more subject to change.

Study 2

Study 2 aimed to address the limitations identified in Study 1. First, a different method of activating belongingness and differentiation needs was used. Research on the need to belong has used recalled social rejection to activate participants' need to belong (e.g. Knowles & Gardner, 2008; Maner, DeWall, Baumeister, & Schaller, 2007). For example, Maner and colleagues (2007) asked participants to write an essay about a time when they felt rejected and found that doing so gave activated the need to belong. In Maner et al.'s (2007) studies, this condition was contrasted with a social acceptance condition where participants wrote about a time when they felt accepted by others. As such, Study 2 used the recall of a social rejection to activate belongingness needs, and the recall of a social acceptance to activate differentiation needs. A third condition asking participants to recall a failure was also added to rule out the experience of negative affect as the driving force behind any observed pattern of results.

Study 2 also used a different dependent variable to highlight the effects of belongingness and differentiation needs. A pilot study was conducted to identify things that would make individuals' lives complete. As in the case of happiness, individuals are expected to have their own, easily accessible set of things which they deem as able to make their lives complete. At the same time, they should also be aware of what their society deems as important. When recalling a social rejection, and thus being motivated by the need to belong, the desire to fit in and be socially approved by others may increase the dominance of the societal set making them rate things corresponding to it as better able to make their lives complete. In contrast, when recalling a social acceptance, hence activating the need for differentiation, the desire to stand out and be different may increase the

dominance of the non-societal completeness of life set. However, as what is perceived as able to make life complete is likely to differ from individual to individual and as such, activating the need for differentiation may not result in a noticeable pattern of results.

With this in mind, participants in the *social rejection* condition were expected to rate their lives as more complete if they had things corresponding to the societal completeness of life set than those in the social acceptance and failure conditions. Completeness ratings of participants in the acceptance and failure conditions were not expected to differ. As in the case of Study 1, ratings of participants on the non-societal completeness of life set were not expected to differ across conditions

Methods

Pilot Study. To create a list of things are deemed important to make people's lives complete, a pilot study was conducted. Seventy-five participants in the US were asked to list down at least 10 things they felt were important in life and would make their life complete. A total of 808 items were generated (average of 10.77 per participant). Two raters then coded the responses into 27 separate categories (e.g. "friends" and "university education"), achieving an agreement rate of 80.20% (refer to Appendix C for the full list). All 27 categories were used as items for the completeness of life ratings.

Participants. Two hundred and twenty two participants were recruited from Amazon's Mechanical Turk (MTurk), an American crowdsourcing website that pays people to participate in online surveys. Past research using Amazon's MTurk has shown that the pool of participants it employs is representative of the

general population of the US, and meets psychometric standards associated with published experimental research (e.g. Buhrmester, Kwang, & Gosling, 2011). A total of 14 participants were excluded, three for describing instances of non-social instead of social rejection, two for describing instances of rejection instead of acceptance, six for describing instances of failure identical to social rejections, and three for describing instances of non-failure instead of failure, leaving a total of 208 (98 male; $M_{age} = 35.68$, $SD_{age} = 12.41$). The sample was ethnically diverse: 76.4% European American, 7.7% African American, 5.8 Latin American, 3.4 East Asian American, 2.4% South Asian, 1.4% Native American, 1% Middle Eastern American, and 2.9% others.

Measures and procedures. Participants were randomly assigned to either the social rejection, social acceptance, or failure conditions. After reading the informed consent form, participants were asked to recall and describe a time when they experienced rejection by others (vs. experiencing acceptance or a failure). Participants were then asked to rate to what extent they would feel that their life is complete if they had certain things.

Social rejection, social acceptance, and failure manipulations. In the *social rejection* condition, participants read the following: "think of a time when you felt that your behavior was not socially approved by others and when you did not feel a strong sense of belongingness with another person or group". In the *social acceptance* condition, participants read the following: "think of a time when you felt that your behavior was socially approved by others and when you did feel a strong sense of belongingness with another person or group". In the *failure* condition, participants read the following: "think of a time when you tried your best to accomplish something, but things did not go as planned, resulting in

you being unable to achieve your goal". Participants in all three conditions were asked to choose an especially important and memorable event and take the next five minutes to describe the recalled event in as much detail as they could. A fourth condition, recalling an instance of success was not included in the present research due to a technical fault.

Completeness of life ratings. After being exposed to the manipulations, participants were asked to rate the extent to which they would feel that their life is complete if they had certain things (1 = *extremely incomplete*, 7 = *extremely complete*). The list with all 27 categories described in pilot study was used as the dependent measure. As in the case of Study 1, what society views as important to make life complete were expected to comprise things that could confer social status on members of society who obtain them. Due to the large number of categories generated in the pilot study however, and insufficient theoretical grounds to split them on an a priori basis, an exploratory factor analysis was conducted to examine their factor loadings.

Results

Factor analysis. A principle axis factoring analysis was conducted on the responses to examine whether the loadings for the completeness of life items were as hypothesized. The Kaise-Meyer-Olkin (KMO) measure of sampling accuracy was .81, falling within the good range, suggesting that the correlations between the items was appropriate for factor analysis. Over a few iterations, items with initial communalities of less than .30 were dropped. On the first iteration, six items ("pets", "religion/faith in a higher power", "involved in a charity/helping others", "luxury goods", "basic necessities", and "free time/leisure/hobbies") were

excluded and the factor analysis was run again. On the second iteration, the initial communality of one more item ("car") fell below .30, and was excluded as well. On subsequent iterations, 4 more items ("home/house", "experience of travelling to many different places", "children", and "family") were excluded. After the exclusion of the above mentioned items the initial communalities of the remaining items all fell within the moderate range (above .30).

As in Study 1, factor extraction was determined by using the scree test and parallel analysis using eigenvalues from the reduced correlation matrix. While the scree test gave a two factor solution, the parallel analysis identified four factors. As past research has warned against underfactoring (e.g. Wood, Tataryn, & Gorsuch, 1996), the four and three factor solutions were first examined to see if they were interpretable. A principle axis factoring analysis with oblimin rotation specifying the extraction of four factors showed that only a single item ("university education") loaded onto the fourth factor. Likewise, an examination of the three factor solution showed that only a single item ("married/had a romantic partner") loaded onto the third factor. The four and three factor solutions were thus rejected, and the two factor solution examined.

An inspection of the two factor pattern matrix revealed a much clearer pattern, with seven items loading onto Factor 1, and seven items loading onto Factor 2. The items "loved/in love" and "married/had a romantic partner" did not load clearly onto any of the factors and were thus dropped from the rest of the analysis (refer to Appendix B for the factor loading matrix of the final solution). Factor 1 appeared to fit the a priori hypothesized non-societal completeness of life set, with items such as "freedom" and "good health". Factor 2 appeared to fit the a priori hypothesized societal completeness of life set, with items such as

"riches/wealth" and "well-paid job". The internal reliability of each set of items was examined using Cronbach's alpha, returning acceptable alphas of .77 for the societal set, and .82 for the non-societal set. Further elimination of items from any of the sets did not result in any substantial increases in alpha.

Completeness of life ratings. Composite scores were then created for each dependent measure (i.e., societal and non-societal completeness of life sets) based on the results of the factor analysis. Higher scores indicated a higher self-rated sense of completeness if they had that set of items in their life. Two separate one-way ANOVAs were conducted with *condition* (i.e., social rejection, social acceptance, and failure) as the factor, and the societal and non-societal completeness of life sets as the two separate dependent variables.

Participants in the social rejection condition were hypothesized to rate their lives as more complete if they had things which corresponded to the societal completeness of life set. Results of the first one-way ANOVA appeared to provide marginal support for this hypothesis, revealing a marginally significant effect of condition, $F(2, 205) = 2.81$, $p = .06$. However, post hoc analyses using the Bonferroni correction revealed that contrary to expectations, participants in the social rejection condition ($M = 5.44$, $SD = .65$) did not rate their lives as more complete if they had societal completeness of life items than did those in the social acceptance ($M = 5.41$, $SD = .78$) and failure ($M = 5.67$, $SD = .69$) conditions, $p = 1.00$ and .16 respectively. Ratings on the non-societal completeness of life set were not expected to differ across conditions. Results from the second one-way ANOVA appeared to support this assertion, showing that ratings on the non-societal completeness of life set did not differ between conditions, $F(2, 205) = .58$, $p = .56$.

Discussion

Study 2 addressed two limitations identified in Study 1 by changing the manipulations and dependent variable, seeking to identify the effect of the activation of the need to belong and the need for differentiation on participants' ratings of completeness of their lives if they had certain things. Contrary to expectations, participants in the belongingness condition did not rate their lives as more complete if they had items which conferred societal status than those in the differentiation, and failure conditions. While the secondary hypothesis that completeness ratings on non-status items would not differ across conditions was supported, again this null finding must be interpreted with caution in light of the failure to find an effect of condition on ratings of status items. Possible limitations and reasons for failing to find the predicted pattern of results as well as a more general evaluation of the theoretical grounds and limitations of the present research are discussed in detail in the next section.

General Discussion and Conclusion

Across both studies, results failed to support the hypothesis that priming belongingness needs shifts what one sees as important in the direction of what society views as important. In Study 1, asking participants to recall a time when they chose a course of action that enabled them to gain social approval from others vs. when they chose to do what they wanted did not seem to affect their ratings of how happy they would be if they had items corresponding to what society viewed as important for happiness. In Study 2, asking participants to recall a time when they experienced a social rejection vs. recalling a social acceptance or failure did not seem to affect their ratings if they had societal complete of life items. The failure to find support for the hypotheses could be due to a number of reasons.

Firstly, the recall of events may not have given rise to the intended motivations. In the social rejection condition, the desire to reconnect may not have been the only motivation being primed. Instead, some participants may have been primed to respond aggressively. A content analysis of participants' descriptions of their recalled social rejection revealed that out of the 72 participants in the social rejection condition, 19 (26.4%) of them reported feeling emotions such as anger, frustration, and annoyance when they experienced the rejection. Indeed, research on behavioral reactions to social rejection has shown that at times participants who were socially excluded behaved in an anti-social manner and lashed out at others (Chow et al., 2008; Twenge et al., 2001; Van Beest & Williams, 2006). According to Gere and MacDonald (2010), this paradoxical reaction to social rejection can occur when the rejected individual is not provided with an opportunity for meaningful social reconnection (as was the

case in the present research). As such, participants who recalled a social rejection may not have been primed with the need to belong as originally intended.

In addition, the failure condition may have primed motives similar to the social rejection condition. A number of the failure experiences described may inherently involve aspects of socially rejection. For example, some participants wrote about being passed up for a promotion, or failing to land a job. These experiences are likely to contain elements of being socially rejected, and as such, may have given rise to belongingness needs as well. This may explain why ratings on societal completeness of life items did not differ between the social rejection and failure conditions.

Next, the societal completeness of life items may have been accessible to participants in the social acceptance condition as well. Although the present research used social acceptance as a comparison group to prime differentiation needs in line with past research on the need to belong (e.g. Knowles & Gardner, 2008; Maner et al., 2007), the nature of the dependent variable it examines may have given rise to confounding effects not seen in other studies. Indeed, past research on cognitive reactions to belongingness needs has focused on discrete effects such as better memory for social events and greater attention to social cues (Gardner et al., 2005; Pickett et al., 2004). The present research however, examines the accessibility of things valued by society, which can be influenced by relatively distal cognitions. It is possible that recalling an instance of social acceptance increased the accessibility of social connections in general, and by spreading activation, led to the increased accessibility of things valued in society as well. This may explain why ratings on societal completeness of life items did not differ between the social rejection and social acceptance conditions.

Another possible limitation of the present research is that the happiness and completeness of life items may not fit into the societal and non-societal two factor solution as proposed. For example, the non-societal factor was discussed in terms of what each individual viewed as important for happiness or completeness of life. These idiosyncratic differences make it unlikely for the non-societal items to fall neatly onto a factor as seen in the factor analyses. As such, the naming of the two factors as "societal" and "non-societal" may not be the most fitting.

In addition, the present research does not differentiate between things which are necessary and those which are sufficient for happiness or viewing life as complete. This is an important distinction as while the absence of some things may cause unhappiness (people to view their lives as incomplete), having them may not be a sufficient condition for happiness (completeness of life). For example, while research has shown income to be a consistent and robust predictor of happiness (e.g. Diener, Diener, & Diener, 1995), other research showed that this was only true up to a certain level (Schyns, 1998), suggesting that having a good income may be necessary, but not sufficient for happiness. Future research should differentiate more closely between the two.

Lastly, the present research also posited that things valued by individuals would somewhat differ from things valued by society. However, it is possible that individuals may have, to a certain extent, internalized society's values, and as such, view the same things as important to them. Evidence for this can be found by examining the responses to a question included in Studies 1 and 2 asking participants what percent of Singaporeans (Study 1) and Americans (Study 2) would agree with their ratings of happiness and things which would make their lives complete. Analyses of descriptive statistics showed that participants in both

studies felt that a significant proportion of their fellow countrymen would agree with their ratings on both the status and non-status sets of items. Specifically, in Study 1, 97.1% of the participants felt that more than 50% of Singaporeans would agree with their ratings on the societal happiness items, ($M = 77.7$, $SD = 10.6$), while 99% felt that more than 50% of Singaporeans would agree with their ratings on the non-societal happiness items, ($M = 79.5$, $SD = 10.7$). In Study 2, 88.4% of the participants felt that more than 50% of Americans would agree with their ratings on the societal completeness of life items ($M = 67.8$, $SD = 14.6$), while 90.6% felt that more than 50% of Americans would agree with their ratings on the non-societal completeness of life items ($M = 68.1$, $SD = 13.5$). Taken together, it is plausible that what participants valued and what their societies valued did not differ much to begin with. This may explain why happiness and completeness of life ratings did not differ across conditions. Perhaps, things that are valued are all societal in nature, and idiosyncratic differences lie in the pathways to achieving these societal goals instead. Future research can try to identify whether belongingness and differentiation needs are able to change the pathways individuals take to achieve important goals.

Taken together, it is thus important for future research to ensure that the manipulations employed give rise to the targeted motivations. Another commonly used paradigm to prime social exclusion leads participants to believe that they were facing a future alone, a future with rewarding relationships, or a future with misfortunes (e.g. Baumeister et al. 2002; 2005). However, priming social exclusion this way may also give rise to aggressive motivations as shown by research conducted by Twenge and colleagues (2001). In order to isolate the

effects of social exclusion, future research should then focus on how social exclusion can be primed without invoking aggression related motives.

In conclusion, the present research attempted to extend on existing research on the need to belong by examining its impact on cognition in the form of shifting what individuals value in life. Although support for the hypotheses was not found, it may be due to difficulties in isolating the effects of the belongingness manipulation. If properly primed and its effects suitably isolated, the need to belong may be shown to have far reaching consequences on how individuals interact with their environment.

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Appendix A

Happiness ratings items

S/N	Items
1	Good income
2	Good job
3	A lot of money
4	House
5	Good education
6	Better off than others
7	Good Health
8	Able to work towards and achieve your goals
9	Family
10	A lot of friends
11	Basic necessities
12	Married
13	Control over your outcomes
14	A lot of leisure time
15	Positive sense of self-worth
16	Outgoing and enjoyed the company of others
17	Religious

Appendix B

Factor loadings based on principle axis factoring analysis with oblimin rotation for happiness rating items

Items	Societal set	Non-societal set
Good income	**.74**	.07
Good job	**.73**	-.15
A lot of money	**.69**	-.06
House	**.50**	.26
Good education	**.47**	.21
Better off than others	**.46**	.00
Good Health	-.08	**.84**
Able to work towards and achieve your goals	.00	**.67**
Family	.09	**.53**

Appendix C

Completeness of life ratings items

S/N	Items
1	Freedom
2	Good health
3	Peace
4	Happiness
5	Friends
6	Physically safe
7	Fulfil goals
8	Involved in a charity/helping others
9	Children
10	Family
11	Religion/faith in a higher power
12	Basic necessities
13	Married/had a romantic partner
14	Loved/in love
15	Pets
16	Free time/leisure/hobbies
17	Riches/wealth
18	Career progression
19	A lot of achievements
20	Financial security
21	Enjoyable job
22	University education
23	Well-paid job
24	Experience of traveling to many different places
25	Car
26	Luxury goods
27	Home/house

Appendix D

Factor loadings based on principle axis factoring analysis with oblimin rotation for completeness of life items

Items	Non-societal set	Societal set
Freedom	**.78**	-.06
Good health	**.70**	-.01
Peace	**.67**	-.04
Happiness	**.65**	-.01
Friends	**.62**	.00
Physically safe	**.53**	.06
Fulfil goals	**.48**	.12
Riches/wealth	-.13	**.68**
Career progression	.03	**.64**
A lot of achievements	-.05	**.61**
Financial security	.18	**.58**
Enjoyable job	.16	**.55**
University education	-.04	**.45**
Well-paid job	.20	**.44**