Relating Self-Complexity to Coping and Adaptation with Chinese College Students: A New Measurement Perspective

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Research into self-complexity has been hampered by problems with its measurement. The present study was designed to test the generality of Western findings about self-complexity and improve the measurement and our understanding of this construct by examining the relationships of four measures of self-complexity to coping and psychological adaptation with 347 Chinese college students. A new measure, the Self-Complexity Task was developed to obtain the number of self-aspects and the average distinction among self-aspects separately, and was employed in parallel to Linville's *H* measure as the overlap among self-aspects in terms of their descriptive traits. As found in Western cultures, the positive correlation between the *H* statistic and overlap supports the position that *H* is not an appropriate measure of self-complexity. Among the four measures, the average distinction is the most powerful indicator of self-complexity in terms of its relationship with coping and adaptation variables in the sample of Chinese college students. Although higher average distinction implies the use of more effective coping strategies, it may be the latter which directly affects adaptation in the long run. Implications of these findings are discussed for future research of self-complexity from a cross-cultural perspective.

Although considerable evidence suggests that stressful life events have an impact on well-being level, their correlations are often low to moderate (Elliott & Eisdorfer, 1982; Schroeder & Costa, 1984). In response to this, stress investigators have proposed different moderating variables characterizing individual differences in vulnerability to stressors, such as coping efforts (e.g., Folkman, Lazarus, Gruen, & DeLongis, 1986), social support (e.g., Cohen & Wills, 1983), and personality (e.g., McCrae & Costa, 1986). In recent years, the structural feature of the self has been addressed by many self researchers (e.g., Campbell, Trapnell, Heine, Katz, Lavellee, & Lehman, 1996; Marsh & Hattie, 1996) not only because of its importance in examining self processes, but also because of its adaptation consequences. The structure of the self describes how the knowledge components of the self are organized (Campbell et al., 1996). In the last two decades, a variety of structural variables have been proposed from different perspectives to describe the structural characteristics of the self. Among these variables, self-complexity (Linville, 1985; 1987) has received much attention in both social and clinical psychology for its presumed coping benefits.

According to Linville (1985, 1987), people with similar actual experiences may differ in the number of aspects they use in thinking about the self and in the way they cognitively organize these aspects about their relationships. "Greater self-complexity involves representing the self in terms of a greater number of cognitive self-aspects and maintaining greater distinctions among self-aspects" (Linville, 1987, p. 663). Linville's (1985; 1987) self-complexity model assumes that when people experience a stressful situation the thoughts and feelings evoked by this stressful experience about the most relevant self-aspect will spill over and color the thoughts and feelings about associated self-aspects. As a consequence, for those high in self-complexity, "the impact of a stressful event will tend to be confined to immediately relevant self-aspects, thus affecting a relatively small part of their self-representation and leaving many other self-aspects to serve as buffers against the stressful event" (Linville, 1987, p. 665).

Most studies of self-complexity measured this construct using the trait-sorting task developed by Linville (1985, 1987). In Linville's trait-sorting task, participants were supplied with

a list of 33 cards with a feature in each card, such as 'individualistic', 'organized', etc. They were then instructed to select and organize self-relevant traits into groups, each group representing one aspect of the self. When doing this task, participants could create as many groups as they wanted, they could omit irrelevant cards, and they could repeat using the same cards to describe different aspects if necessary.

The sorted data of each participant were then translated into the self-complexity measure H, which is calculated in the following way:

$$H = \log_2 n \quad (\bullet \ n_i \log_2 n_i)/n \tag{1}$$

Wherein, n is the total number of traits (33 in Linville's case), and n_i is the number of traits that appear in a particular group combination ($n = \bullet \ n_i$) (see Linville, 1987, p. 666, for a more detailed explanation).

According to Linville (1985; 1987), the single H statistic is a combined measure of both components of self-complexity: the larger the number of self-aspects and the less the overlap or redundancy across self-aspects, the larger is the H statistic. However, some researchers have found that the relationship between overlap and H is contrary to this expectation. For example, Rafaeli-Mor, Gotlib, and Revelle (1999) analyzed the relationship of the H statistic to the number of self-aspects formed in the trait sorting task (*NASPECTS*) and the overlap among self-aspects (*OL*) calculated as follows. In effect, *OL* is the average ratio of the number of common traits between each two self-aspects to the number of endorsed traits in each self-aspect.

$$OL = \bullet_i (\bullet_j C_{ij}/T_i)/k*(k \quad 1) \tag{2}$$

Wherein C_{ij} is the number of common traits in the ith and j[th] aspect, T_i is the total number of traits in the ith referent aspect, i is not equal to j (i, j = 1,..., k), and k is the number of self-aspect groups in a person's sort.

Rafaeli-Mor et al. (1999) found that although H was positively correlated with *NASPECTS* ($r = .71$), it was also positively correlated with *OL* ($r = .24$), which was contradictory to Linville's prediction. The positive relationship between H and *OL* was replicated by Luo and Watkins (2008, $r = .43$). In response to the problem in the H measure, some researchers suggest that the two components of self-complexity be assessed separately in order to better understand their mechanisms as a stress buffer (e.g., Luo & Watkins, 2008; Lutz & Ross, 2003; Rafaeli-Mor et al., 1999; Rafaeli-Mor & Steinberg, 2002).

Rather than using overlap based on the trait-sort data as a measure of the distinction component, some researchers assess it through a direct rating method. As noted above, Linville's self-complexity focuses on the cognitive representation of the self and the distinction component describes the cognitive distinctiveness among different self-aspects. To study the perceived distinctiveness, Evans (1994) used a self-report method to directly assess the cognitive independence among different self-aspects. In Evans' Self-Complexity Inventory (1994), there were eight scenarios, depicting stressful experiences in various domains, e.g., failing a test that one has studied hard for. Participants were instructed to imagine the situation in each scenario, and indicate, along a three-point scale, the degree to which they would be affected in each of the eight domains. It should be noted that this measure taps only the second component of Linville's self-complexity. Although these preset self-aspects are commonly important areas, some of them may not be relevant to all subjects, especially those from different cultures (Watkins & Regmi, 1999). However, the Self-Complexity Inventory supplies a direct way to measure the perceived "spill-over" degree among life domains. The less the spill-over, the smaller portion of the whole self is changed, and thus the unaffected self-aspects can act as buffers against stressful life events.

Combining Linville's trait-sorting task and Evans's Self-Complexity Inventory, a Self-Complexity Task was developed by the authors to measure the two components of self-complexity separately. Except for the number of self-aspects (*NASPECTS*) and the average distinction among self-aspects (*DIST*), Linville's H statistic and the overlap among self-aspects in terms of their descriptive traits (*OL*) can also be obtained by this task. Therefore, by using this new measure, we can examine both the inter-relationships among these different self-complexity

measures and also their relations to other external variables. Linville (1987) proposed that people high in self-complexity cope more successfully with stressful events than do those low in self-complexity, so coping strategies and psychological adaptation were concerned in the current study. In particular, this study investigated the relationships among the four self-complexity measures, and their relationships with coping strategies, coping effectiveness, and psychological adaptation with a sample of Chinese college students.

Although a number of studies in the literature have examined the relationship of self-complexity with adaptation, partly due to the problems in the *H* measure, the results are inconsistent (for reviews, see Koch & Shepperd, 2004; Rafaeli-Mor & Steinberg, 2002). Is *H* also problematic with Chinese respondents? Despite the difference in self-construals between Western and Eastern cultures (Markus & Kitayama, 1991; Triandis, 1989), we predicted that the *H* statistic would also be problematic for Chinese college students. In particular, based on the findings of previous research, it was expected that *H* would be positively correlated with both the number of self-aspects and the overlap among self-aspects in terms of the traits describing them. In addition, it is reasonable to infer that people can have high average distinction among self-aspects no matter how many aspects are represented in their self-structure. Therefore, we expected that the average distinction would be relatively independent of the number of self-aspects, or there was a modest correlation between them.

It was assumed that these four self-complexity measures would show different relationships with coping and adaptation. As analyzed above, the single *H* statistic could not assess self-complexity as conceptualized by Linville (1985; 1987). In addition, the number and the distinction components of self-complexity might not have the same adaptation consequences. Although Linville (1987) addressed that self-complexity only had stress-moderating effect, in the present study, we expected that regardless of the number of self-aspects, the distinction averaged across all self-aspects would be directly associated with psychological well-being. Moreover, we also expected that the average distinction would be more important for people in Chinese culture than in Western cultures because the self-views of people in collectivistic cultures tend to be more situation specific in order to fit in and maintain harmonious interdependence with others (Markus & Kitayama, 1991; Triandis, 1989).

Method

Participants

Three hundred and fifty Chinese university students (273 freshmen, and 77 sophomores) participated in this study. These participants (112 males and 238 females) were aged from 17 to 23 years, with a mean of 19.74 (*SD* =1.01).

Measures

Self-complexity. The Self-Complexity Task included two subtasks: a trait-sorting subtask, and a distinction rating subtask. It should be noted that the self-aspects to be rated in the latter subtask were generated in the trait-sorting subtask, rather than preset by researchers.

The trait-sorting subtask was similar to that of Linville's (1987), while the trait list was generated by Chinese college students themselves through a pretest procedure to make it more culturally appropriate for Chinese respondents. One hundred and seventy-nine undergraduates (94 females and 85 males) from two universities in Mainland China were invited to generate adjectives to describe their typical characteristics. Then, a trait list was developed by selecting traits based on three criteria: the frequency, the valence (positive or negative) and the correspondence of each word to big five personality factors (Costa & McCrae, 1992). The words were generally categorized into five classes corresponding to the five personality factors in order to avoid that synonymous words were chosen and assure that the trait list could cover all the five factors. Unlike Linville (1987) who used 33 traits with a 2÷1 ratio of positives to negatives, a list of 44 traits with 22 positives and 22 negatives was established so that participants could have more negative words to form groups if necessary. Examples of the traits include responsible,

righteous, kind, peacockish, lazy, introvert and so on.

The distinction rating subtask directly measured the "spill-over" degree among self-aspects as explained by Linville (1985; 1987): the less the spill-over of thoughts and feelings evoked by a stressor from the most relevant self-aspect to other self-aspects, the smaller is the change of the whole self, and as a consequence, the larger number of unaffected self-aspects will act as buffers against the stressful life event. To measure the distinction component, Evans (1994) had participants imagine a negative scenario for each self-aspect and rate the change of other aspects in the negative direction; in contrast, participants in the distinction rating subtask were instructed to think about a situation when either positive or negative happenings occurred and resulted in the change of their self-evaluation of one aspect, and rate the general change of their feelings about each of all the other self-aspects. The rating was based on a 5-point scale, ranging from 1, no change at all, to 5, as much change as the referent aspect. The following is the English version of the instructions obtained by translating and back translating the original Chinese instructions.

> For some people, all the aspects in their life are closely associated, and if their feelings about one aspect have changed because of positive or negative happenings, their self-evaluation on other aspects will be much influenced. For example, when they encounter some setback or achieve some achievements in their study or job, their self-evaluation in family life and interpersonal interactions will be influenced a lot. For other peoples, all the aspects in their life are not closely associated, and the change of self-evaluation on one aspect will not much affect their self-evaluation on other aspects either.
>
> As to the aspects you have just generated, imagine that your self-evaluation on one aspect is changed because of some positive or negative happenings, and then point out the degree to which your self-evaluation on other self-aspects will also be changed.
>
> If your self-evaluation on the following aspect has changed because of some positive or negative happenings, will your self-evaluation on each of the other aspects be changed? And by how much will they be changed? Please rate the degree of the change in each of the other aspects on the following 5-point scale, ranging from 1= no change at all, to 5 = as much change as the referent aspect.

Each self-aspect was taken as the referent aspect once, and the change on all other aspects was rated. A computer program was designed to administer the two subtasks, with the self-aspects generated in the trait-sorting subtask automatically read into the distinction rating subtask. This program also made the calculation of the four measures of self-complexity very convenient. *NASPECTS* was the number of self-aspect groups generated in the trait-sorting subtask; *DIST* was indicated as the average distinction score between all the idiosyncratic self-aspects generated by each individual. *DIST* was formulated as follows:

$$DIST = \sum_{i}^{k} \sum_{j}^{k} X_{ij} / k(k-1) \qquad (3)$$

Here, k is the number of self-aspect groups, and X_{ij} is 6 (for a 5-point scale) minus the change score on the jth self-aspect when the ith referent self-aspect is changed (i and j are unequal). The higher the *DIST* score, the larger is the average distinction among self-aspects.

Based on the "0, 1" sort matrix obtained in the trait-sorting subtask, the *H*-Comp program of Nielsen (1996) was used to compute the *H* statistic and another self-designed program was used to calculate the overlap value as defined by Rafaeli-Mor et al. (1999).

Coping. Through the back-translation procedure, a Chinese version of the brief COPE (Carver, 1997) was obtained to measure the use and perceived effectiveness of 14 coping strategies: Active Coping, Planning, Positive Reframing, Acceptance, Humor, Religion, Using Emotional Support, Using Instrumental Support, Self-Distraction, Denial, Venting, Substance Use, Behavioral Disengagement, and Self-Blame. To measure coping use, participants were instructed to rate the frequency of each coping effort they usually use when experiencing stressful life events in their daily life on a 5-point scale, ranging from 0 (never) to 4 (a lot). The use score of each coping strategy was obtained by dividing the sum use score of each coping strategy by the total use score

for all 14 coping efforts. To assess coping effectiveness, participants were asked to rate whether they had ever adopted each coping strategy and if so, the general effectiveness of each strategy for them to reduce stress and solve problems on a 5-point scale, with 0 indicating never used, and 1 to 4 indicating no use to very helpful. Each coping mechanism was given an effectiveness weight by its average effectiveness score. Then the overall coping effectiveness index was formed by dividing the weighted use score by the total use score.

Psychological adaptation. Psychological adaptation was represented with four well-being variables in this study: global self-esteem, depression, loneliness, and perceived stress. The Chinese version (Robinson, Shaver, & Wrightsman, 1997) of the Rosenberg Self-Esteem Scale (SES, Rosenberg, 1965) was used to measure global self-esteem. The Chinese version (Wang, Wang, & Ma, 1999) of the Self-Rating Depression Scale (SDS, Zung, 1965) was employed to tap the frequency that depression occurred in the latest two weeks. The 1988 third version of the UCLA Loneliness Scale (Russell, 1982; Russell, Peplau, & Cutrona, 1980) was translated into Chinese (Wang et al., 1999), and it was adopted to measure loneliness perceived in the last two weeks. To measure perceived stress in this study, Li's (2002) College Stress Scale was modified. This scale was designed to assess the perceived stress of Chinese college students resulting from both hustle and negative life events, including academic hustle (10 items), personal hustle (16 items) and negative life event (4 items). Before using this scale in the current study, ten items adopted from Adolescent Self-rating Life Events Check List (Liu et al., 1997) tapping negative life events perceived by college students were added.

Results

Three of the 350 cases with the largest three values on *OL* (.85, .73, and .70, respectively) were deleted to reduce the skewness (from 1.29 to 1.00) and kurtosis (from 2.24 to .94) of its distribution. With the three outliers deleted, the skewness and kurtosis of all the other three measures were less than .80. Across the remaining 347 cases, the number of self-aspects ranged from 2 to 13, with a mean of 6.18 (*SD* = 1.99), the average distinction (*DIST*) ranged from 1.92 to 5.00 with a mean of 3.64 (*SD* = .63), overlap (*OL*) ranged from .00 to .63 with a mean of .18 (*SD* = .13), and the *H* statistic ranged from .79 to 5.32 with a mean of 2.90 (*SD* = .79).

With the remaining 347 cases, internal consistency estimates (Cronbach's α) for the coping strategies and the effectiveness scales were excessively calculated, as each subscale is consisted of only two items. These estimates ranged from .49 to .93 across the 14 coping strategies, and for the effectiveness scales they ranged from .61 to .94. Since there are only two items in each subscale, these internal consistency estimates are acceptable. Satisfactory internal consistency coefficients for the four well-being inventories were obtained with Cronbach's α values of .87, .78, .90, and .94 for scales of self-esteem, depression, loneliness and perceived stress, respectively.

As shown in Table 1, there was a high correlation between *NASPECTS* and *H* (*r* = .68), and a positive correlation between *OL* and *H* (*r* = .39). The relationship between *H* and *OL* is also portrayed in Figure 1and follows an inverted U-like curve and not a linear function. Curve estimation showed that a quadratic model [$H = (1.04\ OL) - (.69\ OL^2)$, $R^2 = .21$] fitted the data significantly better than a linear model [$H = (.39\ OL)$, $R^2 = .15$]. In addition, there was a modest positive correlation between *NASPECTS* and *DIST* (*r* = .24).

The number of self-aspects was only slightly associated with Religion (*r* = .11), and it was not significantly correlated with overall coping effectiveness (see Table 1). *DIST* was significantly correlated with the use of 6 of 14 coping strategies: Planning (*r* = .18), Positive Reframing (*r* = .31), Acceptance (*r* = .19), Denial (*r* = −.14), Behavioral Disengagement (*r* = −.12), and Self-Blame (*r* = −.22); it was also positively correlated with overall coping effectiveness (*r* = .24). A stepwise linear regression was then conducted with *DIST* as a criterion variable, and the use of the 14 coping strategies as predictors. It was found that three coping strategies entered the regression equation to positively predict *DIST* and explained 12.8 percent of the variance: Positive Reframing (9.5%), Acceptance (1.8%), and Humor (1.5%).

OL was significantly correlated with 3 of the 14 coping strategies: Active Coping (*r*=.13),

Planning (*r*=.12), Self-Distraction (*r*=–.13); *H* was weakly correlated with Self-Distraction (*r*=–.14) and Behavioral Disengagement (*r*=–.11). Neither *OL* nor *H* was significantly correlated with overall coping effectiveness.
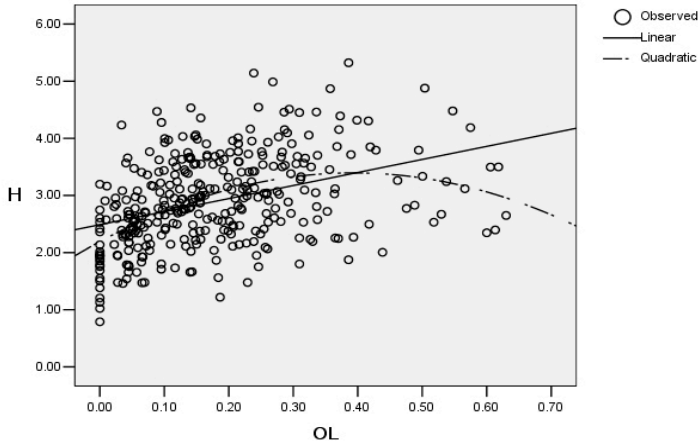

Figure 1. Relationship between *H* and *OL*.

Table 1. Correlations among Self-Complexity measures, Coping Use and Overall Coping Effectiveness

	NASPECTS	*DIST*	*OL*	*H*
NASPECTS		.24***	–.09	.68***
DIST			–.06	.08
OL				.39***
Active Coping	.03	.03	.13*	.03
Planning	–.00	.18***	.12*	.01
Positive Reframing	.06	.31***	.03	–.01
Acceptance	.01	.19***	.03	–.07
Humor	.06	.09	.04	.07
Religion	.11*	–.07	.03	.10
Emotional Support	–.02	–.10	.02	.06
Instrumental Support	.01	.03	–.00	.05
Self-Distraction	–.10	–.05	–.13*	–.14*
Denial	–.05	–.14**	–.03	–.04
Venting	–.01	–.06	–.03	.03
Substance Use	–.01	–.09	–.03	.02
Behavioral Disengagement	–.06	–.12*	–.09	–.11*
Self-Blame	–.09	–.22***	–.06	–.05
Overall Coping Effectiveness	.06	.24***	.09	.04

Note. * *p* < .05, ** *p* < .01, *** *p* < .001.

As presented in Table 2, *DIST* was correlated with all the four well-being variables: high *DIST* was associated with high self-esteem (*r* = .23), low depression (*r* = –.22), low loneliness (*r* = –.18), and low perceived stress (*r* = –.31). None of the other three self-complexity measures was significantly correlated with any well-being variable.

Because overall coping effectiveness was significantly correlated with the four well-being variables (*r* coefficients were .60, –.57, –.45, and –.31 with self-esteem, depression, loneliness and perceived stress, respectively), it was controlled for to examine the unique relationships of the four self-complexity measures with psychological well-being. As shown in Table 2, after controlling

for overall coping effectiveness, the correlation of *DIST* with self-esteem, depression and loneliness was substantially reduced; however, a quite noticeable correlation ($r = -.25$) between *DIST* and perceived stress was remained.

Table 2. Correlations between the Four Measures of Self-Complexity and Psychological Well-Being Variables

	NASPECTS	*DIST*	*OL*	*H*
Zero-order correlations				
self-esteem	.09	.23***	.10	.09
depression	−.07	−.22***	−.07	.00
loneliness	−.03	−.18***	−.04	.01
perceived stress	−.01	−.31***	−.05	.05
Partial correlations after controlling for overall coping effectiveness				
self-esteem	.06	.11*	.06	.09
depression	−.05	−.10	−.02	.03
loneliness	.00	−.08	.01	.03
perceived stress	.01	−.25***	−.02	.06

Note. * $p < .05$, *** $p < .001$

Discussion

Researchers' interest in self-complexity mainly stems from its presumed consequence of adaptation, that is, people with high self-complexity can better cope with stress in their life and thus can fare better. However, studies exploring the relationship between self-complexity and well-being have yielded inconsistent results (for reviews, see Koch & Shepperd, 2004; Rafaeli-Mor & Steinberg, 2002). According to some researchers, this inconsistency is partly due to the problems in the *H* measure, which cannot properly assess the distinction component of self-complexity (e.g., Locke, 2003; Rafaeli-Mor et al., 1999). Therefore, a more appropriate measure of self-complexity is needed before further empirical studies being conducted in this area.

As suggested by some researchers (e.g., Lutz & Ross, 2003; Rafaeli-Mor et al., 1999; Rafaeli-Mor & Steinberg, 2002), rather than employing the single statistic *H* to represent self-complexity, the current study designed a new measure, namely the Self-Complexity Task to assess the two components of this construct separately. The number of self-aspects was represented as the number of groups formed in the trait-sorting subtask. The average distinction was assessed by having participants report the perceived "spill-over" degree among self-generated aspects in the distinction rating subtask. By using this new measure, Linville's *H* statistic and the overlap among self-aspects in terms of their descriptive traits were also obtained.

The positive relationship between Linville's *H* statistic and overlap replicated that found in previous studies (e.g., Luo & Watkins, 2008; Rafaeli-Mor et al., 1999). More specifically, the relationship between *H* and overlap was like an inverted U curve, but because most overlap values were relatively small ($M = .18$), the general relationship between them was positive. This result provides additional support for the position that *H* is problematic as a measure of Linville's conceptualization of self-complexity (Locke, 2003; Rafaeli-Mor & Steinberg, 2002). As argued by Rafaeli-Mor (Rafaeli-Mor et al., 1999; Rafaeli-Mor & Steinberg, 2002), there is actually a mismatch between the *H* statistic and the theoretical model underlying Linville's conceptualization of self-complexity. The *H* statistic is used to describe the complexity of knowledge structure within a multidimensional model. Obtained in the trait-sorting task, the *H* statistic is directly determined by the redundancy among traits, rather than among self-aspects; for a specific number of self-aspects, the *H* statistic will arrive at its maximum when any two self-aspects are all half overlapped in terms of their descriptive traits (see Luo, Watkins, & Lam, 2008, for more detailed analysis of the *H* statistic). In contrast, the two components of Linville's self-complexity are better understood as within a categorical model –the number of categories and the distinction among the categories– and thus better examined separately. The low correlation between the number of self-aspects and the average distinction found in the current study indicates

that the two components are relatively independent with each other.

In the literature, few studies have attempted to examine the relationship between self-complexity and coping. One exception was given by Miller, Omens, and Delvadia (1991), which reported non-significant relationships between the 14 coping styles measured by the COPE Scale (Carver, Scheier, & Weintraub, 1989) and self-complexity indicated by the *H* statistic. In the present study, compared with the other three measures which were only correlated one or two coping strategies very weakly, the average distinction was correlated with the use of 6 of the 14 coping strategies, and only the average distinction was significantly correlated with overall coping effectiveness. In combination with the result of further regression analysis, it was shown that among all the coping strategies Positive Reframing was the most powerful predictor of the average distinction. This can be understood by an inspection into what this scale measures. The two items measuring Positive Reframing were "I try to see it in a different light, to make it seem more positive" and "I look for something good in what is happening." With this positive thinking, the perceived stress activated by a stressful event will be reduced and localized to some degree, and the adverse impact of the stressful situation on psychological well-being will be moderated. As defined by Linville (1985; 1987), the average distinction is also a cognitive variable about the differentiation among self-aspects: with a large average distinction among self-aspects, the thoughts and feelings evoked by a stressful happening will also be constrained and reduced, and thus the adverse impact of this stressful situation on adaptation will be buffered. The other two coping strategies which entered the regression equation were Acceptance and Humor possibly because both of them also required participants to adjust their cognition to be more positive about stressful life events. In general, both high cognitive distinction among self-aspects and these three coping methods may help cognitively minimize, rather than overgeneralize, the stressful feelings evoked by a stressful life event, and thus, have adaptation benefits. In conjunction with the positive correlation between average distinction and overall coping effectiveness, these findings indicate that people with higher average distinction among self-aspects tend to cope more effectively with stressors by using cognitive coping strategies.

Among the four self-complexity measures, only the average distinction was significantly correlated with the four psychological well-being variables. This correlation suggests that people with high average distinction among self-aspects tend to have relatively high adaptation level. However, when overall coping effectiveness was held constant, the correlations of the average distinction with self-esteem, depression and loneliness, the three relatively chronic well-being variables, were substantially attenuated. The correlation between the average distinction and perceived stress, however, could not be accounted for by the overall coping effectiveness. Our tentative explanation of these results is that although people with high self-complexity may use more effective coping strategies and perceive less stress in their daily life, in the long run, it is the coping strategies used to cope with stressful situations that directly affect psychological adaptation. Further studies, especially those with longitudinal designs, are warranted to examine this proposal.

In sum, compared with the other three measures, the average distinction showed stronger relationships with coping and psychological well-being. Between the two components of self-complexity –the number of self-aspects and the average distinction, the latter was a relatively more powerful indicator of self-complexity, which was correlated with the use of six coping strategies, the overall coping effectiveness and all the four well-being variables. The more self-aspects in life, the more internal resources may be needed to meet the demands in different self-aspects. Therefore, although a large number of self-aspects may act as a buffer against a single significant life event, in the long run, the number of self-aspects might indicate a balance between situational demands and personal resources. However, with a large average distinction among self-aspects, the thoughts and feelings evoked by stressful life events in any life domain will be constrained to a small portion of the whole self, leaving a large number of unaffected self-aspects to act as buffers against these life events. Therefore, in the long run, it will be directly associated with psychological well-being. This direct association between the average distinction and psychological well-being has been reported by Evans (e.g., Evans, 1994; Evans & Seaman,

2000)

Relative to overlap, the average distinction might be a more appropriate measure of self-complexity. Overlap obtained in the trait-sorting task describes the similarity across self-aspects in terms of their descriptive traits. However, as noted by Koch and Shepperd (2004), the possession of inconsistent traits in different roles or situations may not truly represent the meaning of high cognitive distinction inherent in the conceptualization of self-complexity. Although some researchers posited that the overlap should reflect the integrity instead of the differentiation of self-structure (e.g., Lutz & Ross, 2003; Rafaeli-Mor & Steinberg, 2002), overlap did not show adaptation consequence of well-being in the present study. Thus, this position needs to be further examined.

However, the average distinction assessed in the current study may be discounted by some researchers who may argue that the self-reported measure can be influenced by the tendency of social desirability, or else it is another indicator of perceived stress. This possibility has been reduced to a large degree, if not eliminated in the current study. First, in the distinction rating subtask, participants were instructed to imagine that their feelings about each aspect were changed because of some reasons which could be positive or negative, and then they rated the general change in other self-aspects no matter it was in positive or negative direction. The measure of the distinction component is based on the "spill-over" mechanism of self-complexity proposed by Linville (1985; 1987): the less the "spill-over" of feelings or thoughts evoked by a life event, the smaller portion of the self is changed, and the unaffected self-aspects will act as buffers against the stressful life event. The spill-over degree measured in the present study was different from perceived stress and mental health outcomes, such as global self-esteem, depression and loneliness. In addition, in our recent research, it was found that the average distinction was actually not confounded with socially desirable response tendency. However, since the average distinction is the perception of the cognitive differentiation among self-aspects, like cognitive coping strategies and perceived psychological well-being, it could be affected by personal stress experience in the dynamic and recursive stress process (Lazarus, 2000).

The present study was conducted in Chinese culture and the problem with the *H* statistic found in Western studies was replicated in this study. However, it has been argued that people from Western and Eastern cultures have quite different construals of the self (Markus & Kitayama, 1991; Triandis, 1989). People in Western cultures seek to maintain their independence from others by attending to the self and expressing their unique attributes. In contrast, people in Eastern culture emphasize their relatedness to others, and thus, the self-construals in Eastern cultures are meaningful within the interpersonal context. The cognitive distinction among self-aspects may be more important for people from Eastern collectivistic cultures because their self-representations are prescribed to be more contextually flexible in order to maintain harmony with others and self-esteem (Campbell et al., 1996). Therefore, the adaptation benefits of the average distinction might be stronger in Eastern cultures than in Western cultures. Cross-cultural research is necessary to examine cultural differences in the nature of self-complexity and its adaptation functions. In addition, in future research, if the method to develop the Self-Complexity Task in the present study is employed for respondents from other cultural backgrounds, it is suggested that the traits used in the trait sorting task should be obtained for the particular participant population concerned. For example, the traits used in the current research to measure the self-complexity of Chinese college students were different from those in Linville's (1985; 1987) in that more traits in our new measure described relational aspects, instead of the inner aspects of the self. Furthermore, to measure the distinction of self-aspects, it is better to use the idiosyncratic aspects generated by each participant, rather than preset the same aspects for all participants.

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