THE CREATIVE LEARNING ORIENTATIONS OF SINGAPOREAN AND AUSTRALIAN UNIVERSITY STUDENTS

Ng Aik Kwang
Nanyang Technological University, Singapore

Abstract: This study investigated how two cultural systems of shared meanings affected the creative and conforming behaviour of the individual, by shaping the way he/she construed himself/herself. It was hypothesised that members of an individualistic culture would construe themselves in an independent manner. This would in turn have a positive causal impact on their creative behaviour, and a negative causal impact on their conforming behaviour. It was also hypothesised that members of a collectivistic culture would construe themselves in an interdependent manner. This would in turn have a positive causal impact on their conforming behaviour, and a negative causal impact on their creative behaviour. Finally, it was hypothesised there was a negative association between creative and conforming behaviour. A theoretical model was developed, which specified the causal relationships between cultural individualism-collectivism, independent and interdependent self-construal, as well as creative and conforming behaviour. Structural equation modeling was used to analyse the empirical data from 158 Australian university students and 186 Singaporean university students, who responded to a divergent thinking task, as well as to various scales tapping the psychological constructs in the theoretical model. The results provided good support for the theoretical model. A major implication was drawn with regards to how we should enhance individual creativity, especially in a collectivistic culture.

Introduction

Various scholars point to the important role of culture in creative behaviour (e.g., Lubart, 1990). This study aims to extend the scholarly research in this area, by focusing on how two cultural systems of shared meanings affects the creative and conforming behaviour of the individual. One of them is Confucianism, which is shared by people living in Asian countries like China, Japan, South Korea, Taiwan, Hong Kong and Singapore. The other is liberal individualism, which is shared by people living in Western countries like the United States, the United Kingdom, Canada, Australia and New Zealand.¹

The Confucian societies of the East put a greater emphasis on the social group vis-à-vis the individual. In such a society, there are many social rules and regulations to govern the behaviour of the person, who is socialised from young to fit in with the rest of the ingroup. Failure to do so may result in social sanctions. Conflict with the ingroup is strenuously avoided, so as to maintain social order and harmony. Instead, discipline and conformity to tradition is emphasised e.g., children are expected to respect and obey their elders (Ho, 1994). In contrast, the liberal individualistic societies

¹ It should be noted that both individualistic and collectivistic tendencies can be found in an Asian or Western country. For example, in Singapore, the younger and English-educated section of the population are more individualistic, in comparison with the older and Chinese-educated section of the population. Likewise, although the cultural ethic of individualism permeates America, it contains many collectivistic enclaves as well e.g., among the American Jews and the Asian-Americans. Still, generally speaking, Asian countries whose historical development have been influenced greatly by the social philosophy of Confucianism are more collectivistic in nature i.e. there is a greater emphasis on the social group vis-à-vis the individual. In contrast, Western countries whose historical development have been influenced greatly by the social philosophy of liberal individualism are more individualistic in nature i.e. there is a greater emphasis on the individual vis-a-vis the social group.
of the West put a greater emphasis on the individual vis-à-vis the social group. In such a society, the individual is socialised from young to develop his/her uniqueness as a person, and to stand on his/her own two feet, instead of becoming psychologically dependent on the ingroup. He/she is expected to pursue his/her own interests and passions in life, rather than following what the ingroup say and do. In support of this observation, Chao (1993) found that 64% of European-American mothers, in comparison with 8% of Chinese mothers, stressed building children’s “sense of themselves” as an important goal of child-rearing.

Markus and Kitayama (1991, 1994) argue that people who live in individualistic and collectivistic cultures construe themselves differently, as a result of their socialisation. Individualistic members construe themselves in an independent manner: they view themselves as a separate entity from the social group, and express their personal feelings/opinions about a matter in a direct manner i.e. they engage in individuated behaviour. In contrast, collectivistic members construe themselves in an interdependent manner: they view themselves as part and parcel of the social group, and follow what the ingroup say and do i.e. they engage in conforming behaviour.

In opposition to conforming behaviour, individuated behaviour is characterised by its differentiation from other parts of the sociocultural environment e.g., in breaking set in a problem-solving task to propose an innovative alternative, or in taking a stance which is different from the rest of the group (Whitney, Sagrestano and Maslach, 1994). Individual differences in the propensity to engage in individuated or conforming behaviour derives from a fundamental tension between the psychological needs for validation/similarity with the social group on the one hand, and a countervailing need for uniqueness/differentiation from the social group on the other hand (Brewer, 1994). These two basic psychological needs are shaped by the cultural system of meanings which the person is exposed to (Hui and Villareal, 1989). More specifically, living in a collectivistic society accentuates the psychological need for validation/similarity with the social group, leading to conforming behaviour. In contrast, living in an individualistic society accentuates the psychological need for uniqueness/differentiation, leading to individuated behaviour.

Creativity can be understood as a form of individuated behaviour which is affected by culture. This is because the creative act is a novel and innovative course of action which results in a valued end-state, ranging from a new scientific theory, to a funny joke facilitating group interaction, to a unique piece of artwork evoking a certain emotion state (Mumford, Mobley, Reiter-Palmon, Uhlman and Doares, 1991). Because of the radical nature of his/her ideas, the creator inadvertently meets up with a lot of resistance from other conservative members in his/her society e.g., during the 17th century, the Italian scientist Galileo was put under house arrest by the Catholic church for suggesting that the sun, and not the earth, was the centre of the universe. As such, the creator must be prepared to defend his/her controversial stance on the matter, and persuade other members in the field of the rightness of his/her radical ideas (Csikszentmihalyi, 1996). In other words, the creator must be psychologically prepared to engage in individuated behaviour.

The culture of the person has a strong influence on whether and to what extent he/she engages in this type of creative and individuated behaviour. More specifically, in the individualistic societies of the West, which puts a cultural premium on individual rights and freedoms, the person will find it easier to behave in such a manner. As the adage goes, “in America the squeaky wheel gets the grease” (Markus and Kitayama, 1991: 224). In contrast, in the Confucian societies of the East, which puts a cultural premium on social order and harmony, the person will find it more difficult to behave in such a manner, as it may destabilise the social group. Instead, he/she is expected to conform to the wishes of significant others, so as to maintain social order and harmony. Failure to do so may result in social sanctions from the group. As the adage goes, “in Japan the nail that stands out gets pounded down”.

CREATIVE LEARNING ORIENTATIONS  757
The empirical literature support this linkage between cultural individualism-collectivism on the one hand, and creative and conforming behaviour on the other hand. For example, Bond and Smith (1996) find in their meta-analysis of conformity studies using an Asch-type line judgement task, that collectivistic countries show higher levels of conformity than individualistic countries. Ripple (1989) finds that members of individualistic societies score higher in fluency than their collectivistic counterparts. Dunn, Zhang and Ripple (1988) find that Chinese respondents perform better in convergent tasks, whereas American respondents are more successful in divergent thinking tasks. Other studies indicate that the Chinese way of raising a child, which emphasises the importance of filial piety and fitting in with the group, may encourage the development of cognitive conservatism, a constellation of attributes which lead the person to adopt a passive, uncritical and uncreative orientation towards learning; to hold fatalistic, superstitious and stereotypical beliefs, and to be authoritarian, dogmatic and conformist. For example, Boey (1976) has administered a battery of psychological tests measuring rigidity and cognitive complexity to university students in Hong Kong. He finds that the student’s father’s attitude toward filial piety is positively correlated with the child’s scores on tests of rigidity, and both the father’s and mother’s attitudes towards filial piety are negatively correlated with the child’s scores on cognitive complexity.

The major arguments in this study are depicted in a theoretical model of behaviour, which consists of a set of antecedent, mediating and outcome variables linked in a causal framework, as shown in Figure 1. The rationale for this theoretical model of behaviour is provided by Singelis and Brown (1995), who argue that to link a cultural system of meanings which a person is embedded in to his/her behaviour in a causal manner, the essential task is to locate a mediating variable which can be theoretically related to the antecedent variable on one side, and the outcome or behavioural variable on the other side. In this theoretical model of behaviour, cultural individualism-collectivism is the antecedent variable, independent and interdependent self-construal are the mediating variables, and creativity and conformity are the outcome or behavioural variables. It is hypothesised that cultural individualism-collectivism has a positive and causal impact on independent self-construal (Hypothesis 1a), and a negative and causal impact on interdependent self-construal (Hypothesis 1b). In turn, independent self-construal has a positive and causal impact on creative behaviour (Hypothesis 2a), and a negative and causal impact on conforming behaviour (Hypothesis 2b). In contrast, interdependent self-construal has a positive and causal impact on conforming behaviour (Hypothesis 2c), and a negative and causal impact on creative behaviour (Hypothesis 2d). Finally, it is predicted that there is a negative association between creativity and conformity (Hypothesis 3).

Figure 1: A Theoretical Model of Creative and Conforming Behaviour

N.B.: ‘+’ indicates a positive causal relationship

‘-’ indicates a negative causal relationship
Method

Students from universities in Singapore and Australia were recruited to take part in this study. The Australian sample (n=158) consisted of 97 females and 61 males. Their average age was 19.1 years. The Singaporean sample (n=186) consisted of 136 females and 50 males. Their average age was 20.6 years. The study consisted of two parts. In the first part, each group of participants responded to a set of divergent thinking tasks, which were timed. Immediately after this, they answered a survey which contained various psychological scales, as described below.

Self-Construal Scale. The self-construal scale (Singelis, 1994) consists of a 12-item independent subscale and a 12-item interdependent subscale. An example of an independent self-construal item is ‘I am the same person at home as I am at school’; while an example of an interdependent self-construal item is ‘My happiness depends on the happiness of those around me’. Respondents were instructed to indicate their agreement or disagreement with the items, based on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Construct validity of the SCS has been established in confirmatory factor analyses and interethnic comparisons (Singelis, 1994), as well as by convergence with measures of communication patterns (Singelis and Brown, 1995).

What Kind of a Person Are You? Inventory. Because creativity is a multidimensional construct (Sternberg and Lubart, 1995), two measures are utilised to measure the construct in this study. The first measure of creativity is a self-report inventory: What Kind of Person Are You? (Khatena and Torrance, 1976). It consists of 50 forced-choice items. The respondent is instructed to decide which item in the pair describes him/herself better e.g., “independent in judgment” versus “considerate of others”. The total creativity score is calculated by summing up those items which are typically chosen by creative people, and it can range from 0 to 50. The WKOPAY demonstrates adequate test-retest reliabilities, ranging from .71 to .97. Its convergent validity is established by linking it to other creativity measures e.g., the Torrance Test of Creative Thinking.

Torrance Test of Creative Thinking. The other measure of creativity is the Torrance Test of Creative Thinking (Torrance, 1974). Unlike the WKOPAY, which is a self-report inventory, the TTCT is an operant measure of creativity i.e. the respondent emits spontaneous responses to five divergent thinking tasks: Guessing Causes, Guessing Consequences, Improving a Toy Elephant, Unusual Uses for Cardboard Boxes and Just Suppose. These tasks do not have any fixed answers, and they last for 7.5 to 10 minutes each. Responses are scored for their fluency, flexibility and originality. Fluency refers to the total number of appropriate responses for the task. Flexibility refers to the total number of categories which the appropriate responses can be sorted into. Originality refers to the statistical rarity of a given response in a particular sample of subjects. The total creativity score of a participant is the sum of these three scores. Longitudinal studies provide strong evidence of the predictive validity of the TTCT (Cramond, 1994).

Group Conformity Scale. This is a self-constructed scale which gauges the individual’s conformity to a social group by tapping his/her inclination to follow a set of social rules regulating behaviour in a group setting. There are altogether 6 items in this scale, and they can be prescriptive or proscriptive. An example of a prescriptive item is ‘I believe I should modify my behaviour to fit in with what is happening in the group’. An example of a proscriptive item is ‘I believe I should not focus on my personal differences in feeling and opinion from the rest of the group’. Respondents indicate how important each social rule is in guiding their behaviour in a social group, based on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores reflect the importance that the respondent places in conforming his/her behaviour to the rest of the group.
Results

LISREL 8.0 was used to analyse the theoretical model of behaviour as shown in Figure 1. Cultural individualism-collectivism was measured by a single indicator: the nationality of the respondent, with 1 equating to Singaporean (lower cultural individualism-collectivism) and 2 equating to Australian (higher cultural individualism-collectivism). Creativity was measured by 2 indicators: the total score of the respondent on the creative personality scale, as well as the divergent thinking task. The independent and interdependent self-construal scale contained 12 items each. Each set of 12 items were randomly parcelled to form 3 indicators with 4 items per indicator. Each set of parcelled indicators was then used appropriately to measure the independent or interdependent self-construal. The group conformity scale contained 6 items. These items were randomly parcelled to form 2 indicators with 3 items per indicator. These two parcelled indicators were used to measure group conformance. All the indicators loaded significantly (p<0.05) on their latent constructs. It was concluded that the various indicators were adequate measures of their latent constructs.

To analyse the fit of the theoretical model to the empirical data, several fit indices are used in this study. They include the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), as well as the comparative fit index (CFI). These fit indices range in value from 0 to 1; a value of 0.90 and above indicated an adequate fit of the model to the data. In addition, two measures of residuals are also utilised in this study. They include the root mean squared error of approximation (RMSEA) and the standardised root mean squared residual (Std. RMR). For the RMSEA, a value of 0.08 and below indicates an adequate fit; for the Std. RMR, a value of 0.05 and below indicates an adequate fit (Kelloway, 1998). Besides these overall fit indices, LISREL 8.0 also provides statistical information on the individual causal relationships in the theoretical model. This information is captured in the estimated parameter for a free or estimated path in the causal model. A bigger and positive value indicates a stronger and positive causal relationship between two latent constructs in the model, and vice versa. A t-value of 1.96 and above indicates that the estimated parameter is significantly different from zero at p<0.05 i.e. the causal path in the model linking the two latent constructs is not due to chance.

Figure 2 displays the standardised estimated path coefficients of the theoretical model. Hypothesis 1a was supported: Cultural individualism-collectivism had a positive and significant impact on independent self-construal ($\gamma = 0.25, p<0.01$). Hypothesis 1b was not supported: although cultural individualism-collectivism had a negative impact on interdependent self-construal, as predicted, this result failed to reach significance ($\gamma = -0.09, p>0.05$). Hypotheses 2a and 2b were supported: independent self-construal had a positive and significant impact on creativity ($\beta = 0.71, p<0.01$), while it had a negative and significant impact on conformity ($\beta = 0.47, p<0.01$). Hypotheses 2c and 2d were also supported: interdependent self-construal had a positive and significant impact on conformity ($\beta = 0.50, p<0.01$). Hypothesis 3 was supported: there was a significant and negative correlation between creativity and conformity ($\tau = -0.50, p<0.01$). To conclude, the overall results indicated good support for the causal relationships in the model, with the exception of the individual path from cultural individualism-collectivism to interdependent self-construal. The fit indices fell within the acceptable range of 0.90 and above: GFI = 0.94; AGFI = 0.90; CFI = 0.91. In addition, the two measures of residuals also fell near to or within the acceptable range: the RMSEA value was 0.075, while the standardised RMR value was 0.062. Based on these results, as well as the earlier findings, it was concluded that there was adequate empirical support for the theoretical model of behaviour.
Figure 2: Overall Fit Indices and Estimated Path Co-efficients of Theoretical Model

** p < 0.01
Comparative Fit Index (CFI) = 0.91
Root Mean Square Error of Approximation (RMSEA) = 0.075
Goodness of Fit (GFI) = 0.94
Standardised Root Mean Square Residual (RMR) = 0.062
Adjusted Goodness of Fit (AGFI) = 0.90

Discussion

Before I proceed to draw out the implications of my findings, I would like to address an issue: cultural individualism-collectivism was found to have a negative impact on interdependent self-construal, as predicted. However, this result failed to reach significance. This insignificant finding can be interpreted as follows. In the modern world we live in, cultural boundaries are not static, but are in a state of rapid flux, due to the advent of modern communication technology. As a result, acculturation may occur i.e. members of a cultural group may learn and assume the behavioural patterns from another culture, instead of following the traditional norms and customs which they have been exposed to in their formative years. For example, acculturation may occur for Asian students when they study in Western universities, or for Western expatriates when they work in Asian societies. However, acculturation is more likely to occur in the direction of cultural individualism than cultural collectivism. This is because effective participation in the modern world requires a core syndrome of cognitions and motivations, such as a sense of personal efficacy, an individualistic orientation towards others, an openness to innovation and change etc. (Smith and Bond, 1993, p.213). These psychological syndromes of modernisation overlap with the independent selfhood of liberal individualism, but are in conflict with the interdependent selfhood of Confucianism. This interpretation was empirically supported by the research of Hofstede (1980), which indicated, firstly, that a strong correlation of +0.82 existed between modernity (as measured by the Gross Domestic Product Per Capital of the country) and cultural individualism; and secondly, by the longitudinal finding that cultural individualism was the only dimension (out of four dimensions) to increase on average across the entire sample of 40 countries during a four-year span when the research was being conducted.

Having accounted for the insignificant finding between cultural individualism-collectivism and interdependent self-construal, I will now discuss a major implication of my findings, for those of us who endeavour to promote individual creativity in the school setting. Often, these endeavours do not take into consideration the impact of culture on creative behaviour. Instead, a ‘culture-blind’ approach is adopted in various creativity-enhancing programmes e.g., the Cognitive Research Trust (CoRT) of Edward de Bono (1985). These programmes focused on expanding the mental abilities of the individual, such as his/her ability to think in a divergent manner. There is the implicit assumption that once the person master this or that particular thinking skill, he/she would be able to
engage in creative behaviour. This assumption is flawed, as a person with a good idea in his/her head may not necessarily have the stomach to implement it in actual practice. An example would be the person who is psychologically dependent on his/her ingroup. Such a person, who is more likely to be found in a collectivistic society, would be more inclined to shelve his/her innovative idea, rather than implement it, since the latter course of action would require him/her to behave in an individuated manner i.e. take a stance which is in opposition to the rest of the social group.

Hence, it is not enough for us to focus on the abstract ‘headware’ of creativity. In addition, we must also focus on the cultural ‘heartware’ of creativity i.e. we must look at the impact of culture on those affectively-laden variables which inhibits creative behaviour. This exhortation is especially relevant for those of us who wish to promote creativity in a collectivistic culture, since members of such a culture may suffer from an ‘emotional deficit of creativity’ i.e. their psychological dependence on the group may prevent them from engaging in creative and individuated behaviour. For these members from a collectivistic culture, enhancing their individual creativity may eventually require us to design a training programme which is more socio-emotional than cognitive in nature. We may, for example, strive to increase his/her independence and autonomy, rather than his/her divergent thinking ability, by recommending him/her to proceed to the microphone to ask probing questions of a speaker, instead of reading a manual on increasing his/her brain power. This argument that we should focus on the ‘heartware’ of creativity is reinforced by the finding that there is a significant and negative relationship between creativity and conformity (r = −0.50, p<0.01). 

This antipathy between conformity and creativity has received empirical support from research which indicate that critical thinking – an essential aspect of creativity – is not simply an intellectual challenge, but an emotional one as well. Zechmeister and Johnson (1992) define critical thinking as a problem-solving process that is not restricted by habit or convention but is free to be uncommon to what seems normal or natural. They suggest that an open attitude is as important to the process as one’s intellectual knowledge and skill. This attitude comprises objectivity, open-mindedness, flexibility, intellectual scepticism, decisiveness and respect for another person’s point of view. Perkins (1993) finds that such an attitude is lacking in conforming and group-dependent students, who show a comparatively high need for nurturance, deference, order and control, in contrast with creative and group-independent students, who show a comparatively high need for achievement, autonomy, aggression and creativity. Perkins argues that the outer agreeableness and restrain of the group-dependent students mask an inner recrimination and control which restrict their critical thinking. Students of this persuasion control their spontaneous, self-directing ego and cloud their rational functions with societal opinions and emotional logic which prevent them from being more self-reliant.

Empirical research by various scholars have indicated that people who live in collectivistic cultures are more psychologically restrained than exuberant. For example, in his research into the Chinese personality, Yang (1986) conclude that “all the studies reviewed, using either a self-report or a projective technique, have unanimously shown that Chinese people in general are inclined to be more restrained, cautious, patient and self-contained, and less impulsive, excitable, spontaneous and natural than Americans.” He attributes this finding to genetic differences between Chinese and
Caucasians, as well as to the cultural system of meanings in the East and West. Similarly, McCrae, Costa and Yik (1997) find that American students are significantly higher than Chinese students in the personality dimension of Extraversion. A person who is high on this personality dimension will direct his/her psychological resources onto the physical and social environment, instead of restraining him/herself (Watson and Clark, 1997). These empirical findings about the emotional dimension of critical thinking, as well as the psychological restrain of the Chinese personality, support my argument that in attempting to promote creativity in an Asian society, we must focus our attention not only on the ‘cognitive deficits of creativity’, but also on the ‘emotional deficits of creativity’ as well.

References


Crutchfield, R. S. (1962). Conformity and Creative Thinking. In H. E. Gruber, G. Terrell, M. Wertheimer (Eds.), *Contemporary Approaches to Creative Thinking: A Symposium held at the University of Colorado* (pp.120-140). New York: Prentice-Hall, Inc.


