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Do Multicultural Experiences Make People More Creative? If So, How?

By Chi-yue Chiu & Angela Ka-yee Leung

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MacDonalds' Rice-burger in Asia; Starbucks' Coffee Mooncake in Singapore; Disneyland Yin-Yang Mickey Mouse Cookies in Hong Kong; Lay's Peking Duck Flavored Potato Chip ... The list can go on. What is common in all these examples is that they are all novel product ideas created by integrating seemingly non-overlapping cultural or product ideas from Eastern and Western cultures.

Combining seemingly non-overlapping ideas from different cultures is an example of creative conceptual expansion, a term in cognitive psychology that refers to the process of extending the conceptual boundaries of an existing concept by synthesizing it with other seemingly irrelevant concepts (Ward, Smith, & Vaid, 1997). Creative conceptual expansion is an ordinary process that produces extraordinary, creative results (Wan & Chiu, 2002; Ward, 2001).

Multicultural experiences increase creativity, and do so in more than one way. To begin with, multicultural experiences liberate people from their mental sets. People learn from their experiences, but experiences also create mental sets that limit creativity. When people need to solve a problem creatively in a certain conceptual domain, their cultural experiences in that domain often constrain the way they will solve the problem. For instance, undergraduates instructed to design novel coins tend to produce coins that are strikingly similar to the attributes of known coins (Rubin & Kontis, 1983). Individuals under the instruction of using their wildest imagination to develop creatures on Mars tend to develop creatures that resemble Earth animals (Ward, Patterson, Sifonis, Dodds, & Saunders 2002).

People break sets when they expand the conceptual boundary of a well-learned concept. For instance, when people think of furniture, culturally familiar exemplars such as tables and chairs readily come to mind. However, this mental set is breakable. For example, people can think more creatively with the concept of furniture after they have solved problems like "What is a piece of furniture that is also a kind of fruit?" This kind of problems, known to cognitive scientists as novel conceptual combination problems, requires the problem-solver to find an exemplar that belongs to two seemingly non-overlapping concepts. People solve these problems by crafting new instances of the concepts (furniture and fruits). As a result, the concepts' boundaries are expanded (Hampton, 1997).

Multicultural experiences can increase creativity by providing people with both the intellectual materials and opportunities for creative conceptual expansion. Take Starbucks Coffee Mooncake as an example, the person who came up with this product idea knows the Starbucks Coffee concept in American culture and the mooncake concept in Chinese culture. Although the two concepts do not seem to be a love match at first glance, an arranged marriage has resulted in a new, innovative range of handcrafted snow-skin mooncakes – Caramel Macchiato, Cranberry Hibiscus, and Orange Citron – for the Singaporean Chinese to celebrate the Mid-Autumn Festival.

What is most intriguing about the creative effects of multicultural experiences is that it can be carried forwarded to a subsequent, unrelated task. This happens because the experience of combining non-overlapping concepts also fosters a habitual tendency to perform extensive memory for unconventional solutions when solving a problem. As a result, people become more fluent in generating creative ideas in a subsequent task unrelated to the conceptual combination task. In one experiment (Wan & Chiu, Experiment 1), some participants, randomly selected, solved a set of novel conceptual combination problems (e.g., What is a vehicle that is also a kind of fish?). The remaining participants solved a set of ordinary conceptual combination problems (e.g., What is a plant that is also a kind of fuel?). Next, the participants took the Figural Tests of the Torrance Tests of Creativity Thinking (Torrance, 1974), a widely used standard test of creativity. As expected, participants who solved the novel conceptual combination problems first had better performance on

the creativity test than did those who solved the ordinary conceptual combination problems first. In another experiment (Wan & Chiu, 2002, Experiment 2) using the same experimental design but a different dependent measure, the investigators obtained the same results. In this experiment, after solving the novel or ordinary conceptual combination problems, participants used LEGO blocks to build model(s) of any objects they liked. Again, the participants who solved the novel conceptual combination problems first built more creative LEGO models than did those who solved the ordinary conceptual combination problems first.

Exposure to multiple cultures has similar effects on creative performance as solving novel conceptual combination problems. In one experiment (Leung & Chiu, 2007a), the investigators had European American undergraduate students who had little knowledge of Chinese culture watch a slideshow and complete a creativity test. In one condition, the participants watched a slideshow of the arts, architecture, music, and life styles in Chinese culture (Chinese Culture Condition). In the second condition, the participants watched a slideshow of both American and Chinese cultures. In each slide, images of American cultures were presented side by side (Juxtaposition Condition). In the third condition, participants watched a slideshow that depicts American-Chinese fusion culture (e.g., Shanghai Tang fashion, Starbucks Coffee Mooncake, McDonald's Riceburger) (Fusion Condition). In addition, there were two control conditions in the experiment. In the first control condition, the participants watched a slideshow of American culture (American Culture Control Condition). In the second control condition, the participants did not watch any slideshow (No Slideshow Control Condition). After watching the slideshow, the participants received a summary of the Cinderella Story and some demographic information about Turkey, and were asked to write a creative Cinderella Story for the children in Turkey. Notice that the measure of creativity in this study did not require knowledge of Chinese culture.

In this experiment, the participants who had watched a slideshow that presented American and Chinese cultures in juxtaposition or a slideshow that presented American-Chinese fusion culture wrote more creative Cinderella stories, compared to the participants in the two control conditions. Interestingly, the stories written by those who watched a slideshow of Chinese culture only were not more creative than those written by the control participants.

The creative benefits of multicultural exposure survived the test of time. Five to seven days later, the participants were contacted again to complete another measure of creativity. This time, they were asked to generate creative analogies of time. This measure also did not require knowledge of Chinese culture. Again, only the participants in the Juxtaposition and Fusion Conditions generated more creative analogies than did the control participants.

Taken together, these results show that exposure to multiple cultures can increase the fluency in generating creative ideas. In the experiment, the creative benefits were observed in creativity tasks that did not require knowledge of the cultures the participants were exposed to. Moreover, the benefits remained when creativity was tested again several days after the exposure. It seems likely that the exposure has led to the development of some cognitive skills (e.g., a spontaneous tendency to extensive memory search unconventional solutions) that underlie creative performance. Furthermore, exposure to multiple cultures produced creative benefits only when both American and Chinese cultures were presented simultaneously. This finding is consistent with idea that holding seemingly incompatible ideas from two cultures in cognitive juxtaposition invites engagement in creative conceptual expansion, a cognitive process that is known to increase creative performance.

Similar results were obtained when the extent of multicultural experiences was measured rather than manipulated. Among European American undergraduates, some have more multicultural experiences than others. For example, some have spent time outside their home State, can speak a foreign language, have parents who were born outside the United States, have close friends from other friends, and like music and culinary arts in foreign cultures. These undergraduates tended to be more fluent in generating creative ideas than those who fewer multicultural experiences (Leung & Chiu, 2007b).

In addition, consistent with the idea that multicultural experiences foster a tendency to search one's memory for unconventional solutions, another study (Leung & Chiu, 2007a, Study 2) showed that

when asked what they would consider if they would present a gift to their friend, those with richer multicultural experiences more readily generated unconventional gift ideas than those with less multicultural experiences.

Close-mindedness is an obstacle to creativity. Compared to open-minded individuals, close-minded individuals are less motivated to search their memory for culturally unfamiliar ideas (Ip, Chen, & Chiu, 2006) and are less creative (Rietzschel, De Dreu, & Nijstad, 2007). Can open-mindedness be learned? Does exposure to multicultural experiences render people more open to ideas from other cultural traditions? One study (Leung & Chiu, 2007a, Study 3) found that when asked to develop an ordinary idea (e.g., "People who have more friends are happier") into a creative one, European American undergraduates with richer multicultural experiences were more motivated to consult ideas originated from East Asian and Middle Eastern cultures.

However, being open is a state of mind. When people are overwhelmed by the amount of uncertainty in the environment, they would crave for a firm answer and close their mind to unfamiliar ideas. When this happens, the motivation to consider ideas from other cultures will be hampered even among those with rich multicultural experiences (Leung & Chiu, 2007a, Studies 4 and 5).

To conclude, the increased level of global connectivity in contemporary societies has presented new opportunities for acquiring multicultural experiences. Not surprisingly, psychologists are increasingly aware of the need to understand the relationship between multicultural experiences and intellectual development (Chiu & Hong, 2005). A major research question in multicultural competence research concerns the potential beneficial effects of multicultural experiences on creativity and cognitive flexibility. Contemporary research on this topic has identified at least three ways multicultural experiences can increase creativity. First, it can liberate people from their mental sets by providing intellectual materials and opportunities for creative conceptual expansion. Second, it can foster the development of the cognitive skills that give rise to creative performance. Finally, it can increase people's receptiveness to ideas from other cultures.

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