

ence, such as living abroad for many years. These mild forms of multicultural experience may be termed “little m” multicultural experience, and the profound forms, “Big M” multicultural experience. Of course, Big M multicultural experience can vary dramatically as well; for instance, the experience of a voluntary immigrant will differ from that of a refugee. Since for many individuals, the chance at living, working, or studying abroad for many years is a remote possibility, it would be helpful if future research focused on little m multicultural experience with as much interest as it has focused on Big M multicultural experience. One suspects that related fields—such as the anthropology of tourism—may have much to offer here in terms of generating research questions and suggesting theories.

In sum, while making a significant contribution, Leung et al. (2008) seemed to focus the majority of their attention on little c creativity and Big M multicultural experience. Thus their article presented an excellent starting point, and one hopes their continued endeavors focus on the relationships between other forms of creativity and other forms of multicultural experience as well. An openness to multiple methods seems essential.

REFERENCES

- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York: Harper Collins.
- Csikszentmihalyi, M., & Rich, G. (1997). Musical improvisation: A systems approach. In R. Sawyer (Ed.), *Creativity in performance* (pp. 43–66). Greenwich, CT: Ablex.
- Gardner, H. (1993). *Creating minds*. New York: Basic Books.
- Guilford, J. P. (1959). Traits of creativity. In H. H. Anderson (Ed.), *Creativity and its cultivation* (pp. 142–161). New York: Harper.
- Koestler, A. (1964). *The act of creation*. New York: Macmillan.
- Leung, A. K., Maddux, W. W., Galinsky, A. D., & Chiu, C. (2008). Multicultural experience enhances creativity: The when and how. *American Psychologist*, 63, 169–181.
- Simonton, D. K. (1994). *Greatness: Who makes history and why*. New York: Guilford Press.
- Tatum, B. (2003). *Why are all the black kids sitting together in the cafeteria?* New York: Basic Books.
- Correspondence concerning this comment should be addressed to Grant J. Rich, Department of Psychology, University of Alaska Southeast, 11120 Glacier Highway, Juneau, AK 99801. E-mail: optimalex@aol.com

DOI: 10.1037/a0014941

Toward a More Complete Understanding of the Link Between Multicultural Experience and Creativity

William W. Maddux
INSEAD

Angela Ka-yee Leung
Singapore Management University

Chi-yue Chiu
Nanyang Technological University and
University of Illinois

Adam D. Galinsky
Northwestern University

In our recent article (Leung, Maddux, Galinsky, & Chiu, April 2008), we presented evidence supporting the idea that multicultural experience can facilitate creativity. In a reply to that article, Rich (2009, this issue) has argued that our review, although timely and important, was somewhat limited in scope, focusing mostly on smaller forms of creativity (“little c”: e.g., paper-and-pencil measures of creativity) as well as on larger forms of multicultural experience (“Big M”: e.g., living in a foreign country). Rich made a provocative call for a more comprehensive examination of the link between multicultural experience and creativity, including both larger forms of creativity (“Big C”: e.g., major artistic achievements or scientific breakthroughs) and milder forms of multicultural experience (“little m”: e.g., exposure to cross-cultural information at home).

We agree with many aspects of Rich’s (2009) assessment. The issue of whether different forms of multicultural experience can affect Big C creativity is of interest to both scholars and laypeople because creative breakthroughs can literally alter the course of human progress. Given the importance of creativity and the relevance of multicultural experience in the increasingly globalized world of the early 21st century, we share Rich’s view that such research can and should shed light on how major innovations may come about as well as on whether milder forms of multicultural experience can be a catalyst to these breakthroughs.

The Bridge From “Little c” to “Big C”

We believe, however, that examinations of little c creativity, which form the lion’s

share of creativity research (including our own work), are critically important. First, such investigations, particularly those carried out via controlled experiments, not only provide an assessment of creative outcomes but also deepen our understanding of the basic psychological processes necessary to produce new ideas. For example, we know that flashes of insight are critical components of creativity (Schooler & Melcher, 1995), with world-class scientists, artists, and inventors (Archimedes at his “Eureka” moment being perhaps the most famous example) remarking on how sudden moments of inspiration dramatically influence creative progress (Csikszentmihalyi, 1996). Similarly, our own work shows that multicultural experiences lead to novel but hidden creative insights as well (e.g., on the Duncker candle task or within a complex negotiation, Maddux & Galinsky, in press). In another example, Rich (2009) mentioned the Big C creative achievements by musician Gunther Schuller, renowned for his introduction of the new musical genre “Third Stream,” which synthesizes classical music with jazz. Interestingly, Schuller’s willingness to integrate ideas from seemingly incompatible music traditions also fits nicely with some of our laboratory findings—in particular, that multicultural individuals are particularly willing to recruit unfamiliar ideas for creative expansion, consider conflicting alternatives, and make remote associations between ideas (Leung & Chiu, in press; Maddux & Galinsky, in press) in addition to being less influenced by cultural conventions (Leung & Chiu, in press). Thus, investigations of little c creativity outcomes and processes can potentially inform our understanding of how multicultural experience can impact cognitive processes in larger scale creative endeavors.

Along these lines, it is interesting to note that some of the most influential research programs on creativity have shown that remarkably similar personality and contextual variables are associated with both small- and large-scale creativity. For example, Theresa Amabile’s laboratory investigations and Mihaly Csikszentmihalyi’s case studies on eminent thinkers both demonstrate that intrinsic motivation and flow experiences are critical factors influencing a wide range of creative outputs, from college students doing laboratory tasks to Nobel Prize winners working on the most complex scientific questions imaginable (Amabile, 1996; Csikszentmihalyi, 1996). Thus, insights into personal and situational antecedents and cognitive

mediators of little c creativity can illuminate what is likely to affect Big C creativity.

At a more practical level, even everyday individuals engaging in little c processes can have a significant impact. For example, educators who can find a more creative way of presenting their ideas to students, or entrepreneurs who create new products to fill a market niche, may not immediately revolutionize the world, but they certainly make incremental contributions toward a better one. Indeed, as Toyota was poised to surpass General Motors in 2008 as the largest producer of automobiles in the world, Surowiecki (2008) described their achievement as largely the product of a "distinctive element of Toyota's approach: defining innovation as an incremental process, in which the goal is not to make huge, sudden leaps but, rather, to make things better on a daily basis. . . . Toyota implements a million new ideas a year, and most of them come from ordinary workers" (para. 5). What is critical, then, may be that individuals possessing small-scale creativity do not meet resistance and explicitly seek the opportunity to implement their novel ideas. And from a long-term perspective, little c activity may provide the building blocks from which others may be able to contribute Big C types of ideas.

Nevertheless, we agree that much interesting work may result from a greater focus on large-scale creativity going forward. Some of our more recent work has moved in this direction; in particular, we found that individuals who have lived abroad or who identify themselves with multiple national cultures are more likely to become entrepreneurs or come up with new product ideas at work (Maddux, Galinsky, Gregersen, & Dyer, 2008). Future research could take this even farther, as Rich (2009) suggested, perhaps by using case studies or a historiometric approach to examine the extent to which multicultural experience has impacted the lives of eminent and highly creative individuals. Indeed, history is rife with compelling stories of famous innovators spending significant time abroad. Rich mentioned a set of famous musicians, though perhaps the most vivid example is the "lost generation" of American writers living in early 20th-century Paris (Hemingway, Fitzgerald, Stein, etc.). Interestingly enough, all four Irish winners of the Nobel Prize in literature (Yeats, Heaney, Shaw, and Beckett) lived abroad extensively, as did famous Irish writers Oscar Wilde and James Joyce, not to mention that a Russian émigré, Vladimir

Nabokov, is considered by many to be the greatest American writer. Thus, we believe there is ample fodder for more in-depth analysis of how multicultural experience can impact Big C creativity and the lives of eminent individuals.

From "Big M" to "Little m"

The distinction between different types of multicultural experience is also a useful one. We agree that it is important to know whether individuals can derive creative benefits from smaller scale types of multicultural experiences that may be easier to experience than larger scale immersions in foreign cultures. Notably, however, the work reviewed in our article does indeed demonstrate that both little m multicultural experience (e.g., cognitively juxtaposing ideas from different cultures in the lab, having foreign friends, listening to foreign music) and Big M multicultural experience (e.g., spending years living abroad) can affect creativity. Our work also specifically suggests why multicultural experiences matter: We have consistently found that passive exposure to different cultures seems to be relatively unhelpful and that some sort of comparison between cultures is critical for the process to impact creativity. For example, participants who were exposed to a slideshow presenting either two cultures simultaneously or the fusion of two cultures initiated an explicit integration of the two cultures, which suggests that this process of juxtaposition might be a critical element in heightening creativity (Leung & Chiu, in press). Thus, the distinction between small- and large-scale multicultural experiences may actually be less important than whether the experience allows different cultures to be simultaneously engaged or actively compared.

Moreover, the evidence shows that what most likely distinguishes little m from Big M experiences is not how long or arduous the multicultural experience is but rather what mindset individuals bring to the multicultural environment. Although Maddux and Galinsky (in press) never found a positive correlation between traveling abroad and creativity, with the right multicultural learning or adaptation mindset, we believe that even a little m multicultural experience can generate huge creative benefits. As noted in our earlier article, both Boris Yeltsin (in the United States) and Malcolm X (in Mecca) had life-changing experiences during short stints traveling abroad. And as our own work attests, individuals who are particularly openminded

(Leung & Chiu, 2008) or able to adapt to new cultures (Maddux & Galinsky, in press) are the ones most likely to derive a creative benefit from multicultural experiences, whether on a small or large scale. Conversely, with the wrong mindset or attitude (closeminded, obstinate resistance to adapting), a Big M experience may actually have counterproductive effects, overwhelming unprepared or unappreciative individuals (Leung & Chiu, 2008). Thus, it will be important for future research to clarify not only the scale or type of multicultural experiences but also the specific mindsets individuals adopt during such experiences. For both Big M and little m multicultural experience, then, what may be particularly important is whether the individuals who encounter these experiences are willing to capitalize on the creative benefits.

To conclude, we second Rich's (2009) call to broaden conceptual and methodological approaches to capturing the full relationship between multicultural experience and creativity, both big and small. We also hope that this clarification of our work may help better position its contribution as well as that of our colleagues working on similar questions. In our earlier article (Leung et al., 2008), we had two goals: First, we wished to present a compelling theoretical and empirical argument for the link between multicultural experience and creativity. Second, we wanted the article to serve as a launching point as well, stimulating new research on this important and timely topic. The response to our article, including Rich's reply, supports our view that the interest in multicultural experience and creativity is far from exhausted; future research will certainly uncover important new insights. In fact, we believe (and hope) that we are looking not at the end of a domain of research, but only at the beginning.

REFERENCES

- Amabile, T. M. (1996). *Creativity in context*. Boulder, CO: Westview Press.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York: Harper Collins.
- Leung, A. K., Maddux, W. W., Galinsky, A. D., & Chiu, C. (2008). Multicultural experience enhances creativity: The when and how. *American Psychologist*, 63, 169–181.
- Leung, A. K-y., & Chiu, C-y. (2008). Interactive effects of multicultural experiences and openness to experience on creative potential. *Creativity Research Journal*, 20, 376–382.

- Leung, A. K-y., & Chiu, C-y. (in press). Multicultural experience, idea receptiveness, and creativity. *Journal of Cross-Cultural Psychology*.
- Maddux, W. W., & Galinsky, A. D. (in press). Cultural borders and mental barriers: Living in and adapting to foreign cultures facilitates creativity. *Journal of Personality and Social Psychology*.
- Maddux, W. W., Galinsky, A. D., Gregersen, H. B., & Dyer, J. (2008, August). *Multicultural experience and entrepreneurial innovation*. Paper presented at the annual meeting of the Academy of Management, Anaheim, CA.
- Rich, G. J. (2009). Big C, little c, Big M, little m. *American Psychologist*, 64, 155–156.
- Schooler, J., & Melcher, J. (1995). The ineffability of insight. In S. M. Smith, T. B. Ward, & R. A. Finke (Eds.), *The creative cognition approach* (pp. 97–133). Cambridge, MA: MIT Press.
- Surowiecki, J. (2008, May 12). The open secret of success. *The New Yorker*. Retrieved December 23, 2008, from http://www.newyorker.com/talk/financial/2008/05/12/080512ta_talk_surowiecki

Correspondence concerning this comment should be addressed to William W. Maddux, INSEAD, Organisational Behaviour Area, Boulevard de Constance, 77305 Fontainebleau Cedex, France or Angela Ka-yee Leung, School of Social Sciences, Singapore Management University, Level 4, 90 Stamford Road, Singapore 178903. E-mail: william.maddux@insead.edu or angelaleung@smu.edu.sg