



## From the Editors

# Creativity East and West: Perspectives and Parallels

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**ABSTRACT** This Editors' Forum – 'Creativity East and West' – presents five papers on the question of cultural differences in creativity from the perspective of different research literatures, followed by two integrative commentaries. The literatures represented include historiometric, laboratory, and organizational studies. Investigation of cultural influences through country comparisons and priming manipulations, focusing on how people perform creatively and how they assess creativity. This introduction notes parallels in the findings across these research perspectives, suggesting some cultural universals in creativity and some systematic differences. Many differences can be explained in terms of the model that creativity means a solution that is both novel/original and useful/appropriate, yet that Western social norms prioritize novelty whereas Eastern norms prioritize usefulness – an account which predicts cultural differences would arise in contexts that activate social norms. The commentaries elaborate this argument in terms of processes – at the micro cognitive level and at the macro societal level – through which creativity occurs.

**KEYWORDS** creativity, cultural differences, East Asia, innovation, social norms

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## INTRODUCTION

The 'creativity problem' is a salient theme in the last decade in several East Asian societies. In Singapore, titles such as *Why Asians Are Less Creative than Westerners* (Ng, 2001) and *Can Asians Think?* (Mahbubani, 2002) hit the bestseller list amid educational reforms designed to encourage creativity and economic policies aimed at developing creative industries (Tan & Law, 2000). Economic doldrums in Japan bred questioning of traditionally conformist classrooms and hierarchical workplaces, and calls for legal changes to foster innovation (Hashimoto, 2004; McCreedy, 2004). Taiwan unveiled a programme of creativity research and education centres with the vision of making R.O.C. stand for 'Republic of Creativity' (Ministry of Education, 2006). Not to be outdone, China has designated

certain cities as creative centers and even constructed creative neighbourhoods by converting disused manufacturing areas into studios, galleries, and café spaces (Keane, 2007).

However, this creativity push is not without its sceptics in Asia, some of whom regard 'creativity' as a Western hang-up. Leaders such as Lee Kuan Yew have praised the creativity of Western classrooms and corporations, yet lamented the chaos and social problems that seem to come with Western individualism as opposed to traditional Asian values. According to the traditionalists, it may be the West that has a creativity problem.

Given that the image of Asians as creatively challenged has snowballed from a popular stereotype to a public policy premise, researchers must ask what evidence exists for an Asian/Western creativity gap? Or, to put it more neutrally, an East/West creativity difference? This Editors' Forum on 'Creativity East and West' emerged from a conference in December 2008 on Creativity and Innovation in Global Business, co-sponsored by the City University of Hong Kong's Management Department and Columbia Business School's *Program on Social Intelligence*. Before introducing the various research perspectives on creativity represented in the conference and ultimately this forum, it is worth starting with some facts about creative accomplishments that figure prominently in the public discourse about creativity differences, even though, as we shall see, they may reflect only indirectly on creativity.

## COMPARING CREATIVE ACCOMPLISHMENTS ACROSS COUNTRIES

For pundits and politicians, Nobel prizes are the *sin qua non* of creativity and so the creativity of a culture can be measured by its number of prizes. The tally of Nobel laureates does not look good for Asian creativity, especially in science, as less populous Western countries such as the U.S., U.K., and Germany outpace all of Asia (see [http://www.wikipedia.org/wiki/List\\_of\\_Nobel\\_laureates\\_by\\_country](http://www.wikipedia.org/wiki/List_of_Nobel_laureates_by_country)). Of course, the comparative wealth of Western vs. East Asian nations over the last century no doubt accounts for much of the difference. That said, even Japan, which has been wealthy for decades, lags far behind smaller Western nations such as Switzerland and the Netherlands. Some psychologists, similarly, take the dearth of science Nobels in Asia, along with the applied academic tastes of Asian students, as evidence that Asian culture stunts scientific creativity (Kanazawa, 2006). This may occur, it is insinuated, because ideographic languages such as Chinese do not exercise abstract thinking as much as alphabetic languages (Hannas, 2003), or because Asian education emphasizes holistic thinking rather than analytic thinking (Nisbett, 2003). While the validity of the Nobel tally as an indicator of scientific creativity can be debated, it is indisputably a lagging indicator, and more leading indicators present a decidedly more positive picture of Asian scientific accomplish-

ment. The percentage of articles from Asia in scientific journals currently is over 30% compared to 10% in the 1980s (<http://www.thompsonreuters.com>), and the basic research investments of global firms such as Microsoft, Pfizer, and Exxon increasingly flow to labs in East Asia rather than the West (Drexler, 2009; Friedman, 2005).

In addition to science, art is also raised as evidence for East/West creativity differences. While Westerners describe their own art history as a succession of revolutionary inventions (despite its none-too-subtle debts to non-Western traditions), the term 'imitative' appears all too often in their descriptions of East Asian art, whether traditional (Rosenstone, 1980) or modern (Clark, 1998). In this vein, divergences in art education are also cited; Western classes encouraging students to express themselves vs. Asian schools challenging students to adhere to a model, for example, the Suzuki method of music education (Taniuchi, 1984). Further, Asians and Asian-Americans have excelled in classical music performance, a domain demanding disciplined reproduction rather than wild originality from the performer (Yoshihara, 2007). However, one barely needs to scratch the surface to belie the stereotype of Asian artistic accomplishment as merely imitative; there is nothing imitative about the avant-garde designs of Japanese New Wave architects or the frame-breaking cinematic techniques of Hong Kong directors such as John Woo and Wong Kar-wai, the Korean development of massive multiplayer online games, not to mention the outrageous work of contemporary Chinese performance artists such as Zhu Yu, Zhang Huan, and Cai Guo-Qiang and the edgy design trends they have inspired (see Chen, 2007). While dramatic counterexamples do not rule out the proposal that prevailing tendencies in Eastern and Western artistic styles differ, they certainly do suggest that the picture is more complex than one of Western invention vs. Eastern imitation. A serious look at Eastern and Western artistic contributions makes plain the need for a more dynamic account of cultural influence that can explain the prevailing cultural tendencies as well as the conditions that suspend or reverse them.

A longer historical view makes it even harder to defend the notion of an uncreative Asian mentality. Historical studies of arts and literature record many great breakthroughs in China and Japan throughout the ages (Murray, 2003). Many of the great inventions of antiquity – gunpowder, paper, printing, and the compass – famously came first in China. Historical scholarship (Needham, 1956; Needham, Robinson, & Huang, 2004) reveals equally impressive ancient Chinese accomplishments in astronomy, botany, seismology, and other scientific fields. Indeed, evidence increasingly suggests that the scholarly, scientific, and technological blossoming of the West in the Renaissance and ultimately the Enlightenment owed much to its exposure during the late Middle Ages to Asian achievements through the Silk Road and Indian Ocean trade routes. Contrary to Weber's classic cultural-religious explanation, contemporary historical research concludes that the key to why the industrial revolution broke out in Manchester

first rather than in Shanghai or Tokyo was not culture but the right kind of coal and geography (Pomeranz, 2001). In sum, a longer historical view of Eastern and Western civilizations cautions against reading differences in modern artistic, scientific, or economic accomplishments as reflections of inherent national characters or capacities. China, for instance, has experienced a 20th century of colonialism, foreign invasion, and tumultuous political change (with violently anti-intellectualist chapters such as the Cultural Revolution). It would be naïve and unfair to read deficits in the scientific or artistic curiosity of China's recent generations as signs of a timeless Chinese mentality.

While comparing Eastern and Western creative accomplishments beyond Nobel prizes suffices to debunk the worst stereotypes about the East/West difference no historical comparison is ever comprehensive enough to establish whether creative productivity hinges on cultural factors, as these are always compounded with other factors. To understand whether culture plays a role, by shaping people's private cognitive processes or by shaping their public social norms and institutions, we need to turn to research that compares creative behaviour within different cultures under matched or controlled conditions.

## RESEARCH ON CREATIVE PROCESSES

Psychological laboratory experiments and organizational field studies provide ways of studying how creativity and innovation differ as a function of many factors, including Eastern vs. Western cultures. These research traditions also provide models of the process of creative problem solving that enable theorizing about possible points of influence or mechanisms through which culture might enter.

Echoing American patent law, the social psychologist Amabile (1986) defined creativity as a solution to a problem that is both novel and useful (in that it can be practically implemented and socially accepted). Psychologists have developed many standardized tests and tasks for assessing creativity in the laboratory, some of which enable a distinct measurement of participants' performance on the novelty and usefulness dimensions. Several researchers have hypothesized that the East/West cultural difference consists of a stronger orientation towards useful/appropriate solutions in the East and a stronger orientation towards novel/original solutions in the West, although the evidence is inconsistent, with many studies showing no difference or difference on some measures and not others (see Leung & Morris, 2010). Beyond a cultural difference in performance, researchers seek to identify the psychological mechanism that underlies it. Predominantly they have taken the personality psychology approach of positing individual differences – such as conformity values or uniqueness motivations – thought to heighten or inhibit novelty- and usefulness-oriented processing, and presumed to be differentially inculcated by Eastern vs. Western socialization (e.g., Ng, 2003). However, few

studies have found evidence that personality differences mediate East/West differences in performance, and those few that have found evidence have not converged on the same personality dimensions (see Leung & Morris, 2010).

An alternative, social psychological mechanism through which culture may influence creative performance is the activation of social norms. Norms are socially shared expectations or common sense – what everybody knows about what everybody knows. (Zou, Tam, Morris, Lee, Lau, & Chiu, 2009). In Western cultures there is a salient individualistic norm that individuals should distinguish themselves from others. Generating highly original or novel solutions is a means of fulfilling this ideal. In Eastern cultures there is a collectivist norm that people should maintain social harmony. Devising solutions that build on existing practices is a way of upholding this idea.

The social norms that people inherit from their communities are not ever-present guides to their behaviour. Norms become activated as guides in situations with features that cue their relevance, such as, the presence of other people (as interactants, observers, or anticipated evaluators), or the presence of symbols associated with a particular culture, in other words, sights and sounds linked to a cultural tradition and community (Briley, Morris, & Simonson, 2005; Fu, Morris, Lee, Chao, Chiu, & Hong, 2007). The influence of norms also depends on motivations related to personality; some individuals have the non-conscious habit of defying or contradicting cultural norms precisely in those situations that cue them (Mok & Morris, 2009). Hence, compared with a personality account, a norm account predicts that cultural differences would appear under some situations (e.g., performing music at a holiday concert, an interaction with others in an environment richly laden with culturally associated images) but not in other situations (e.g., practising music in one's dorm room, a solitary activity in a nondescript environment).

Norms often become institutionalized within groups of people, meaning that they come to be performed ritually as an end in themselves (Scott, 1998). Within organizations they also become encoded within informally shared routines and ultimately can become inscribed into formalized standard operating procedures, policies, or strategies (Scott, 1998). Given that a norm account locates the origin of cultural behaviours within socially shared and organizationally encoded rules – not just in personality – it entails different explanations for the persistence of cultural patterns and different prescriptions for how to change them.

The notion that cultural differences in orientations toward novelty vs. usefulness arise in part from norms encoded in organizational routines and procedures fits with evidence from the organizational innovation literature. In this literature innovation refers to the introduction of a new product or service; incremental innovation is one that extends an existing product or service line, and breakthrough innovation is one that brings a whole new technology to the problem, disrupting the existing business and starting a new cycle of incremental improvement. Incremental innovations propelled Japan's late 20th century success in the

automobile industry and high technology industries.<sup>[1]</sup> Still today a quarter of all corporate patents filed in the U.S. are from Japan (<http://www.ifclaims.com>), as significant inventions tend to be patented internationally. This zeal for improvement exists for consumers as well as creators; the time it takes for new versions of products to take off is faster in Japan than anywhere else in the world (Chandrasekaran & Tellis, 2008). Hence, several scholars have suggested that East Asian culture fosters incremental innovation and Western culture, breakthrough innovation (e.g., Herbig & Palumbo, 1996), much as psychologists have linked these cultures to usefulness- and novelty-oriented creativity.

However, innovation research provides tools for testing the norm account prediction that these approaches to creativity/innovation are encoded in organizational structures and not just imprinted in people's personalities. Incremental and breakthrough innovation arise from different kinds of organizational routines and procedures (Nelson & Winter, 1982) and organizations face tradeoffs between the ends of incremental exploitation and breakthrough exploration (March, 1991). Striking findings about how this tradeoff is resolved comes from recent large-scale surveys of significant internationally patented inventions (Nagaoka & Walsh, 2009). These inventor surveys focus not on comparing whether more inventions occur in one country than the other but on comparing the relative frequency of different organizational contexts of invention in the two countries. A major finding involves the type of research and development (R&D) procedure in which the invention arose: inventions result more frequently from projects with incremental objectives in Japan (66 percent) than the U.S. (48 percent), and less frequently from projects with breakthrough objectives in Japan (8 percent) than the U.S. (24 percent).

Related to this difference in research procedures, inventions are more often unexpected by-products of research on other problems in the U.S. (11 percent) than in Japan (3 percent). This reflects that the organizational procedures for seeking incremental extensions to existing assets are less amenable to recognizing and developing serendipitous ideas than procedures for open-ended exploratory research (Nagaoka & Walsh, 2009). In support of this, there are countless prominent examples of serendipitous inventions in Western research enabled by the openness or flexibility of objectives. Research in a British Pfizer lab, for example, found little evidence for the hypothesized cardiovascular effects of Sildenafil, yet notes of an embarrassing side effect in these trials quickly led to it being patented and marketed for another problem under the name Viagra (Terrett, Bell, Brown, & Ellis, 1996). Examples can also be cited of the contrapositive of missed invention opportunities in less flexible Asian research programmes. Consider the Icarian story of Woo Suk Hwang, briefly the toast of the scientific world after cloning a dog and claiming to have succeeded in cloning human stem cells. Hwang was charged with fraud, expelled from his university, and banned by the Korean government from further cloning research after it was discovered that his human cloning evidence was fabricated. Subsequent investigations of samples of the Hwang lab's

stem cell line revealed that, during the course of their fixated human cloning crusade, they had extracted cells from eggs that had undergone parthenogenesis, which is by itself a pioneering scientific accomplishment on par with cloning, yet which Hwang's goal-blinded team had failed to even notice (Minkel, 2007).

Other evidence from inventor studies indicates that not only R&D procedures but also human resource procedures differ across countries in ways that support the Eastern and Western tendencies towards incremental vs. breakthrough innovation. Incremental innovation is fostered by employees with a deep knowledge of the firm's existing assets, such as long-term employees who have rotated through different jobs. Breakthrough innovation is fostered by cross-pollination of engineers and scientists from universities and other firms. Whereas 25 percent of inventions in the U.S. were made by employees who had changed employers, in Japan only 3 percent were (Walsh & Nagaoka, 2009). While the lifetime employment model has eroded in many parts of the Japanese economy, in research it still persists as a structure that supports the tendency to seek incremental innovations, solutions that complement existing products and services of the firm – immediately useful and acceptable yet not so novel. The success of East Asian corporations at incremental innovation no doubt reflects many such aspects of organizational structure that perpetuate norms of prioritizing usefulness and acceptability over novelty.

In sum, cultural tendencies to emphasize novelty vs. usefulness/acceptability in the search for creative solutions likely reflect social norms that are supported by institutionalized procedures for organizing industrial research as well as by tacit, ubiquitous rules of appropriate self-presentation and interpersonal interaction. Having established this possibility, it is instructive to consider the five papers in this forum, which present and synthesize the recent findings pertinent to culture and creativity from the perspectives of different research literatures.

## **FIVE RESEARCH PERSPECTIVES**

The five papers included in this Editors' Forum review evidence on the question of culture and creativity from different scientific disciplines. The empirical methods range from tracking the creative output of generations of artists in relation to myriad historical factors to experiments tracking the split-second responses of students in psychology laboratories to stimuli that cue cultural identities. While creativity is difficult to study and each research method has its limitations, findings that emerge recurrently across different research methods are likely to have validity. As we shall see, these different perspectives provide converging support for the conception of the cultural difference within the novelty vs. useful framework and they provide many findings favourable to an account in terms of social norms rather than personality traits or other individual differences.

The first paper, by Dean Keith Simonton and Shing-Shiang Ting (2010) distills the results of historiometric studies of creative achievement in the East and West.

This method involves quantitative analyses of the factors associated with creativity in different fields across time at individual and generational levels. This pioneering integrative analysis uncovers both convergences and divergences in the factors associated with creative achievement in Eastern and Western civilizations. A converging result is that quality comes with quantity; both in the East and the West, the most creative individuals in a field tend to be those with a larger body of work (indexed by known productivity, precocity, or longevity). A diverging result is that while in the West mental illness is associated with artistic and literary genius, this is not the case in the East. Simonton and Ting (2010) interpret this in terms of the strains involved in the normative pressure to be unique, suffered by Western artists more than Eastern artists.

Miriam Erez and Rikki Nouri (2010) review individual and group studies of creativity to theorize about contexts that activate the individualistic and collectivistic cultural norms relevant to the East/West difference. For instance, they review one of their own studies comparing Israelis and Singaporeans working alone vs. in the presence of peers. Creative performance was similar across cultures in the alone condition, but in the peer condition Israelis produced a greater number of unique solutions (increased novelty) whereas Singaporeans produced more elaborated solutions (increased usefulness). Just as the context factor of peers activates individualistic vs. collectivistic norms, Erez and Nouri (2010) propose that the context factor of supervisor presence activates norms associated with power distance, and the context of strong task structure activates norms associated with the need for cognitive closure. These norms impinge on the weighting of novelty and usefulness in parallel ways. These hypotheses lay the groundwork for important research investigating to what extent managers can create contextual conditions that dampen, eliminate, or amplify the influence of employees' cultural backgrounds on their creative work.

Aurelia Mok and Michael W. Morris (2010) raise further questions about the context-dependency of cultural styles of creativity, addressing questions such as: can an individual shift from an Eastern style to a Western style, and vice versa? How do bicultural individuals inculcated with both Eastern and Western styles negotiate these conflicting imperatives? This paper is an empirical report of laboratory experiments using the method of priming bicultural individuals with culturally associated symbols. Asian-American biculturals were exposed to Eastern or Western cultural images before being presented with divergent thinking tasks, which capture novelty-oriented processing. The way participants' creative styles shifted in response to cultural cues depended on identity structure. Individuals with highly integrated bicultural identities (those who chronically experience their Asian and American sides as compatible and blended rather than conflicting and separated) responded to cues by following the culture's norms (i.e., generating more highly original solutions after Western than Eastern cultural cues) whereas individuals with less well-integrated bicultural identities shifted to contradict the cued



cultural norm (generating less original solutions after Western than Eastern cultural cues). In other words, these conflicted- or divided-identity biculturals tended to contradict or invert the normative style of creativity signalled by their environment. The radical experimentation in some groups of contemporary Chinese artists may reflect such an inversion dynamic – conflicted biculturals escaping the ‘trap’ of the traditional Chinese normative expectations cued by their environment, yet in doing so enacting creative styles much like those prized in the West. In any case, Mok and Morris’s (2010) findings imply that in this era of identity multiplicity and fragmentation, managers need to think carefully about how they manage symbols to set desired norms and influence employees. Asian leaders and organizations have introduced Western images to prime individualistic behaviour or free expression, and it may have worked well in past decades. However, as more and more Asian employees become bicultural, for many of them (the less integrated biculturals) Western symbols in the workplace will set off reactive responses of rejecting individualism and adhering more closely to traditional Asian norms.

Next, Jing Zhou and Yanjie Su (2010) review studies of creative performance in organizational settings in Eastern and Western cultures. As it looks at employees’ creative work on real problems *in situ*, this literature provides a richer picture of the contextual factors that affect creativity – factors that may mediate or moderate cultural influences on creativity. Zhou and Su (2010) review findings about how workplace social contexts (leaders, supervisors, coworkers) affect employee creativity and introduce related theories such as the contingency of creativity on intrinsic motivation. They draw on such theories to elucidate cultural differences in these contextual effects. Consider the paradox between the Western finding that directive leadership inhibits creativity and some recent Chinese findings that it fosters creativity (so long as other conditions are right). This may be reconciled by the proposal that intrinsic motivation comes solely from having individual choice for Westerners while for Easterners it can come from having choices made by a legitimate ingroup leader.

Finally, Paul S. Hempel and Christina Sue-Chan (2010) shift the focus from the creator to the evaluator of creativity. They adopt Csikszentmihalyi’s (1997) social system view of creativity as a process involving the creator’s act as well as its acceptance by ‘the field’, the community of experts who assess and recognize contributions to a given domain. Hempel and Sue-Chan (2010) review evidence of various ways in which the assessment of novelty and usefulness are affected by Eastern and Western cultural norms. They develop an agenda for future research on cultural differences in creativity that addresses specific processes used within particular professions (arts, sciences, industries) to judge novelty and usefulness. Finally they derive hypotheses about how the apparent creativity of expatriate managers may wax and wane differentially, as seen from the perspective of their heritage and host country colleagues.

## PARALLELS ACROSS DIFFERENT PERSPECTIVES

Across these different research perspectives on Eastern and Western creativity, a number of parallels emerge. Some parallels point to antecedents of creativity that may be culturally universal. The same quality/quantity relationship seen in Simonton and Ting's (2010) historical analysis of creative geniuses in the East and West also emerges in Mok and Morris's (2010) laboratory divergent thinking tasks, where fluency (number of ideas) is positively correlated with originality (uniqueness of ideas). Likewise, the culturally invariant effect of role models in historiometric studies of artistic or scientific generations is paralleled by those in the organizational studies reviewed by Zhou and Su (2010), in which employee creativity can be fostered by exposure to highly creative coworkers.

Other parallels reveal robust cultural differences, visible from different research perspectives. Chiefly, the Western prioritization of novelty and the Eastern prioritization of usefulness is seen with historiometric analysis, laboratory experiments, and organizational data. The parallel differences here seem to reflect the activation of individualistic vs. collectivistic social norms.

Another parallel can be seen in East/West differences in the influence of centralized control on creativity, which show up both at the societal level and at the organizational level. Simonton and Ting (2010) find that whereas in European history civil uprisings, such as the French Revolution, spur creative florescence, in Chinese history, they do not have this salutary consequence. Simonton and Ting (2010) also find East/West differences in effects of political fragmentation perhaps because those in the West (e.g., the fall of Rome) generated cultural diversity (liberating vernacular languages and customs into public life) whereas political fragmentations in the East did not (e.g., through the passing of many Chinese dynasties, the orthodoxy of written Chinese and other customs persisted). At the organizational level, a similar pattern holds. Western organizational studies find that decentralized, participative leadership as opposed to autocratic, directive leadership facilitates employee creativity, whereas the evidence from studies of Eastern organizations is mixed (Zhou & Su, 2010). These authors propose that the difference may reflect the dynamics of intrinsic motivation within more independent versus interdependent self-concepts. This may be a case where a parallel cultural difference involving the effects of centralized control at two levels of analysis is merely a coincidence – it reflects a social structural mechanism at the societal level and a psychological mechanism at the organizational level.

Overall, the papers in this forum provide a rich picture of how aspects of culture foster and constrain particular kinds of creativity. We argue that culture does not shape an individual's creative behaviour, as is popularly imagined, by imprinting fixed mentalities, worldviews, or talents. Culture shapes behaviour largely through social norms, contexts that cue them, and motives that drive individuals to follow, ignore, or invert them. This norm-based account elucidates

some important complexities in how cultural legacies affect individuals and groups. While some cultural patterns extend across domains, others are specific to particular fields, and the likelihood of their expression in behavior depends on many contextual factors.

The papers are followed by two commentaries authored by leading researchers of creativity. Carsten K. W. De Dreu (2010) bolsters the case for a norm account by reviewing recent experiments manipulating motives that activate Western vs. Eastern norms. When brainstorming groups were implored to do their best, this evoked enhanced novelty in Dutch groups yet brought out enhanced usefulness in Korean groups. Furthermore, through priming explicit novelty or usefulness goals groups could be shifted away from these culturally normative performance styles (Bechtold, De Dreu, Nijstad, & Choi, forthcoming).

De Dreu also raises the important issue of whether, not just creative solutions, but also the information processing strategies used to reach creative solutions differ culturally. Recent evidence from his lab suggests that creative problem solving can proceed through loose, flexible inference or cautious, persistent inference (Nijstad, De Dreu, Rietzschel, & Baas, 2010). The flexibility strategy may be reinforced more by Western institutions whereas the persistence strategy may be reinforced more by Eastern institutions. If the habitual strategies for generating new ideas differ, this could be relevant to the applied issue of how societies and organizations can best train creativity. Research suggests that Western techniques for fostering creativity can be successful in Asian classrooms and corporations but little is known about whether they are optimal (e.g., Dineen & Niu, 2008). Rather than ignoring traditional habits of the mind, training programmes may do well to leverage the culturally established creativity strategies rather than introducing new ones; that is, Western interventions for heightening creativity may work better when tailored to East Asian settings (Ng, 2004). Conversely it may be that the best way to train creativity is to bolster strategies that are not already established. Future research may uncover Asian methods that, sufficiently tailored, could improve problem solving performance in the West. A case in point may be the Kumon method of learning mathematics and language from Japan, which emphasizes practice and persistence, and has been increasingly adopted as a supplementary educational practice in the West ([http://en.wikipedia.org/wiki/Kumon\\_method](http://en.wikipedia.org/wiki/Kumon_method)). Research should explore if such methods work through exercising students' persistence-oriented strategies and enable creative problem solving.

Finally, Chi-yue Chiu and Letty Y-Y. Kwan (2010) integrate the arguments of several papers into a model of creativity as a distributed societal process involving the authorship of new ideas, the selection of ideas for usefulness, and then the acceptance of the new ideas in a market. Within this framework Chiu and Kwan delineate further ways in which cultural traditions and knowledge of culture shapes creative problem solving. For instance, authoring a novel solution often involves combining elements from several different cultures the author knows, as these

elements are less likely to have been previously combined. In this argument and others, Chiu and Kwan (2010) go beyond the simplifying assumption that individuals are only affected by one (or at most two cultures) to recognize that many individuals live and work immersed in multiple cultures. Exposure to multiple cultures fosters individuals' creativity by broadening their stock of ideas, reducing the conventionality and similarity of their associations, and diversifying the social connections available for collaboration (see Leung & Morris, 2010). Just as global firms operate in multiple nations in part so they can tap into the distinctive pools of knowledge, talent, and expertise that are institutionalized in the traditions of particular countries (Frost, Birkinshaw, & Ensign, 2002), so do individuals immerse themselves in multiple cultures over the course of their life so as to become capable of insights that require drawing on different traditions and combining their elements into ever new forms.

## CONCLUSION

Creativity is an essential ingredient for the success of a modern economy; innovation accounts for more than half of recent economic growth in the U.S. and U.K. (*The Economist*, 2002). The nations of East Asia, each at its own pace, are navigating the transition from manufacturing economies to innovation economies (see Keane, 2007; Kim, 1997; Koh, 2000; Meyer, 2008).

The research brought together in this forum showcases that East/West differences in creativity exist and can be studied systematically. We have proposed that an important explanation for differences is that social norms in the West encourage novelty and those in the East prioritize usefulness. This account fits the findings better than a trait account that portrays the Asian character as conformist or the Asian mentality as allergic to abstraction or analytic processing. The current papers also detail important and non-obvious implications of this model of cultural influence on creativity for managers. Understanding the drivers of cultural tendencies, and the situational contexts that trigger them, is essential to organizing the best people and best procedures for solving different types of problems in the culturally diverse organizations of the East and West.

## NOTE

- [1] A prominent exception to this generalization is Japan's Shuji Nakamura, the trailblazing inventor of the blue and violet semiconductor lasers, an exception who proved the rule by critiquing Japanese research institutions and emigrating to California (McCready, 2004).

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