

Culture and Attention: Comparing Cultural Variations in Patterns of Eye-Movements between East Asians and North Americans

Takahiko Masuda (tmasuda@ualberta.ca)

Department of Psychology, University of Alberta
P-355, Biological Sciences Building, Edmonton, AB, Canada, T6G 2E9

The issues of culture must be one of the most controversial topics in the field of psychology. For over 25 years, many cross-cultural and cultural psychologists have theoretically and empirically tackled with the issue. However, early research in cultural psychology has methodologically relied too much on subjective measurements, such as self-report questionnaires consisting of both scaled and open-ended questions. Limitations associated with this methodology have led some critics to suggest that these findings fail to remove possible confounding variables and demand characteristics (e.g. cultural differences may be observed simply because participants in different cultures interpret the task differently) and, therefore, the evidence is less convincing to researchers in the more broader psychological field. Furthermore, it has been suggested that such research often shows a weak cultural effect simply because of the participants' conscious and deliberate thoughts regarding social norms (e.g., Heine, Lehman, Peng, & Greenholtz, 2002). In this talk, I will introduce some recent findings that attempted to resolve this problem, and discuss the methodological and theoretical implications of these studies.

In an attempt to meet the research goals mentioned above, recent experimental cultural psychologists have used more objective behavioral measurements with scientific rigor. The cultural variation in attention process is one of the most discussed topics. The results of these studies consistently indicated that, in various experimental tasks, East Asians' context sensitivity is greater than that of North Americans, whereas North Americans tend to show greater concentration on focal objects within a scene (Ji, Peng, & Nisbett, 2000; Masuda & Nisbett, 2001; Masuda & Nisbett, 2006; Miyamoto, Nisbett, & Masuda, 2006; Nisbett & Masuda, 2003; Chua, Boland, & Nisbett, 2005). These findings suggest that even so-called fundamental psychological processes, notably attention processes could be culturally shaped.

To further test this possibility, empirical cross-cultural research, using more (involuntary) behavioral measures (e.g., eye-movement, contractions of facial muscles during facial expressions, and galvanic skin response) must be expected. Notably, measurement of participants' eye movements, which is commonly used in the area of vision research (e.g. Henderson & Hollingworth, 1999), is one objective measure that could broaden the applicability and appeal of cross-cultural research.

In fact, several researchers have applied this methodology to their cross-cultural research. For example, Masuda, Ellsworth, Mesquita, Leu, Tanida, van de Veerdonk (2006) presented participants with cartoon images consisted

of a target figure, and four background figures, and asked them to judge the target's emotion based on his/her facial expressions, while measuring the participants' patterns of eye movements. The results indicated that, overall, Japanese allocated 15% of their gaze time to the background figures, whereas Westerners allocated less than 5% of their gaze time to the background figures.

Similarly, Chua, Boland, & Nisbett: 2005 replicated Masuda and Nisbett's (2001) results, while measuring the participants' eye movements. The results indicated that Chinese made more saccadic (rapid non-focused) eye-movements towards the background than did North Americans, whereas North Americans looked at the object earlier and had longer fixations than the Chinese.

Furthermore, Masuda, Akase, & Radford (2006) conducted an experiment in which they asked participants (Japanese and Westerners) to focus only on the center circle appeared in a computer screen, while manipulating the contextual information (no background vs. four dots that surround the center circle). They then measured the participants' patterns of eye movement and analyzed how much they were distracted by the contextual cues. The results indicated that the Japanese failed to focus on the center circle when it was presented with four surrounding circle, whereas such a manipulation did not affect Westerners' attention. Such empirical data will broaden the reliability and acceptance of findings of cultural research. By doing so I hope the findings will appeal to a broader range of research fields (especially 'hard-nosed' cognitive psychologist), and thereby bring about a wider knowledge of the importance of cultural and social factors in understanding human mind.

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