Journal of Experimental Social Psychology xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

Journal of Experimental Social Psychology

journal homepage: www.elsevier.com/locate/jesp

Culture as automatic processes for making meaning: Spontaneous trait inferences☆

Yuki Shimizu [a,*], Hajin Lee [b], James S. Uleman [c]

[a] Faculty of Education, Saitama University, 255 Shimo-Okubo, Sakura-Ku, Saitama 338-8570, Japan
[b] Department of Psychology, University of Alberta, Edmonton, Alberta, T6G 2E9, Canada
[c] Department of Psychology, New York University, 6 Washington Place, New York, NY 10003, United States

HIGHLIGHTS

- People make spontaneous trait inferences (STIs) when observing others' behaviors.
- STIs among Americans were more frequent and more automatic than among Japanese.
- No cultural differences were found in estimates of controlled processes in STIs.
- Results support the idea of culture as automatic procedures for making meaning.

ARTICLE INFO

Article history:
Received 19 March 2016
Accepted 18 August 2016
Available online xxxx

Keywords:
Spontaneous trait inference (STI)
Culture
False recognition paradigm
Process dissociation procedure (PDP)
Automatic and controlled processes

ABSTRACT

Culture shapes how we interpret behavior, symbols, customs, and more. Its operation is largely implicit, unnoticed until we encounter other cultures. Therefore deep cultural differences should be most evident in automatic processes for interpreting events, including behavior. In two studies, we compared American and Japanese undergraduates' spontaneous (unintended and unconscious) trait inferences (STIs) from behavior descriptions. Both groups made STIs but Japanese made fewer. More important, estimates of the controlled (C) and automatic (A) components of their recall performance showed no differences on C, but A was greater for Americans. Thus westerners' greater reliance on traits, in intentional and spontaneous impressions, may reflect cultural differences in automatic processes for making and recalling meaning. The advantages of locating cultural differences in automatic processes are discussed.

1. Introduction

There is no consensual definition of "culture," but our increasingly multi-cultural experience has prompted an explosion of theory and research on culture and psychology (e.g., Gelfand, Chiu, & Hong, 2015; Kitayama & Cohen, 2007; Valsiner, 2012), providing a welter of empirical differences among various "cultural" (usually national) groups. In this article, we describe a national difference that unites two theoretical approaches to culture. One privileges procedural knowledge and the other semiotics.

Many scholars distinguish between knowing *about* a culture (explicit knowledge) and knowing how to enact cultural practices, i.e., knowing *how to do* a culture (procedural knowledge). Procedural knowledge is usually implicit — unnoticed or hard to describe — until you meet someone who does it differently. Chiu and Hong (2007, chap. 34) describe procedural knowledge as "a learned sequence of responses to situational cues. Once the learned response sequence is automated through frequent practices, its performance requires little cognitive deliberation" (p. 789). They cite studies of cultural differences in decoding emotions, visual scanning, language comprehension, deploying attention, categorization, reasoning, and problem solving. Kitayama, Park, Sevincer, Karasawa, and Uskul (2009) posit "cultural mandates" and "cultural tasks" that produce "psychological tendencies" which "become habitual… and automatic… We thus call these tendencies implicit and distinguish them from explicit beliefs…" (p. 239). Chiu, Ng, and Au (2013, chap. 37) note that "Evidence for the automatization of culturally normative cognitive procedures abounds" (p. 775) and cite many examples.

"Semiotics is the study of signification in the most general sense of that term…of meaning-making and the meaning systems and sign systems in which they are embodied and expresses" (Innis, 2012, p. 1,

☆ This study was supported by a Grant-in-Aid for Japanese Scientific Research (No. 26380868) from the Ministry of Education, Culture, Sports, Science and Technology to Yuki Shimizu.

* Corresponding author at: Faculty of Education, Saitama University, Japan.
E-mail addresses: shimizu@mail.saitama-u.ac.jp (Y. Shimizu), hajin@ualberta.ca (H. Lee), jim.uleman@nyu.edu (J.S. Uleman).

http://dx.doi.org/10.1016/j.jesp.2016.08.003
0022-1031/

chap. 13). The influential cultural anthropologist Clifford Geertz (1973) favored this approach. "The concept of culture I espouse… is essentially a semiotic one. Believing… that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs…" (1973, p. 5). He also favored attention to concrete behavior. "Behavior must be attended to… because it is through the flow of behavior — or, more precisely, social action — that cultural forms find articulation" (1973, p. 17).

Both of these traditions are illustrated by cultural differences in spontaneous social inferences (Uleman, Saribay, & Gonzalez, 2008). Spontaneous inferences result from unintended and unconscious procedures for giving behaviors meaning. These meanings have included personality traits and goals, situation characteristics, non-social causes, and justice concerns (Uleman et al., 2008). Imagine you observe someone yelling at other people. You are likely to spontaneously infer that this person is *short-tempered*. Spontaneous trait inference (STI) is a relatively effortless implicit process that occurs even when people are not instructed to make such inferences and have no such explicit goal (Uleman et al., 2008). Observed behaviors are encoded in trait terms, and then trait concepts are associated with the actors. And critically for our purpose here, there are cultural differences in STI.

1.1. Cultural differences in STI

Studies of cultural differences in *intentional* impression formation have demonstrated that Westerners emphasize personal causes of social behaviors, such as traits, while Asians emphasize situational causes (e.g., Fiske, Kitayama, Markus, & Nisbett, 1998; Nisbett, Peng, Choi, & Norenzayan, 2001). Differences in attention may play a role. Westerners pay more attention to the central actor while people from East Asian cultures (e.g., Japan, China, and Korea) are more sensitive to contextual information (e.g., Ji, Peng, & Nisbett, 2000; Kitayama, Duffy, Kawamura, & Larsen, 2003; Masuda & Nisbett, 2006). Self-descriptions differ in similar ways, with Euro-Americans describing themselves more in trait terms, Koreans using more social roles and contextual qualifications, and Asian Americans falling in between (Rhee, Uleman, Lee, & Roman, 1995).

Similar cultural differences in STIs have been reported. Na and Kitayama (2011) found that STIs occurred among European American but not among Asian American students at the University of Michigan. Zárate, Uleman, and Voils (2001) reported a similar cultural difference between European American and Latino American students at the University of Texas—El Paso. Whereas these studies compared ethnic groups within American culture, using materials in English, more recent studies have examined the occurrence of STIs among East Asian people in their own languages (Shimizu, 2012; Zhang & Wang, 2013). For example, Shimizu (2012) investigated STI among Japanese 5th-graders, 7th-graders, and undergraduates, using the savings-in-relearning paradigm (Carlston & Skowronski, 1994). Participants *did* show STIs, indicating that STI is not uniquely western. But comparisons across studies using different methods can be problematic. The present studies compared American and Japanese undergraduates' STI directly, with the false recognition paradigm and the same stimuli but in English and Japanese respectively. They also estimated the contributions of automatic and controlled processes to detecting these STIs through the process dissociation procedure (PDP, Jacoby, 1991).

1.2. Automatic and controlled processes in STIs

Given that STIs are usually unconscious and always unintended, how can we detect them? Studies have employed lexical decisions and memory tasks such as false recognition and savings in relearning to measure STI (Uleman et al., 2008). For example, in Todorov and Uleman's (2004) false recognition paradigm, participants under memory instructions are shown pairs of persons' faces and behavioral sentences that imply (or contain) traits. After a delay, they are presented with face–trait pairs and decide for each pair whether the trait word appeared in the behavioral sentence previously paired with the face. Participants are more likely to falsely recognize implied traits when they are paired with the corresponding actors' faces than when they are paired with other faces that they have seen. This false recognition indicates that participants inferred traits from behaviors spontaneously when they read the behaviors, and that they bound (linked) them to the specific actors.

Early STI studies (e.g., Winter, Uleman, & Cunniff, 1985) explored how automatic STI is by examining criteria for automaticity besides lack of awareness and intention. Unfortunately this approach is limited because various criteria (Bargh, 1994) do not always covary. An alternative approach is to define automatic processes as "not controlled," design tasks to estimate control directly, and use that estimate to calculate the contribution of automatic processes (Jacoby, 1991). This process dissociation procedure (PDP) recognizes that automatic and controlled processes both contribute to performance on most memory and social judgment tasks (Payne & Bishara, 2009). Uleman, Blader, and Todorov (2005) used the PDP to show that STI depends on both automatic and controlled processes (see also McCarthy & Skowronski, 2011). PDP has been applied to other social topics such as decision making (e.g., Ferreira, Garcia-Marques, Sherman, & Sherman, 2006) and stereotyping (e.g., Mazerolle, Régner, Morisset, Rigalleau, & Huguet, 2012; Payne, 2005; Sherman, Groom, Ehrenberg, & Klauer, 2003).

The PDP includes two conditions: "inclusion" in which both automatic and controlled processes contribute to performance, and "exclusion" in which the two processes work in opposition. The difference in participants' performance between these two conditions provides an estimate of controlled processes (C). Automatic processes (A) are then estimated for each participant from that, following a few simple algebraic equations. (C and A do *not* sum to 1.) McCarthy & Skowronski (2011, Experiment 3) showed that participants' reports of unintentionally making trait inferences correlate with estimates of C but not A.

1.3. Culture as automatic procedures for making meaning

All of this suggests identifying "culture" with the automatic procedures for imbuing meaning into our own and others' behavior (and cultural icons, rituals, and customs in particular contexts) in ways that distinguish one culture (or subculture) from another. Particularly revealing are those differences in performance that individuals *cannot control*, even when they wish to. These are most diagnostic of culture-specific procedural knowledge. So in tasks that involve both controlled (C) and automatic (A) processes, as most performances do, and which can be structured so that the contribution of both C and A can be estimated, the differences most diagnostic of deep cultural differences are differences in (A), the automatic processes.

A recent study by Lee, Shimizu, and Uleman (2015) illustrates this concept of automatic processes as a signature of deep cultural differences in impression formation. They studied spontaneous trait transference (STT), the unintended transfer of trait inferences to observers who tell about other people's trait-implying behaviors. If Adam says that Bob returned the wallet with all the money in it, and Bob is absent (i.e., no photo of him is present; Goren & Todorov, 2009), then *honest* becomes associated with (the photo of) Adam. Lee et al. (2015) used false recognition with the PDP to study STT among American and Japanese undergraduates in their respective languages. They found that STT occurred among both American and Japanese, but more frequently among Americans. Controlled processes did not differ in both samples, but automatic processes were weaker among Japanese. They noted that, because STT indexes trait activation, an elemental component of impression formation, STT and PDP are useful tools for investigating cultural differences in elemental processes of impression formation.

Please cite this article as: Shimizu, Y., et al., Culture as automatic processes for making meaning: Spontaneous trait inferences, *Journal of Experimental Social Psychology* (2016), http://dx.doi.org/10.1016/j.jesp.2016.08.003