Cross-Cultural Differences in Visual Perception and Aesthetic Preferences

An Online Implementation of the Framed Line Test (FLT) and Photo Selection Task (PST)

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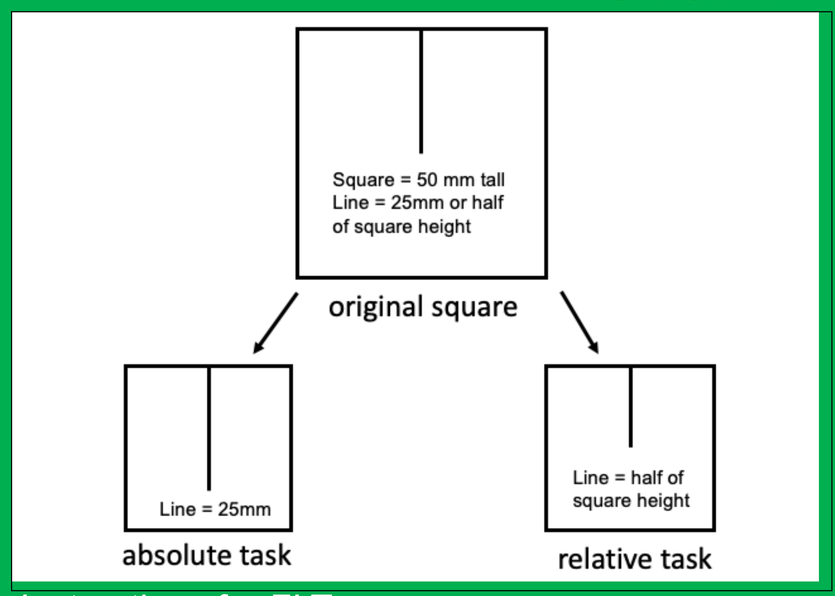
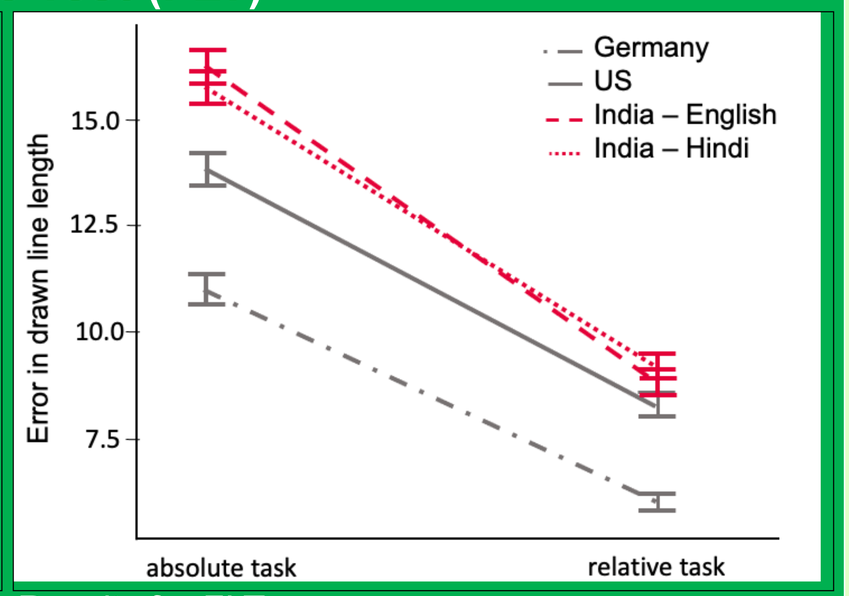
Introduction

While holistic perception highlights context and relations among objects, analytic perception highlights the focal object and de-emphasizes context[1]. Here, we compare 2 Western (US and Germany) and 2 Indian (participating in either English or Hindi) samples regarding context-(in)dependent perception as well as aesthetic preferences. We hypothesized that the Indian as compared to the Western samples would show a higher accuracy in the relative task of the FLT[2] and would prefer pictures with more background information (smaller model sizes) in the PST[3].

Framed Line Test (FLT)



Instructions for FLT



Results for FLT

Results Framed Line Test

Across cultures, participants made smaller errors in the *relative task* as compared to the *absolute task* (b_{task} = 5.99, p < .001). This main effect was qualified by a cross-level interaction of task and cultural sphere (East vs. West) (b_{int} = 1.68, p = .019), indicating that the difference between the two tasks was larger for the two Indian compared to the two Western samples. This also implies that the East-West difference was larger for the absolute task, which is in line with our hypotheses.

Sample descriptives

	n (% female)	age (SD)
U.S.	163 (38)	37.10 (11.18)
Germany	133 (23)	29.08 (8.37)
India (English)	143 (31)	31.08 (7.14)
India (Hindi)	157 (22)	35.05 (9.74)

Data were collected through Amazon Mechanical Turk (MTurk).

Methods

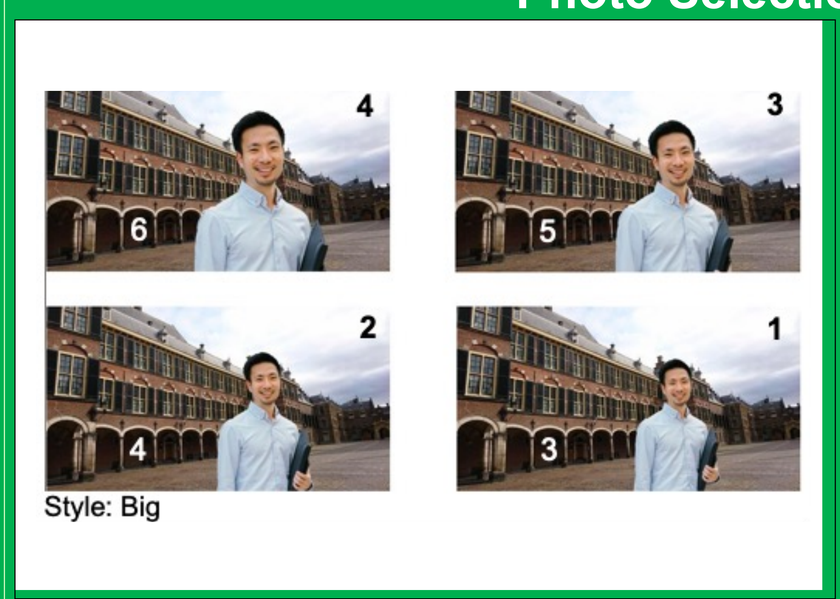
The FLT *absolute task* requires the exact reproduction of an earlier presented line within a frame (absolute length) while the *relative task* asks for the context-bound reproduction of the line (relative length). DV is the error in drawn line length. Each participant completed 10 absolute and 10 relative task trials.

In the PST, participants choose a favorite picture out of 4, where only the size of the depicted person is manipulated while background stayed the same (but is more or less covered by the person). Below, the *big style* version is shown, where the person was depicted larger (sizes 3-6, see white numbers). The *small style* version had person sizes 1-4. DV is the average selected person size (black 1-4 within each style).

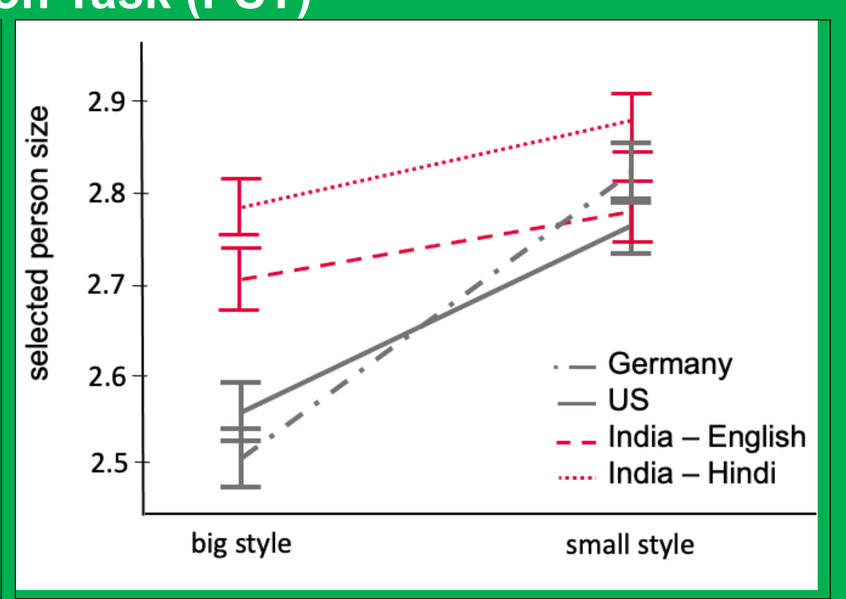
Results Photo Selection Task

Contrary to expectations, the selected person size was overall *smaller* in the two Western as compared to the two Indian samples (b_{west} = -0.13, p = .014). This main effect was qualified by a cross-level interaction of style and cultural sphere (b_{int} = 0.17, p < .001) showing that Western participants adapted their choice to presentation style (selecting a bigger person size in the small style version) more strongly than Indian participants.

Photo Selection Task (PST)



PST Big-Style Example Pictures



Results for PST

Discussion

In the FLT, all participants reproduced a more accurate line when the task was context-dependent *(relative task),* but the difference in accuracy between the two tasks was larger for participants from India, reflecting a rather holistic perceptual style. Participants from Germany and the US also made more errors in the absolute task, but relatively less so compared to the Indian samples, thus reflecting a slightly more analytic perceptual style.
In the PST, Western participants chose pictures with a lower person-to-background ratio than participants from India. However, this was only the case for the *big style* pictures. One possible explanation for Indian participants' choices being less affected by presentation style: Indians may try to find a balance between the two styles, while participants from the West made each choice independent of prior context. Overall, FLT results compliment findings from earlier studies while PST results were rather unexpected and call for clarification in future research.

1 Ji, L. J., & Yap, S. (2016). Culture and cognition. *Current Opinion in Psychology*, *8*, 105–111.
2 Kitayama, S., Duffy, S., Kawamura, T., & Larsen, J. T. (2003). Perceiving an object and its context in different cultures: A cultural look at new look. *Psychological science*, *14*(3), 201–206.
3 Masuda, T., Gonzalez, R., Kwan, L., & Nisbett, R. E. (2008). Culture and aesthetic preference: Comparing the attention to context of East Asians and Americans. *Personality and Social Psychology Bulletin*, *34*(9), 1260–1275.

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