The Impact of Language on Cross-Cultural Research

J. Dana Stoll

University of Liverpool

May 10, 2017

The Impact of Language on Cross-Cultural Research

# Introduction

Analysis in cross-cultural research focuses on three concepts: emics (concepts that are specific to their cultural reference frame), etics (concepts that are valid across cultures, and at best truly universal), and theorics, "to interpret and account for emic variation and etic consistancies" (Yau-Fai Ho, & Wu, 2001, para. 18). Beyond assessing relevant concepts in exploratory, qualitative research, to establish cause in cross-cultural research, quantitative methods or experiments must be used. Quantitative methods in psychology focus on questionnaires, for example the items of the International Personality Item Pool (IPIP, 2017). Lexical approaches to cross-cultural research produce two problems that need further evaluation: cross-stage validity of measurement instruments combined with within-stage impact of the originating culture of the instrument on evaluating the target culture.

# **Cross-Stage Issues**

When researching the etics of personality, for example, using Goldberg's (1992) Big-Five markers, result interpretation needs references for comparison. Language concepts may be rated differently across developmental stages as cognitive development progresses. Mellor & Moore (2014), for example, recommend scoring Likert-scales from "always" to "never" (frequency) instead of "strongly disagree" to "strongly agree". Likewise, questions that are aimed at children in middle childhood need to account for their cognitive capacity. Language simplification inadvertently reduces the epistemological content of the measurement instrument to a smallest common denominator. Following Maruyama's (1999) research on the cross-cultural validity of epistemological types, language simplification may limit psychological research to hierarchical concepts that develop at an early stage in human thinking.

Cross-cultural research may thus not be generalized across all life-stages using the

same test. Barbaranelli et al. (1998) developed a Big-Five questionnaire for children (BFQ-C) and report factor analysis results that explain 30.2% of the variance when researching elementary school children. Factor loadings may generally be lower in middle childhood than adolescence or adulthood (cf. Muris, Meesters, & Diederen, 2005).

### Within-Stage Cross-Culture Issues

Marsh (1968) reports a general negative rating bias when researching pre-adolescents. This bias may not be generalizable. Measurement instruments widely originate in academic contexts of WEIRD societies. Even double-back translation may not properly reflect the cultural particularities of the contrast culture. Facial expressions, for example, have been popularized as cross-culturally valid by Ekman & Friesen (1971). Lisa Feldman Barret invalidated Ekman's initial experiments by removing the categorical terms into which pictures should be clustered: the same population would cluster the pictures differently when no preset categories were given.

In modern, globalized societies, cultural constructs are thought to converge with age and education. There is, however, a growing body of evidence that native languages shape perception fundamentally, for example, the perception of time (Lancaster University, 2017). Defying cultural reductionism, adults learning a second language may form lasting "nativelike neural responses", an enculturation that remains stable even after periods of discontinued use (Morgan-Short et al., 2012). As a result, observations by Margaret Mead (1932) for Canadian indigenous people may no longer be replicated by current studies due to internalized, bilingual education of formerly indigenous people within WEIRD host cultures.

## Conclusion

Psychological tests are usually designed within one culture and may not properly evaluate another in between-culture comparison. Between life-stage comparisons may reduce language to the least common epistemological denominator. Lexical approaches should exploratively compare factor loadings of terms and grammatical constructs across a variety of situations within-culture, for example, using Big Data internet analyses on socially relevant discussions, and subsequently compare the identified factors between-culture instead of testing predefined instruments against new cultures. A meta-analysis may confirm the impact of source culture instruments on target cultures by comparing percentages of explained variance, that are expected to consistently drop when using old instruments on new cultures.

#### References

- Barbaranelli, C., Caprara, G. V., & Rabasca, A. (1998). *Manuale del BFQ-C. Big Five Questionnaire Children*. Firenze, Italy: O.S. Organizazioni Speciali.
- Barbaranelli, C., Caprara, G. V., Rabasca, A., & Pastorelli, C. (2003). A questionnaire for measuring the big five in late childhood. *Personality and Individual Differences, 34*, 645-664. doi:10.1016/S0191-8869(02)00051-X
- Ekman, P. E., & Friesen, W. V. (1971). Constants across cultures in the face and emotion. Journal of Personality and Social Psychology, 17(2), 124-129.
- Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment*, 4(1), 26-42.
- International Personality Item Pool [IPIP]. (2017). A Scientific Collaboratory for the Development of Advanced Measures of Personality and Other Individual Differences. Retrieved May 10, 2017 from http://ipip.ori.org/
- Lancaster University (2017, May 2). Language Shapes How the Brain Perceives Time. *NeuroscienceNews*. Retrieved May 2, 2017 from http://neurosciencenews.com/brain-time-language-6562/
- Lende, D. (2013). Lisa Barrett: Facing down Ekman's universal emotions. *PLOS Blogs*, Retrieved May 10, 2017 from http://blogs.plos.org/neuroanthropology/2013/06/30/lisa-barrett-facing-down-ekmansuniversal-emotions/
- Marsh, H. W. (1968). Negative item bias in rating scales for pre-adolescent children. Developmental Psychology, 22, 37-49. doi:10.1037/0012-1649.22.1.37
- Maruyama, M. (1999). Heterogram analysis: Where the assumption of normal distribution is illogical. *Human Systems Management*, 18(1999), 53-60.

Mead, M. (1932). Contrasts and comparisons from primitive society. Annals of the American

Academy of Political and Social Science, 160(1), 23-28.

- Mellor, D., & Moore, K. A. (2014). The use of Likert scales with children. *J Pediatr Psychol*, 39(3), 369-379.
- Morgan-Short, K., Finger, I., Grey, S., & Ullman, M. T. (2012). Second language processing shows increased native-like neural responses after months of no exposure. *PLoS ONE*, 7(3), e32974. doi:10.1371/journal.pone.0032974
- Muris, P., Meesters, C., & Diederen, R. (2005). Psychometric properties of the Big Five Questionnaire for Children (BFQ-C) in a Dutch sample of young adolescents. *Personality and Individual Differences, 38*, 1757-1769.
- Takooshian, H., Mrinal, N. R., & Mrinal, U. S. (2001). Research methods for studies in the field. In. L. L. Adler, & U. P. Gielen (Eds.), *Cross Cultural Topics in Psychology* (2nd ed.), pp. 29–46. Westport, CT: Praeger.
- Yau-Fai Ho, D., & Wu, M. (2001). Introduction to Cross-Cultural Psychology. In. L. L.
  Adler, & U. P. Gielen (Eds.), *Cross Cultural Topics in Psychology* (2nd ed.), ch. 1.
  Westport, CT: Praeger.