



Cognitive Anthropology’s Contributions to Cognitive Science: A Cultural Human Mind, a Methodological Trajectory, and Ethnography

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Does Cognitive Science (CS) need Anthropology, and specifically Cognitive Anthropology (CA)? The answer is yes! The contributors to the *topiCS* issue seem to agree. So, why write this commentary? After reading the issue, I found myself compelled to indicate three fundamental reasons why the answer to the question is positive. I recognize that these reasons have been lightly mentioned in the various contributions. However, I am convinced that readers might not come out with the necessary clarity about their relevance in the debate. These are the reasons:

1. CA makes the mind human, that is, cultural.
2. CA suggests a multimethodological trajectory for research on the mind that is not realized by any other field of research in CS.
3. CA brings ethnography to play a salient role in the research about the mind.

The working of the mind is not available for internal (introspection) nor external observation. It can only be inferred from its instantiations, or better, from what it generates, that is, behavior (including linguistic). A standard procedure in studying the mind has been that of experimentally restricting the focus of the investigation on few variables that could be easily controlled. In addition, the population investigated has been reduced—typically, undergraduate students in one’s institution—in the conviction that findings could be attributed to any human mind.

The limits of this research agenda and methodology have been indicated by many contributors to the special issue (see Beller, Bender, and Medin; Boster; Levinson; Unsworth). The “weird” (see Henrich, Heine, & Norenzayan, 2010) population used can undermine the “atomistic” approach insofar as it may discover “atoms,” that is, specific working aspects of the mind, from which to build a mind that does not correspond to the one of any other population. This is where CA makes its first important contribution: It

studies the mind as embedded in molar (not atomistic) experiences, both daily and exceptional, for example, rituals, and in non-weird populations. In other words, CA treats the human mind as a cultural phenomenon. Mind is the engine that generates cultural behavior (including language); thus, it is to be expected that these molar phenomena are bound to reveal salient cognitive properties.

The second important contribution that CA makes is its use of a multidimensional methodological trajectory. By this I mean a methodology that includes a number of strategies to acquire three types of data and a varied set of analytical procedures. The data deemed necessary are ethnographic, linguistic, and experimental. The analyses conducted on these data are both interpretative and quantitative.

Research in CA usually starts with a period of ethnographic data acquisition by means of participant observation. The information collected about the culture/community ranges, for example, from kinship to subsistence activities and from rituals to beliefs about health. These data are used to discover salient domains of knowledge to be investigated. In addition, appropriate cultural strategies for interviewing and/or conducting experimental activities are highlighted and used to construct tasks to be administered. In other words, the ethnographic data provide guidance in choosing acceptable tasks, the appropriate language to use, and the culturally correct people to whom administer the tasks. The semistructured interview is the strategy typically used to acquire linguistic data (Quinn, 2005). Other common data acquisition activities include free listing tasks, pile sorting tasks, frame elicitation, inference tasks, rating tasks, memory tasks, drawing tasks, administration of a questionnaire, and others (see Bernard, 2006; Ross, 2004).

The acquired data undergo a number of analyses that include discourse analysis (e.g., key words, metaphor, and reasoning) on transcribed texts of interviews and statistical procedures. The ones commonly used are frequency, multidimensional scaling, clustering, correlations, and others, including social network and consensus analysis. Not all CA researchers use all of these activities and analyses. However, the overall tendency is to have a multimethods approach that covers many of the data acquisition activities and data analysis strategies indicated (see Atran & Medin, 2008; Bennardo, 2009; Quinn, 2005). The rationale being that entering the mind from a variety of points might provide sounder validity to the findings.

Finally, CA assigns a relevant role to ethnographic data. I have already indicated that they are used to shape the research by providing the necessary information to be able to focus on a domain of knowledge as well as to construct the appropriate methodological tools to investigate it. In addition, these data are used to interpret the results of the analyses conducted on the data. The richness they provide contributes saliently to the validity of the conclusions one may eventually draw during the interpretative process.

References

- Atran, S., & Medin, D. L. (2008). *The native mind and the cultural construction of nature*. Cambridge, MA: The MIT Press.
- Bennardo, G. (2009). *Language, space, and social relationships: A foundational cultural model in Polynesia*. Cambridge, England: Cambridge University Press.

- Bernard, H. R. (2006). *Research methods in anthropology*. New York: Altamira Press.
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33, 61–135.
- Quinn, N. (Ed.) (2005). *Finding culture in talk: A collections of methods*. New York: Palgrave Macmillan.
- Ross, N. (2004). *Culture and cognition: Implication for theory and method*. London: Sage Publications.

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A Biological/Computational Approach to Culture(s) Is Cognitive Science

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Beller, Bender, and Medin rehearse an often repeated statement (challenge 1a): “Cognitive science is not on the right track” because it “never took some of the crucial dimensions of cognition seriously.” Namely, “from the very beginning, they have excluded some fundamental dimensions of cognition from examination—*affect, context, culture, and history [...]*” (p. 345).

To overcome this criticism, I suggest promoting the following perspective on cognitive science. A cognitive approach to any phenomenon—*action planning, face recognition, language, culture, arts, religion, etc.*—views it as the product of the human brain/mind (or, as the emergent product of interacting brains/minds). The focus on the brain invites biological aspects, while studying the mind entails the computer metaphor. Bottom-up (neuron-to-phenomenon) and top-down (phenomenon-to-neuron) approaches together aim to understand how information flow in the brain produces the observable abilities of the mind. Indeed, many in the first generations of cognitive scholars decided to deny, ignore, put in parenthesis, or underplay the above-mentioned “fundamental dimensions of cognition.” Yet I suggest viewing their decision as a—conscious or unconscious—research strategy, dealing first with (over)simplified cases. Imagine physics if Galilei and Newton

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