

## EDITORIAL / ÉDITORIAL

# CSBBCS at Ryerson University and the Embodied Cognition Debate

Stephen J. Lupker  
University of Western Ontario

The last official task for an outgoing past-president of the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS) is to organise the Past-President's Symposium at CSBBCS's annual meeting. It was my opportunity and pleasure to be responsible for that task for the 2014 meeting at Ryerson University in Toronto.

The topic of the symposium was embodied cognition, that is, the role of sensorimotor processes in cognition. When I was in the process of selecting a topic, embodied cognition was not an immediate choice (which would not come as a surprise to anyone who knows what my own research areas are). However, when I was mulling over the possibilities while at the 2013 CSBBCS meeting in Calgary, two of my colleagues were only too happy to point me in that direction. I am glad they did. Those who are monitoring the cognition literature today certainly will have noticed that there is an increasing number of researchers arguing for the role of sensorimotor processes in cognition, that is, for the reality of the idea that some or much of what we think of as cognition does not take place at an abstract representational level. These types of arguments are, of course, completely counter to what many of us older folks have always been led to believe. The basis of cognition must be abstract. Isn't that the way computers work and aren't they merely devices designed by humans based on what humans assume they, themselves, do (except computers tend to be a bit faster and more accurate)? In fact, isn't that what separates us from lower animals, the fact that we think abstractly? The battle clearly had begun and there did not appear to be any shortage of proponents on either side.

My goal in setting up the symposium, therefore, was to find two of the most committed proponents of the embodied versus abstract positions and then coax them to come to Toronto (with one important requirement being that I could put them together in the same room). Doing so was actually fairly easy. Art Glenberg, who has been one of the strongest proponents of the embodied perspective for years, was a former instructor of mine in graduate school (although only a youth himself at that time), making his invitation a particularly easy call. Finding Art an opponent was only slightly more difficult. Brad Mahon and I had shared a long-time interest in picture–word interference phenomena and, more important, he had, in a short time, become one of the leading proponents of the abstract represen-

tation position. Having selected the opponents, all that was lacking was someone to set the battleground and, if necessary, referee. Mike Masson was an obvious choice. Embodied cognition has been one of Mike's interests for a long time, and his words on the topic are inevitably measured as well as typically being spot on.

The resultant symposium was, as has been described to me on numerous occasions, a big success. As a result, Penny Pexman, the current editor of this journal, asked me whether we could turn the symposium material into a set of papers. Even with all their other commitments, the three participants were more than happy to oblige. In that process, I have served as a special editor and I must say that it has been quite a bit of fun. I cannot imagine having an easier group of people to work with.

What you will find when you read these articles is, initially, Mike laying out the issues in a way that will sharpen them for readers of the articles to follow. Art then presents his case for the claim that all cognition is embodied. That is, not that *much* of cognition is embodied, but that *all* of it is. As he states at the end of his abstract, "Embodied cognition is not limited to one type of thought or another: It is cognition." Brad is up next and, needless to say, he takes quite the opposite view, that thought and action are independent and, as he concludes in his abstract, "that independence is made possible by the representational distinction between concepts and sensorimotor representations." Nonetheless, Brad also wishes to argue that "the embodied/nonembodied debate is either largely resolved, or at a point where the embodied and nonembodied approaches are no longer coherently distinct theories." The first component of this claim flows directly from Brad's arguments in support of abstract representations. The latter component is a bit of curve ball. Are the theories truly not distinct anymore? Has the argument between the supporters of the two positions become a false one, perhaps based only on how the two groups define their terms? Well, needless to say, Art, in his rebuttal, makes it clear that he does not tend to agree while at the same time proposing what he refers to as "a partial compromise," one intended to provide a type of merging of the two positions.

To describe the two rebuttals in any more detail would only serve to spoil the ending. As I said earlier, I have really enjoyed this experience, including writing this prologue. My goal in writing it has been to entice the typical reader of this journal to have a look at these articles, articles on a topic that he or she perhaps had only a fleeting acquaintance with prior to today. And, for those of you who do accept my invitation, if you find your interest in the debate has been stimulated, the next time

---

Correspondence concerning this article should be addressed to Stephen J. Lupker, Department of Psychology, University of Western Ontario, London, Ontario, N6A 5C2, Canada. E-mail: [lupker@uwo.ca](mailto:lupker@uwo.ca)

you see any of the authors at a conference, come up to them and let them know what you thought about what they have written here. Everyone loves to talk about their own work and I am sure they will tell you something new and interesting about their position, something that was not in these articles and that you had not thought about before. And maybe that will stimulate you even more to think about what it is that we, as humans, are

doing when we think about things. It is certainly the case that questions about the nature of human thought and what makes it up have been with us for a very long time, and that situation does not appear likely to change any time soon. Equally important, it certainly appears to me that the specific question of what role sensorimotor representations play in our thought processes will be with us for many years to come.