

Still playing 20 questions after all these years

In 1973, Allen Newell published a paper entitled “You can’t play 20 questions with nature and win”, encapsulating his views on a symposium that featured the work of the best experimentalists in cognition at the time, including such luminaries as M. Posner, R. Shepard and H. Simon. The comments by Newell raised a series of important questions on whether the research by this distinguished group if extended over a longer period, would ultimately add up to genuine progress in psychology. Newell in fact argued that despite the apparent fecundity of experimental results, clarity is never achieved. As he put it, “matters simply become muddier and muddier as we go through time”. In this talk, I will summarise the details of Newell’s critique. I will then turn to three central issues in my own research domain and will argue that we continue to engage in exactly the same methodology that Newell described nearly 50 years ago as ultimately leading to “an ever increasing pile of issues, which we weary of or become diverted from, but never really settle.” The three issues are: (i). What is the nature of the representation(s) generated by the image of a graspable object like a frying pan? (ii). What is the nature of the representation(s) of the image of a left/right hand posture presented from a first-person perspective? (iii). What is the nature of the representation(s) generated by the image of left/right hand superimposed on the image of a graspable object like a frying pan? I will clarify why these three questions deal with a set of issues that is of considerable importance to our understanding of the relationship between perception and action. I will also show that despite the confusion (i.e. mutually contradictory published results) that now exists in regard to these three questions, there is in fact a clear way of approaching each of them that if adequately pursued, would indeed constitute genuine progress.