Title: Cognitive Processes and Collaborative Working Technologies: The Point of View of a Psychologist

Abstract
Although it is evident that either the technological aspects of collaborative working and human competences and performances in using new technologies derive and are influenced by several cognitive processes no agreement exists as regards not only the number but also (and more importantly) the nature of these cognitive processes. A major point of debate resides in the newly introduced concept of “distributed cognition” due to the multiplicative effect of knowledge diffusion besides individual minds and social relationships, also among technological artefacts and different artificial systems. Distributed cognition is highly supported by external devices and therefore emphasizes the role of facilities external to the mind in developing knowledge not only as regards existing technology but, in particular as regards the “user-generated-content” devices and the practise of file-sharing. Distributed cognition, being no longer a subject’s property, requires a new circular and dynamic model of the organism/environment relationships entailing a redefinition of the psychological system so as to include both the organism – playing the leading role – and the environment, as inseparable interacting components (Olivetti Belardinelli). In the unified viewpoint of the organism-environment system a simple operative value is assigned to the distinction between subject and object, understood as subsystems interacting by virtue of their essential structure.

In the case of the new communication and working technologies this dynamic model allows to describe the progressive coincidence of agency and agent in an emergent interconnected subject behaving in a generative and proactive way more than in a reactive one. This collective agency is based on the shared reliance on collective efficacy as attribute emerging at a group level, following cooperation and interaction dynamics. Once more the relationships between technology and cognitive achievement is double-bounded since technology allows the emergence of what De Kerckhove calls “collaborative or connective intelligence” which in its turn has a multiplicative effect on technology development.

The existing literature about the cognitive processing by the collaborative intelligence will be discussed in the light of the abovementioned dynamic model requiring a combined objective- and subjective-oriented method for assessing accessibility and usability of the “cognitive web”.

About the speaker
Prof. M.O. Beraldinelli is Full Professor of General Psychology, first chair, at the Faculty of Psychology; lecturer in Cognitive Psychology; President of the interfaculty laurea course in Psychology of Information Processing and Knowledge Representation at the University of Rome “La Sapienza. Director of the Interuniversity Center for Research on Natural and Artificial Systems (ECONA); founder of CIRID (Interdisciplinary Centre for Integrated Research on Disabilities). Director of the Laboratory of Cognitive Psychology and Science. Editor of “Cognitive Processing – International Quarterly of Cognitive Science”. Consulting Editor of “Musicae Scientiae”. Organizer of the International Conference on Spatial Cognition (ICSC) held each three years.Organizing Partner for Italy of the International Master Course “Multilingual Writing Cognitive Processes” in the frame of the Erasmus Mundus Program.

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