

Chapter III

The Mediating Effect of Material Cultures as Human Hybridization

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ABSTRACT

We already are hybrid humans, fruit of a kind of co-evolution of both our brains and the common, scientific, social, and moral knowledge we have produced by ourselves, starting from the birth of material culture with our ancestors until the recent effects generated by the whole field of information and communication technologies (ICTs). We all are constitutively natural-born cyborgs; that is, biotechnological hybrid minds. Our minds should not be considered to be located only in the head; human beings have solved their problems of survival and reproduction, distributing cognitive and ethical functions to external nonbiological sources, props, and aids, which originate cultures. This chapter also illustrates the interplay between cultures and distributed cognition, taking advantage of the so-called disembodiment of mind, and stresses the problem of the co-evolution between brains and cultures. The second part of the chapter is related to the analysis of the interplay between cultures and cognition and of some consequences concerning the problem of intercultural communication in light of the role of moral mediators, docility, and cyberprivacy. Finally, I discuss some suggestions concerning the problem of what I call the principle of isolation of cultures, with respect to the effects of ICTs.

CYBORGS AND DISTRIBUTED COGNITION

Following Clark's (2003) conclusions on the relationships between humans and technology, especially information- and communications technologies (ICTs), we all are constitutively natural-

born cyborgs; that is, biotechnologically hybrid minds¹. Less and less are our minds considered to be in our heads; human beings have solved their problems of survival and reproduction by distributing cultures and cognitive functions to external nonbiological sources, props, and aids. Our biological brains have delegated to external

tools many activities that involve complex planning and elaborate assessments of consequences (Clark, 2003, p. 5). A simple example might be how the brain, when faced with multiplying large numbers, learns to act in concert with pen and paper, storing part of the process and the results outside of itself. The same occurred when Greek geometers discovered new properties and theorems of geometry; they manipulated external diagrams to establish a kind of continuous cognitive negotiation with a suitable external support (e.g., sand or a blackboard) in order to gain new important information and heuristic suggestions.² The use of external tools and artifacts is very common; cognitive skills and performances are so widespread that they become invisible, thus giving birth to something I have called *tacit templates* of behavior that blend internal and external cognitive aspects (Magnani, 2001a).

New technologies will facilitate this process in a new way: on a daily basis, people are linked to non-biological, more-or-less intelligent machines and tools like cell phones, laptops, and medical prosthetics. Consequently, it becomes harder and harder to say where the world stops and the person begins. Clark contends that this line between biological self and technological world has always been flexible and that this fact has to be acknowledged both from the epistemological and the ontological points of view. Thus the study of the new anthropology of hybrid humans becomes important, and I would add that it is also critical for us to delineate and articulate the related ethical issues.

I certainly share Clark's (2003) enthusiasm in philosophically acknowledging our status as cyborgs, but I would like to go further in order to do more than just peer through the window of his book at the many cyberartifacts that render human creatures the consumer cyborgs we are.

Our bodies and our selves are materially and cognitively extended; that is, meshed with external artifacts and objects. This fact sets the stage for a variety of new philosophical and moral questions

related to the role of cultures in our technological world. For example, because so many aspects of human beings are now simulated in or replaced by things in an external environment, new ontologies can be constituted, and Clark would agree with me. Pieces of information that can be carried in any physical medium are called *memes* by Dawkins (1989). They can stay in human brains or jump from brain to brain to objects, becoming configurations of artificial things that express meaning, like words written on a blackboard or data stored on a CD, icons and diagrams on a newspaper, configurations of external things that express meanings and cultural units like an obligatory route. They can also exist in natural objects endowed with informative significance (e.g., stars), which offer navigational guidance. In my perspective, the externalization of these chunks of information is described in light of the cognitive delegation on which human beings concentrate in material objects and structures. Like memes, cultural units are distributed everywhere, thanks not only to their dissemination in brains but also to their embodiment in various kinds of external materiality, objects, and artifacts of various types (see section on Artifacts and Intercultural Communication and section on Cultures, Counter Cultures, and Docile Humans).

Beyond the supports of paper, telephone, and media, many human interactions are strongly mediated (and potentially recorded) through ICTs (e.g., the Internet). What about the concept of identity, so connected to the concept of freedom? At present, identity has to be considered in a broad sense; the externally stored amount of data, information, images, and texts that concern us as individuals is enormous. This storage of information creates for each person a kind of external data shadow that, together with the biological body, forms a cyborg of both flesh and electronic data that identifies us or potentially identifies us (see the subsection Mediating Individual Privacy and Identity and the Principle of Cultural Isolation: The Role of ICTs). I contend that this complex new

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