and robotics. 2. If a computer is not just an ordinary object, what is it? 3. If we cannot clearly answer this second question, what should we do? 4. Splitting the Man-Object continuum into three categories Man-Computer-Object could be a solution, but this would mean that a computer is not an object. Is it entirely plausible to make this statement? Some machines, due to their form and behavior, look more human than others. How many categories would we need?

In this context, one could even say that computers are object *and* human, but this would entail the existence or creation of an overriding ontological category to Man which we as humans may not be willing to accept; it could also be interpreted as introducing foreign elements into our definition of humans. Some might say that computers 'create' modern Man as they give those that were not previously particularly efficient or creative the power to be so. If one were to accept this last line of thought, one may have difficulty explaining why modern computers are not gods or at least superior to Man. All in all, the new phenomena observed in our information society may force our cognitive values to change. It is therefore time to equip ourselves for addressing these issues.

2 Computers, Continuums, and the New

The four questions above arise out of a practical problem that concerns the public at large in the new Communication Era, Knowledge Community or Information Age and brings us to the question of why it is not possible to establish steadfast boundaries for ordinary objects or things, and why it is necessary to renew essential categories from time to time. So if we were to split the Man-Object continuum into three categories Man-Computer-Object it would create a definitional working space for those working on the notion of computer, and keep the human and object definitions "safe" from this enquiry. Or would it? The very fact that we are considering establishing a 'central category' would imply that we consider reducing the maneuvering space within the categories of Man and Object. To create the computer category, one would have to accept a reduction of the human category. But then again, some of those who would isolate intelligent machinery in its own category take such a reduction for granted as their main goal is to preserve the essential qualities and character of the present definition of Man. This would not impede our enquiring into the central category.

If we were to take the example of a very sophisticated computer that is able to see what its user was doing, to sense when he is in difficulty, to understand intuitively the intentions the user has, to hold similar beliefs to man and be able to speak, this would help us to see that it is very difficult to reduce the notion of machines and robots down to mere objects, especially if one is projecting into the future. I believe that man will be able build a human-like machine that will fool many into thinking it is human; I also firmly believe that man will be (or is) able to modify himself to a point that some would say he is no longer human. I am speaking both about advanced humanoid robotics and transhumanism without wishing to discuss

why we should or should not accept new forms of life similar to our present state or those that deviate from it. All I wish to do is to firmly ground the question: "Should we redesign Man?" by, hopefully, providing the key elements required to discussing these increasingly important matters. Besides, rules, maxims or other rigid devices of science have never made final decisions a congenial experience to live with for everyone. In contrast, proper terminological foundations help us to make sense of decisions, whether we accept them or not.

3 Two Techniques for Human Modification

There are basically two approaches that can be used for modifying artificially the human species. The evolutionary process has changed and possible further diversification of it may come about especially if humans play a role in guiding evolution. The two approaches can be separated by their starting points. The robotics-based approach generally uses many components that are mechanical in nature, i.e., traditional hardware, though there is a growing tendency to accept organic elements into these constructions. The reasons for using organic materials in the robotics sphere of intervention are various: they are less costly, increase functionality, render the resulting "machine" more lifelike, are less harmful to the environment, and provide jobs for local workforces. The transhumanist approach begins by rebuilding man using one single, very familiar component, the human body. The idea is to use technological advances to modify the body or brain to create a desired effect. This could entail introducing various entities into the body for a variety of reasons: molecules (e.g., using metabolic control for 'slimming', or anti-ageing medicine to stay young or live long), electronic chips (e.g., in the brain to help one understand better or remember more, or in the eyes to improve sight), and bionics (e.g., for increased power).

Perhaps a minor detail would be the difference between implants and transplants. The former generally take the current state of the individual to a greater capacity – picture the average person having Steve Austin's bionic ability to lift and throw heavy objects! The latter aims at bringing one back to a state that has been lost – for example, an elderly person having a hip replacement. The only similarity between the two is that they both augment the person's present state.

Let us go back to the robotics versus transhumanism distinction. Although different, it is important to point out that there are similarities: for both approaches, it is the desired effect that leads to the design of a new being, which means there is a certain willfulness driving us to create a new world. I do not think this drive is new, it is just the techniques that can be used that may surprise people. Change is a concept familiar to us, we are, after all, part of the world's evolutionary cycle.

But it would seem that this short-term aspect of evolution is mainly behavior-based, thus there will be limited change to the identity of what it means to be human. The concept of being human entails a highly social element and a cultural