From the Editors

Arguably the most difficult of all new ethical issues facing us is presented by new technologies permitting what we call in our special section "designs on life." These technologies arose from both research on genetics and from research on reproductive enhancements, particularly medically assisted fertility. It is ironic that, simultaneous with the discussions about euthanasia and physician-assisted suicide, issues of physician-assisted reproduction and roughly, designing life, should also arise. Birth and death, the two most foundational human events, are now medicalized and specialized as moral problems!

What establishes the moral problem, at least initially, is the feeling that science and medicine are permitting us "to play God." Those of us professionally involved in medical ethics would reject that feeling or concern. There is nothing godlike in this new-found control over fertility and the origins of life, just as there is nothing godlike in the control of the dying process. Both are decidedly human actions, sometimes, reminiscent of Nietzsche, "all too human." Nothing is more characteristically human than the wish to control our environment and the circumstances of our lives. In fact, we often distinguish what we can do from divine power by saying such things about the dying process as "let *Nature* take its course," or "God is calling grandma home; let us take her off the respirator." Indeed, we employ the distinction between human and divine or natural processes to comfort ourselves during discussions of the morality of withholding and withdrawing care. For example, we are not directly killing the patient (that is taking dominion over life and death), but rather are letting the natural course of human life play its last cards. The basic processes of life, even dying itself, then occur without human intervention.

In the West we have struggled to separate the divine from the human: witness Augustine's separation of the City of God from the City of Man (from this, one could almost predict that a Descartes would come along and separate the mind from the body). So, we inherit a convenient separation of duties: nature or the divine are in charge of the regular workings of the universe; human beings, on the other hand, are responsible for all technological interventions including science and medicine. Our realm involves tinkering with that universe, even to the point of constantly challenging the values of the past. As the old advertisement for General Electric put it, "Progress is our most important product."

The point to all interventions is to improve upon nature. In fact, we frequently measure the ethics of an intervention by its success in improving on nature. Thus, for example, if assisted reproduction in genetics results in inferior or damaged embryos we would rush to condemn such a technology.

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A good example of this point was the thalidomide interventions of the 1960s, or the fertility drugs that led to daughters with increased risk of cervical cancer. Our instincts are right that intervention carries with it a responsibility for a good outcome.

It is also a Western view of such birth and death ethics that human intervention requires new choices; these in turn require greater "humanity" of participants who must make the choices. Further, such challenges require greater attention to guidelines and rules that carve out the morality of such interventions. For other cultures, however, the mere proposal of introducing new choices is threatening. Unlike the West, their fundamental values are not progress, but stability, not new challenges to old ways of thought, but rather reinforcement of traditional thought processes. Science and art are not so much in service of increased public humanism. Rather they should serve the moral responsibilities of a whole people.

Thus, in the midst of public upheaval and uproar about such techniques as cloning, twinning, and research on preembryos, we must accept moral responsibility for all actions, not only regarding the possibility of tinkering with human beings and even destroying them, but also the implications of these actions for our own culture as well as for others. Science itself cannot suggest the guidelines. What is possible may not always be advisable. We are just on the threshold of establishing the appropriate distinctions and guidelines, just as 20 years ago we were embarking on developing an ethics regarding transplantation of organs and the withholding and withdrawing of care at the end of life.

It is particularly appropriate that in this issue we introduce a new *CQ* section, "Genethics," edited by Charles R. MacKay, in which many of the dilemmas will be addressed arising from advances in human genetics in general. We will be looking at issues in the context of research and development based on discoveries in genetics, the impact on genetic services, policy questions relating to the widespread use of these new technologies, and questions in genetic counseling. We invite your contributions and commentary.