

**Moral Anxiety:  
The Interface Between Biomedicine,  
Public Policy and Ethics**

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“It is difficult to enough to understand who we humans really are  
let alone who we might, or should, become.”

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## **I. Introduction**

I want to begin by saying how pleased and honored I am to have been asked to present this year's Martin Lecture. First, I am glad to have the occasion to acknowledge the contributions of Dr. Martin to the founding and flourishing of the American College of Surgeons. Second, I am grateful for the opportunity to express publicly my gratitude to the members of the American College of Surgeons, past and present, for their historic and on-going contributions to the health and welfare of so many people.

I have to say at the outset, however, that I was somewhat intimidated by the instructions I received after having agreed to give this lecture. They were as follows: be brief, crisp, well rehearsed and make people think in a different way. It usually takes me an entire semester to make my students think in a different way, but I will do my best to be responsive to these injunctions.

Principally, however, I am glad to be here because, given the startling discoveries that are emerging daily on the scientific and clinical frontier, it is more vital than ever for clinicians and scientists like yourselves, and other citizens such as myself, to be engaging in serious conversations about the significance of such discoveries for our joint future. The key objectives of such conversations would be to help insure that these truly remarkable discoveries are used in a manner that not only helps us relieve pain and suffering, but enables us to give greater meaning to the lives we live together.

New technology does not have a life or mind of its own. Rather, it is we who give it shape and meaning. Discovery itself is a great achievement, but only the manner in which this new knowledge is used impacts our lives. My remarks today are animated by the fact that we often forget that with the power of new knowledge comes the responsibility to use it in a manner that will best serve humankind. Moreover, in an era that is overflowing with new discoveries, it is important to recall that the more knowledge we have the more capacity we have, and the more capacity we have the greater our ethical responsibilities.

One of the great ethical challenges of this extraordinary age of scientific discovery is to ensure that we deploy our new knowledge so that it will strengthen our communities and yield the greatest benefits to our entire society. New knowledge by itself has little moral or ethical content. It is, by itself, neither a good nor a bad thing. New knowledge achieves its moral and/or cultural relevance only when we decide how we will use it.

For example, the ethical implications of using new insights in physics to develop an atomic bomb are different from using this new knowledge to develop nuclear power. Similarly, the ethical implications of using new discoveries in biology to produce more effective medications is different from using these same discoveries to produce more effective biological weapons. A determined search for new knowledge unmediated by human concerns does not always work out well. The history of the 20<sup>th</sup> century reveals, for example, that when an aggressive search for new knowledge unites with the ideology of dictatorships, what can result is a devaluing of both human life and the worth of each individual. It was in these circumstances that science was used, for example, for activities like the notorious Nazi medical experiments.

Once again, therefore, new knowledge is neither good nor evil. Rather it gains its moral and ethical status through the very human decisions regarding how this new knowledge is used. All new discoveries, therefore, immediately raise important ethical issues, since they require us to think through just how this new knowledge will be deployed. The question constantly before us is: Will our new knowledge be focused on uses that give greater meaning to our lives and the lives of others or will it be used for trivial or even frightening and, therefore, immoral purposes? I hope my remarks today will play some small role in sensitizing us to our increasing ethical responsibility to use our rapidly expanding knowledge base to create a better and less frightening world.

This challenge has become dramatically more salient at this turn of the century moment when developments in human genetics have erased the time-honored boundaries between the social and biological, and between the natural and man-made. This in itself is a traumatic development since the boundaries between the social and biological and the natural and man-

made, which just a few years ago were considered almost impermeable, lie at the heart of how we understand what it means to be human in the moral sense. We use these boundaries to tell us, for example, what aspects of the world we experience are under our control and which are not. They define, if you like, our sense of mortality and the ultimate boundaries of the human condition. Little wonder, therefore, that the loss of these “guidelines” make many thoughtful persons somewhat anxious. Moreover, this new genetic knowledge has the unsettling characteristic that it simultaneously seems remote from our experience and yet very intimate (i.e., uniquely personal). No wonder so many are alternatively awestruck and anxious about these developments.

With this background, I want to focus my remarks on two principal objectives. First, I would like you to leave this year’s Martin Lecture with a fuller understanding that change and anxiety are constant and, indeed, welcome companions in life’s journey. Anxiety and change can be welcome companions in life's voyage either because existing anxieties and concerns themselves hasten needed change, or because change itself leaves some anxiety in its wake. Thus, I hope you will leave the room understanding that not all types of anxiety require Prozac! Indeed, I would like to convince you that some types of anxiety, especially moral anxiety, might be a very good thing.

Second, I would like you to leave this room with the understanding that in a pluralistic society no one set of ideas can occupy the moral high ground alone. If a democratic and pluralistic society is to avoid moral tyranny we must learn how to live together in a mutually supportive way without reaching full consensus on all moral issues.

## **II. The Critical Interface**

Within the framework of these two objectives, the title of my remarks, Moral Anxiety: The Interface Between Biomedicine, Public Policy, and Ethics, probably requires some

explanation. Let me first deal with the interface between the three areas of biomedicine, public policy, and ethics.

One facet of this three-dimensional interface, the interface between clinical medicine, medical investigators, and ethics, has ancient roots. After all, the Hippocratic oath probably is one of the most widely known aspects of ancient Greek culture that continues to have resonance in the popular mind. This ancient oath makes it clear that physicians have concerned themselves with the interests of their patients and, thus, their ethical responsibilities to them for a long time. In addition, the moving words of this ancient oath set in motion one of the great moral traditions of the medical profession; namely, that there was an inseparable bond between professional expertise and professional and personal ethics. The interface of medicine and ethics, therefore, has a long and venerable history.

While the interface between medicine and public policy is of much more recent vintage, it is clear to everyone that public policy, for good or ill, now exerts an enormous influence on the size, scope, and nature of both clinical medicine and all phases of biomedical research. Further, both of these important human endeavors; namely, clinical practice and bio-medical research, are increasingly sensitive to ethical concerns. This increased sensitivity to ethical concerns is not primarily driven by the clear evidence that a few people have, from time to time, behaved badly, but by the fact that our ethical responsibilities are growing along with our wealth and our knowledge base and that we now take ethics more seriously.

What, however, does moral anxiety have to do with the interface between medicine, ethics and public policy? Let me begin to address this particular matter by returning to the issue of anxiety and change.

As I have already noted, I believe that certain kinds of anxiety may be a very good thing, since a certain level of anxiety often is the providential spark that initiates a period of long-awaited and refreshing social or political or technological or economic change. It is very often the case, for example, that moral anxiety, or even moral outrage, regarding some aspect of

existing arrangements or accepted norms – whether in science or society – is responsible for the social or political or scientific mobilization required to bring about necessary change.

Scientific and/or social change does not happen by itself. Rather such change is generated by a certain level of unhappiness, or anxiety, about existing arrangements or understandings. Attempts to suppress such anxieties, therefore, can become an unproductive and unwelcome effort to suppress needed change and progress.

Moreover, even if anxiety about our current circumstance is not the initiator of change, it is an inevitable byproduct of important social and/or scientific change, since social, political, cultural, technological and economic resources always are redistributed as society moves from one point to another. Anxiety, therefore, whether an omen of necessary change or a signal of important on-going political or economic or social and cultural developments, may be a very good thing! Although anxiety is always disconcerting, it can be a symbol of good things happening or good things about to happen.

Consider, for example, the many voyages of discovery currently under way along the biomedical frontier. These voyages are themselves a profoundly moral activity, since many of them are aimed at contributing to the future relief of human suffering. Moreover, the resulting increase in our knowledge of the natural world helps us understand what it means to be human and where we stand in the broader scheme of things.

At the same time, however, for many people these developments threaten to disrupt important human belief systems that are central to their understanding of the bonds between the generations, our notion of the family, and our understanding of what it means to be human. Furthermore, these belief systems, or human narratives, are essential components of our lives. They inform us of who we are, what we should be doing, and to what end, or why we are doing these things. Disrupting such narratives, or belief systems, can generate a great deal of anxiety.

This is especially the case when scientific developments seem to erode humankind's sense of uniqueness. After all, it took some centuries for humankind to accommodate to the fact

that we were not located at the center of the universe. Moreover, we have yet to fully accept that we are, along with the rest of the animal kingdom, part of the same vast evolutionary scheme.

It will, therefore, also take time to culturally assimilate the meaning of the discovery that we share with all other living things a common genetic code that we may soon be able to manipulate. Further, it is the first time we will be able to extend, in a new and radical fashion, our control over human nature itself. It is not easy to culturally accommodate these facts given that certain key elements of the edifice of moral philosophy that guides our sense of what is good or evil is based on the premise of a relatively unique and unchangeable “human nature”.

No wonder there is a lot of anxiety! Such anxiety, however disconcerting, may not be a bad thing, since it reflects an acknowledgement that some of our central human narratives and belief systems need to be reconstructed. Prozac, or its equivalent, would not serve our needs!

More generally, we have to understand that the moral anxiety regarding developments on the scientific frontier reflects a certain anxiousness, uneasiness, or even fearfulness regarding the nature of the moral responsibilities that accompany our rapidly expanding knowledge of the natural world, particularly as it relates to biomedicine. Regardless of how we feel about such matters, we must at least acknowledge that it is morally challenging to address the question of how we should think about using, for example, our radically enhanced abilities in molecular biology and genetic engineering. Even more difficult is the issue of how we are to think about our ethical obligation, if any, to “improve” the lot of future generations, assuming that we are entitled to have a view regarding what future persons will be like and what they would prefer.

These matters are hardly abstract, since they relate to such “practical” issues as the morality and nature of family planning, population policy, and genetic engineering. Whatever else we may believe, clearly we are at a moment when the encounter of biomedicine with ethics and public policy is both more frequent and increasingly uneasy. I would like, therefore, to be more specific about a somewhat broader set of interrelated factors that now seem to dovetail to create all this anxiety.

### III. Other Sources of Anxiety

First, there is the traditional and rather ancient concern about whether all this new knowledge will enhance or threaten the human condition. Since the earliest days of Western history, there has been the constant concern of how we were to understand the nature of what it means to be human within the context of our ever-increasing knowledge of the natural world. The Bible itself at the very beginning -- in the Genesis account of the Garden of Eden -- is ambivalent regarding whether we are meant to control and exploit nature or praise, protect and celebrate it. While there is much to celebrate regarding new discoveries in human genetics, these same discoveries make many increasingly anxious about what it means to be human in a moral sense and present a direct challenge to long-held cultural beliefs regarding the nature and meaning of our efforts as members of human communities.

There is an ancient mythological figure who symbolizes the potentially double-edged nature of technological/scientific discoveries as well as the anxiety that often surrounds such discoveries. This figure is Prometheus, the god who brought fire to mankind. On the one hand, fire provides a foundation for civilized life, but on the other hand it can also destroy in a moment all that civilized man has built. Prometheus is often thought of as the patron saint of technological progress. Nevertheless, his story embodies the anxiety that can accompany such progress, since this unsurpassed benefactor of mankind is chained to a rock for eternity because Zeus thought he gave mankind too much power and brought them too close to the gods. His story is one of both grandeur and anguish, and some would say it is not unlike our own history of technological progress.

Second, this heightened level of moral concern, or anxiety, also emanates from the sudden fragility of traditional reference systems such as the great Western religions, brought about, at least in part, by the uncertain status of previous truth claims. Moreover, even in the broader geopolitical environment, the world of easily identifiable contending powers and ideologies is slipping away. There is, therefore, across many frontiers some shattering of previous coherencies. We are, for example, growing both more global and more divided and



both more inter-connected and more intricately partitioned. We are unsure of who we think we are, what we are doing, and to what end. We are, therefore, quite anxious.

Third, every day we discover once again that science says very little about what is morally right or about how we should act. The ever popular Faust legend, which focuses on the limits of scientific understanding, speaks once again to aspects of our human existence that lie beyond our ever-expanding understanding and control of nature.

Fourth, there is a broader awareness that scientific progress is necessarily accompanied by a certain level of unpredictability and risk since we cannot be sure of all its implications or applications.

Fifth, our anxiety may stem from the modern enterprise that invests so much moral authority and moral responsibility on the shoulders of the individual. This central commitment to the autonomy and the intrinsic worth of each individual values requires a set of social institutions and values that accommodates the multiplicity of interests that arises from a wide diversity of individual circumstances and historical contexts. As open-minded and as modern as this approach is, it also validates many different interpretations of the common good. In this context, it can be difficult to define a broad set of common principles that also accommodates local moral processes and individual autonomy. Such moral diversity and flexibility, and the sacrosanctity of the individual human being, however attractive, may raise the moral anxiety of us all.

Sixth, despite the rich, inspiring and diverse array of current thinking in moral philosophy, the fact is that in the West we lack a compelling consensus on many ethical issues. Consequently, no one set of ideas can claim exclusive control of the moral high ground. The hope and promise of a pluralistic democracy is a willingness to extend respect and understanding to those with whom you have some disagreement. Thus, we cannot escape the anxiety that characterizes a situation where the justifiability of many ethical claims remains uncertain, and we are, therefore, often anxious about how we should act. However, the alternative to this anxiety is moral tyranny.

#### **IV. Conclusion**

The challenge we face is that in an age where many remain in the thrall of scientific discovery, others have an increasing ethical uneasiness about what this all means for our obligations to each other, our obligations to future generations and for the special moral meaning, if any, of being human. One of the great responsibilities facing us in the twenty-first century is to consider the social and human repercussions of our rapidly accumulating new knowledge and the appropriate stance of public policy in this respect. This responsibility is especially acute in the areas touched by genetics given our enhanced capacity to transform the lives of all manner of plants and animals, including ourselves. The question for many is where can we locate the non-scientific and non-market resources to more adequately respond to the full human implications of the vast changes in the biomedical frontier that now drives us forward.

One of the characteristics that make humans special is our capacity to put ourselves in the mind of another and to understand what they believe and desire. Clinicians and clinician/scientists, therefore, can put themselves in the minds of those who are neither clinicians nor scientists and vice versa so that we can try to understand each other better. This is what ethics is all about; namely, taking the thoughtful interests of others into account when we act. Indeed, crossing these barriers is a special responsibility of the informed and motivated imagination. Moreover, taking the interests of others into account is not a zero-sum game. While it may put additional constraints on our behavior, it can improve the life of everyone. In any case, I believe that this type of mutual empathetic understanding between those who are exploring the biomedical frontier and other citizens is what is required in order to sustain public support for, and therefore the vitality of, the scientific and clinical enterprise in the genetic age.

Irrespective of one's views on the ultimate impact of advances in biomedical science on the evolving human condition, there seems to be a clear need for all thoughtful citizens to consider the ongoing impact of these developments on those institutions, values and other cultural commitments that give meaning to our efforts and sustain our individual and common

life. It is only by such a focus that science and technology gain their moral and cultural relevance.

It is particularly important that scientists understand that it is not the public's ignorance of science that makes some members of the public uneasy about developments on the scientific frontier. On the contrary, more often than not it is the scientist's ignorance of the quite understandable concerns of the public that is the problem. Indeed, the more educated a citizen is, the more likely he or she is to have such concerns.

Once again, it has become clearer than ever that those engaged in the public policy process and those driving biomedicine ahead cannot escape the anguish and uncertainty involved in trying to create a better future, especially when they involve ethical questions that go to the heart of what it means to be human. In this respect, they and we share the anguish of all true artists; namely, that while the struggle to create a better world is full of anxiety, there is no more rewarding human activity. If we work together and we take our ethical responsibilities seriously, our anxiety can be turned to fulfillment.