

Comment

If you can't take any more of this, please press two

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Published: 28 January 2002

Genome Biology 2002, **3**(2):comment1002.1-1002.2

The electronic version of this article is the complete one and can be found online at <http://genomebiology.com/2002/3/2/comment/1002>

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The widely syndicated columnist George Will remarked that American football - a game characterized by brief bouts of mayhem interrupted by lengthy huddles among the players, or between players and their coaches - exemplifies the two worst features of modern life: violence and committee meetings. Lately I've been tempted to add a third feature to his list: those recorded telephone menus that, it would seem, nearly every organization now uses to avoid paying human beings to answer their phones. Companies argue that this system actually allows callers to be directed to the precise person who can respond to their needs, but I think that's disingenuous. The real purpose of these maddeningly patient, infinitely nested, incredibly stupid mechanical receptionists is clearly to produce so high a level of frustration in callers that they hang up in disgust before bothering anybody.

All of this would be only another annoyance in the catalog of daily irritations to which we are all subjected, were it not for the disturbing possibility that it is symptomatic of something serious: the increasing depersonalization, perhaps dehumanization, of our lives. It is now possible to go through much of life experiencing minimal contact with other human beings: one can rent videos of movies and watch them at home, by oneself, instead of having to deal with a collection of strangers at a movie theater. One can order food to be delivered, and not have to buy it in a crowded grocery store or sit in a room full of other people at a restaurant. And with telecommuting, one can work from home, alone, never meeting one's coworkers face to face.

Technology, and the basic science that produces it, usually gets the blame for all this, but I think that's a bad rap. My reading of history is that the dehumanization of man has usually been done for reasons of religion, or politics, or economics. Of these, economics is perhaps the most ruthless and cold-blooded. Religions, when they dehumanize man, do so either by making God too remote and man too small or by demonizing people whose beliefs are different. Horrible as the consequences can be, at least some sort of moral

imperative (however misguided) is often behind such acts. Political systems dehumanize man by reducing the individual to a dispensable cog in some utopian vision or conflict aimed at preserving the welfare of the state. Again, despite the terrible deeds that have been done in the name of various political ideologies, at least there is sometimes an underlying attempt to craft a better society, even if that vision happens to be perverse. But economic dehumanization has no higher purpose than the creation of profit. And many of the assaults on the dignity of the individual that have been carried out in the name of religion or politics are actually intended to line the pockets of the perpetrators at the expense of the exploited. In a secular, democratic society the great danger to individual human freedom and dignity comes from the desire of people to make money regardless of the consequences, a desire that is justified by devotion not to a god or political creed but to the ideal of free-market capitalism. So, if it adds to a company's bottom line to replace people with tape recordings and speech-decoding devices, companies will do just that, and human interactions will become a little scarcer and our world will get a little colder, and all the while those responsible will wonder why things seem to be going to hell around them.

Of course, the genomics revolution is furnishing those who fear science and technology with plenty of fuel for the fire of their paranoia. Foremost is the fear that all human behavior will be shown to be genetically determined, reducing man to the status of servant of his DNA. Then comes fear of the loss of privacy, of having one's individual genetic information known to employers and insurance agencies and governments. Implicit in this second fear is the first, for both imply that a sequence of bases can tell someone else everything about who we are. It is that assumption, not science and technology, that is actually dehumanizing. Those who fear what biology can learn about our minds and our bodies have already reduced each individual to a gene-programmed automaton, whereas biology in general, and genomics in particular, is actually doing just the opposite. A real understanding of the findings of

genomics should elevate our sense of what it means to be human. We have much the same genetic material as a zebrafish or a mouse, yet our behavior can be - and often is - governed by rational choice, not preprogrammed instinct. There is no obvious gene for heroism, or generosity, or honesty, or loyalty, and in many cases these behaviors seem to act against the interest of the individual - particularly the economic interest. We choose them because they allow us to serve something larger than ourselves, and we have learned to do so slowly, over millions of years. Human evolution occurs not just at the level of our chromosomes, but at the level of our civilization and philosophies.

Genomics should also help put to rest one of the most common grounds that politics, economics and religions use as a justification for human degradation: racial differences. The genomes of black and white, Asian and Hispanic, Native American and Aborigine, are more alike than are the genomes of two related species of chimpanzee. Nor can one justify religious persecution in the cold light of genomics: there is no gene that makes one person a Muslim, another a Hindu, a third a Christian and a fourth an atheist. At the level our genes, a Democrat differs not one whit from a Republican, all Tories look like Socialists, and Communists, Monarchists and Anarchists are indistinguishable. No one can ever again be considered biologically inferior - and therefore less than human - for their religion, or their politics, or the color of their skin. If we understand fully the lesson that the human genome sequencing effort has taught us, we can free ourselves from any danger that we can ever be dehumanized in the name of some god or political principle.

Which leaves only the danger of depersonalization for economic motives. I can see a danger that modern biology might unwittingly contribute to that, because there is a kind of Darwinian, survival-of-the-fittest character to much economic theory and practice. If we try to justify putting profits ahead of people as an expression of our basic biological nature, we ignore all of the progress we have made as a species in mastering our instinctive behavior with our power to think and our ability to choose. So, every time we pick up the telephone and a tedious, obtuse and impersonal recorded menu comes between us and the chance to deal with another person, however briefly, we would do well to remind ourselves that it is not science and technology, but greed and laziness, that are the real threats to our humanity.