The genome project alibi: towards a genetic reductionism?

Could you imagine Bill Clinton and Tony Blair jointly and virtually supporting the completion of the first world wide map in health inequalities? What about the same coverage of a map, on food security in developing countries? Difficult to imagine isn’t it?

Indeed, geneticists are in luck! Ingelfinger rules were not respected at all in the case of the genome project performance we saw last 26 June. Including high tech, the media show we suffered was unique. Not even political appearances to announce new wars have had comparable media paraphernalia. The “book of life” rendered science as the flag of international power. The most powerful countries of the world have hurried to stamp their mark in biotechnology, as public opinion identifies it with the control of life. For some months, having the genome seems the same as having the power. International supremacy is not, perhaps, anymore in the arms race or space conquests.

Probably the real scientific advance is the least prominent issue of all this business. At the end of the story, genes are considered by the genome project ideologists as acting in a vacuum, against all the prevalent frameworks in causal thinking in medicine. Everyone seems to have forgotten that every gene needs environmental causes to express itself. Hence studying genes is only as important as studying their external counterparts, and giving citizens false expectations is the same as lying to them.

From the bottom and to the top, “technical” progress is still relative. From our point of view, the key question is the resultant radical overturn in popular health culture. We are witnesses of the transition from the germs era,1 to the genes one, and the reflection upon political, social, medical, clinical, and scientific implications of this significant change of paradigm now seems mandatory. At the beginning of the new age, it is especially necessary to consider the effects of media messages about genome on public opinion.2 Will they modify the popular notion of aetiology (one disease, one germ) and make us return to the predestination notion?3 Are we in front of a new advance of reductionism? If the germ theory was the landmark for forgetting social causes in public health and advocating biological pathways, will the genome project have a similar and even more narrow meaning and lead public opinion to miss the environmental frameworks of illness?

Calibrating and measuring public messages requires now more than ever extreme prudence. This is why the publication of the 1996 Duncan Lecture in this edition of the journal is timely. Many of Professor Bobrow’s predictions regarding the rapidly advancing field of medical genetics and the human genome project in the 21st century have begun to materialise. The challenge for public health practitioners is not only to become acquainted with the science but also to ensure that effective developments in this area are appropriately targeted to those who can benefit most. As Professor Bobrow highlights, this will not be a simple task. It will require a cadre of dedicated horizon scanners who can practically combine the science and the art of the specialty of public health.

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