

difference at the DNA level was only slightly greater [King, 1975 #915]. The obvious implication was that humans differed more in the timing and quantity of gene expression, rather than which genes there were.

It is far from clear what a proscription on patenting "human" genes would entail, how it could be made meaningful in the law, and whether it would do any good. In most cases, patenting an animal gene and then slightly modifying it for another patent would cover the same material as a human gene. A simple genetic determinism would seem to lie at the root of this equation of DNA with dignity. The factors that distinguish humans from other organisms seem more likely to be nuances of gene expression, development, and environmental response than the collection of genes in the human genome. The brain, for example, is an organ seemingly adapted to be able to change its structure and function in response to environmental stimuli, even more than other organs. No CD-ROM containing Lincoln's DNA sequence could tell us much we would care to know about why he became an historically important figure.

The NIH patent dispute did surface a true international policy dilemma nonetheless, but it was not in patenting policy *per se* but in conflicts between the goal of quickly constructing comprehensive maps and databases as a worldwide scientific effort, and the goal of linking genome research to each nation's domestic economic development. It was not a simple conflict with data-sharing, since investigators in each company could release data as soon as patents were filed. Rather, it was the incentive for each nation to structure its science effort so as to secure its intellectual property rights before the others. Data could be shared only after stakes were claimed, and this could theoretically provoke an international genome gold rush.

If one of the purposes of an international effort was to reduce the duplication of effort that necessarily follows from a purely competitive strategy, then this efficiency was at risk. Taken to an absurd extreme, each nation might choose to attempt to patent the pathways to all human genes before making its data available to others. In this case, all nations would have to map the entire genome. Every nation would be aiming at the same goal, expending its resources to win