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William Raspberry Cornering The Market On Life

The \$33-billion Monsanto/American Home Products merger announced last week is, obviously, an economic, market and financial blockbuster.

Jeremy Rifkin thinks it may be a good deal more than that.

"What we are witnessing," he says, "may well be the end of the petrochemical age and the dawn of the age of genetic commerce."

Genetic commerce?

In his book, "The Biotech Century," as in numerous articles, broadcast appearances and this interview, Rifkin has been pushing the theme that the world's gene pool constitutes the next great source of raw materials for almost every human use or undertaking. Gene manipulation will provide patentable new species of plants, animals and even plant-animal combinations that were unimaginable only a short time ago. The powerful entities in the world will be the owners of these patents.

"Four giant petrochemical companies—Novartis, Hoechst, DuPont and Monsanto—have decided in the last 12 months to sell off their chemical divisions and aim for the genetic market," Rifkin explains. "This new merger will touch off a whole series of mergers to control biology. I'm talking about mergers and acquisitions that will rival, and in some cases even surpass, what's happening in telecommunications. People still think we're headed into the information age, when the real shift is toward the genetic commerce age."

What particularly alarms Rifkin, who is head of the Washington-based Foundation on Economic Trends and a bit of a Cassandra on the subject of gene-splicing, is the prospect that these giant new companies essentially will own the genetic blueprints of all life.

"Within seven or eight years, all 60,000 genes that make up the human genome will be known," he predicts. "That's the first thing. The second is that the patent office has decided that the person who discovers a particular DNA sequence can patent it and license its use. Now think about this. Say somebody isolates and patents the gene that causes a form of cancer. The technician who develops the means of screening for that particular gene—a life-saving technique—could be required to pay a royalty to the person who owns the patent."

It is possible to get a patent on a naturally occurring gene? Washington patent attorney Patrick Cohen says, essentially, yes.

"The patent office has allowed, and an appeals court has upheld, the notion that a DNA sequence can be patented as intellectual property," he tells me. "The only caveat—and it's a pretty thin protection—is that the sequence be 'purified' or 'isolated.' If I were to isolate, say, sodium and describe its naturally occurring function in the formation of salt, there's no way I could get a patent on sodium. I didn't make it. I didn't create it. I merely discovered it. Well, these folk are discovering and isolating genes, not creating them, and while it might be reasonable to grant them patents for their methods of isolating genes, or their techniques by which they use their discoveries, say, to treat disease, to allow a patent on the gene itself doesn't make much sense to me."

And it positively alarms Rifkin, though he isn't quite sure why. "What are we risking? I just don't know," he says. "There's no precedent for dividing up the genetic blueprints of life."

Not that he has any doubt that the effort to do so is already underway. Scientists are not only busily at work here identifying and learning to manipulate genes, he says, but others are traveling the globe looking for rare plant and animal DNA which they can then patent.

"Just to take one example," he says, "10 life science companies now control 37 percent of the global seed market. Pretty soon, maybe half a dozen companies will own 70 or 80 percent of the biological markets."

Rifkin likens the trend to the "enclosure" movement of the 16th century that transformed common areas—formerly available to peasants for farming and grazing—to the ownership of rich and powerful landlords. The giant new companies are, in effect, "enclosing" the most basic of raw materials—genes.

So, I asked him, should I take my genes and run for my life—or buy stock in one of the new conglomerates?

Rifkin wasn't amused. He seldom is.