

## Where has Big Genomics taken us, and what will the future hold?

Below are some thoughts about David Dobbs's recent [piece](#) and 'Big Genomics'; this should not be construed as a 'response':

1. The Human Genome Project was overhyped. Many biologists, even with our rudimentary late 20th century biological knowledge (heh), realized that a DNA sequence would not be the be all and end all. If memory serves (and at this point, who the hell knows if it does), I thought the claims ("cancer cures in five years") were absurd (although here's some 'countersnark').
2. The HGP was absolutely necessary. Does anyone think we're worse off for having done it? Of course we—and the National Institutes of Health—needed a human genome sequence. It's ludicrous to think otherwise. It was going to be expensive—important data always are, one way or another. It led to significant technological and methodological improvements.
3. We need to rethink the underlying model for much of human genetic disease. It seems that thinking about this from a genetic load perspective is helpful: most human disease should consist of rare alleles, unless there is some kind of balancing or environment-specific selection. What this means is that a disease like schizophrenia will often be like Tolstoy's unhappy families—each case (or at least cases in different families) will be schizophrenic in its own unique way, in the same way there isn't 'cancer', but a multitude of different cancers. That we have been as successful as we have been using such primitive approaches with relatively low resolution data (SNPs) is remarkable.

**The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [Thoughts on the Promises of Big Genomics](#)**