

Parallel Session 4: Cultural identity implications in genomics research and communication

**GENETICS AND BEHAVIOR IN THE NEWS:
THE FATE OF GENETIC OPTIMISM**

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Abstract

Context: Research on genetics and behavior has grown in past two decades, which is reflected in an increase in news coverage. The news media is a major source of public understanding of genetics.

Method: We examined U.S. print news coverage of genetics and behavior in major from 1970-95.

Results: The dominant frame of “genetic optimism” was identified: a gene exists, it will be found, it will be good. Despite disconfirmations, genetic optimism persisted in the US reporting.

Conclusions: The genetic optimism frame can distort, misrepresent and reify the impact of genes on behavior, and under represents criticism. Genetic optimism may vary by news culture and time.

Key words: genetics, news, public conceptions

Text

Over the past two decades the pace and specificity of discoveries associating genetics with behavior has accelerated, which is reflected in the increase in news coverage about genetics and behavior. The news media is a major source of public understanding of genetics and a strong influence on public discourse (Nelkin and Lindee, 1995; Conrad, 1997; Van Dijk, 1998; Condit, 1999).

Method and Sample

This paper is drawn from a larger study, which examines the presentation of three cases of genetics and behavior in the news from 1965-1994: homosexuality, mental illness, and alcoholism. The data include all articles published in 5 major American newspapers (Boston Globe [BG], Los Angeles Times [LAT], New

York Times [NYT], Washington Post [WP], and Wall Street Journal [WSJ] and three news magazines (Newsweek , Time , and US News and World Report.) for this period.

My analysis of genetics and behavior in the news I examined what “frames” were used in presenting the news. Journalists do not simply report the “facts”, but rather present the news in the context of a particular frame. Journalists develop specific media frameworks, which enable them to process, report and present large amounts of information quickly and routinely (Gitlin, 1980:7).

Rise of Genetic Optimism

This paper builds upon earlier papers (Conrad and Markens, 2001; Conrad, 2000; Conrad, 2002) and provides brief fate of “genetic optimism.” Using mental illness as the example genetic optimism has three components.

A gene exists. The idea of specific identifiable genes reflects research claims of molecular biology. The news articles frequently reported discoveries of genetic markers or linkage as if the science discovered the existence of a “genetic flaw” or “faulty gene”. Genetic markers are usually particular genetic constellations, rarely specific genes.

It will be found . Even when reporters recognized that genetic markers were not specific identified genes, they displayed confidence that the gene existed and would be found. In the light of the new genetic technology, genes would be identified.

It will be good. The assumption is that finding genes for mental illness will be good for sufferers, their families and society. Most of the stories promised the possibility of accurate genetic diagnoses or new treatments for the disorder could developed soon; some suggested that a genetic revolution in treatment was just around the corner. Others believed that genetic explanations would remove blame from families and guilt from sufferers.

The genetic optimism frame was reflected in virtually all major stories on genetics and mental illness from the 1980s through 1995.

Homosexuality, “the Gay Gene” and the News

Dean Hamer’s 1993 article in Science claiming the discovery of a marker on the Xq28 chromosome, became front page news world-wide and soon was touted “the gay gene.”

I compared the American and British press reporting of Hamer’s study. The American press framed Hamer’s work in “cautiously optimistic” terms: the science was good and it was likely to have some positive effects of gays. The British press, however, framed the stories as “the perils of the gay gene,” emphasizing potential difficulties: new genetic discrimination of gays, genetic

screening, aborting “gay fetuses”, possible genetic therapy (see Conrad and Markens, 2001). The assumption of genetic optimism frame underlied the American reporting, but not the British. Hamer’s work remains contentious, but even if it were valid, it would not constitute a “gay gene” as was commonly depicted in the press.

The Fate of Genetic Optimism

With one interesting exception, genetic optimism was pervasive in the US reporting of genetics and behavior in the news. In the late 1960s and early 1970s and early 1990s (The Bell Curve) there were widespread news stories of studies associating race, genetics and IQ. In both cases, however, the reporting was overwhelmingly critical of genetic explanations. There was no genetic optimism here at all. Why? Perhaps because race was a hot button in the US, because it was (bad) social science and not molecular biology, or because stories were written by news rather than science reporters.

The case of alcoholism parallels mental illness and homosexuality. The title of our paper reflects its content: “Has the gene for alcoholism been discovered three times since 1980?” (Conrad and Weinberg, 1996)..

In my study period, when a new genetic discovery related to a significant social issue is discovered, it is typically presented with great fanfare and optimism. If the study cannot be replicated or is disconfirmed, and there were many (e.g., D2Dopamine receptor and alcoholism, several genes for mental illness, the “novelty seeking” gene), this was ignored or there was a small mention in the back pages. Big news when genes are found, no news when they are lost, creating a misleading public perception about the advances of genetics.

Conclusion

While the scientific accuracy of the gene stories is high, the genetic optimism frame distorts some of the findings, misrepresents and reifies the impact of genes on behavior, and leaves no space for critics or an examination of potential negative impacts. A comparison of American and British press suggests that genetic optimism can vary by news culture. Genetic optimism presents an overly sanguine picture of the state of genetics; as we enter the genetic age it is important to balance the extraneous “hype and hope.”

References

References are available from author: conrad@brandeis.edu