

A Web-based Instrument to Model Social Norms

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Surveys and focus groups are well known methods for ascertaining public perceptions and opinion. The general view is that such tools provide reasonably accurate reflections of public opinion and values, and that the norms employed by people to make decisions are fixed. But what about issues where the public needs to consider novel choices and where no prior experience can be drawn on? Do their preferences and beliefs change when presented with new options and new information? Recent evidence suggests that they do and this paper describes an alternative way of gathering data, which takes into account the dynamic nature of social norms in response to new technologies and their applications. It also discusses the problem with traditional methods of generating information about public opinion and offers a possible solution.

It is widely held that surveys and focus groups are reasonably accurate methods. This accuracy is enhanced if the topic is familiar to respondents, and the heuristics used to make decisions are fixed. However, in the case of new technologies such as genomics or biotechnology, it is difficult to determine whether the information such methods gather is accurate enough to inform public policy.¹ Recent evidence suggests social norms on issues involving breakthrough scientific advances (e.g. prenatal diagnosis or genetically-modified foods) are not as static as originally believed. Preferences and beliefs change when the public is presented with new options and when the consequences of their choices are known. This is of particular importance in the case of biotechnology, since we believe biotechnology poses three central challenges for democratic ethics²: bio-

technology is complex; it is an important field in light of the promises it makes; and biotechnology induces a rapid rate of change.

These three challenges compromise the democratic means by which we want biotechnology to be governed. Biotechnology is difficult for much of the public to fully comprehend, yet our methods of gathering public opinion are based on old assumptions that everyone has an informed understanding of the issues at hand. At the University of British Columbia, our interdisciplinary research team, NERD (Norms Evolving in Response to Dilemmas), has developed a web-based survey instrument to address some of the challenges faced by traditional modes of public consultation. The survey can be accessed online at the following website: <<http://robo.ethics.ubc.ca/~pad/NERD/>>.

NERD is designed to bridge the gap between perceived public opinion and actual response modes for which neither surveys nor focus groups can account.³ It is an online, easily accessible survey that offers respondents the opportunity to answer a carefully constructed set of twelve decision problems. These problems are based both on historical fact and established science, and for each one the respondent has the option to seek information and advice from five well-informed advisors.

NERD is designed to stress test normative decisions with social and technological change and social pressure. By making the survey web-based, it is possible to develop a much more comprehensive picture of public opinion in



many regions, both nationally and internationally. The NERD survey has some distinctive features, but most notable is that it offers respondents the option of seeking advice from various sources while trying to answer questions about new technologies. In addition to providing a richer set of results, NERD is also cost-effective as it allows us to survey thousands of people on three parallel issues of genomics at one-eighth the cost of more traditional consultation methods.

Additionally, our survey instrument provides depth to our analysis of public opinion, since we not only record participants' answers to our questions, but also the time they spend on each issue, their patterns of advice-seeking, and group dynamics or the "herd-effect": half the participants receive real-time feedback of how people have responded before them, and the other half do not. The adaptable structure of NERD allows for modifying the content so that similarly structured surveys can be developed on a variety of topics. For example, our second survey focuses on food genomics (salmon). The data we gather will enable us to model the social structure of norms that other methods overlook.

Although the NERD survey was originally designed to test the primary hypothesis that norms are in fact dynamic and can change when under stress, the structure of the survey permits us to test other hypotheses as well. We have found our method allows us to provide more information than polls, control for social structure, and get ethically deep data in an inexpensive way. The results from our first two surveys on the issues of genomics in human health and salmon confirm the influence of social norms on types of answers given, advice-seeking, and textual contributions. We have found that the feedback/no-feedback groups differ in answers given, advice-seeking behaviour, and optional text contributions. We currently have plans to develop a third survey testing a new hypothesis.

This project is funded through grants from Genome Canada and the office of Genome British Columbia and through the National Science Foundation. We thank our colleagues in the W. Maurice Young Centre for Applied Ethics and the Institute for Resources, Environment and Sustainability, both at the University of British Columbia, who helped us at many stages.

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