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# Biotechnology discourse



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The articles in this special issue of *Discourse Studies* have their origin in an international conference on the way society talks about biotechnology and the implications of that talk. The conference was organized by the Sustainable Biotechnology Project, an interdisciplinary research programme funded by the New Zealand Foundation for Research, Science & Technology, and held in Wellington, New Zealand in late 2005. The focus of the conference, ‘Talking Biotechnology: Reflecting on Science in Society’, was aimed at stimulating constructive dialogue about the role of biotechnology in society. As the conference organizers noted, the future of biotechnology is constructed in the discourse of society and the dialogue between a range of actors from science, industry, government, media and the public.

Biotechnology can be a controversial science that is accompanied by and co-constructed with varied interests and concerns over its implications for areas such as agriculture, food, the environment, medicine and health. As social scientists and discourse scholars, we ought to have an interest in how the discourses surrounding the development of modern biotechnologies have evolved, as well as the implications of those discourses for the conduct of this science and its relations within society. Nerlich et al. (2004: 364) argue that we have a duty to analyse the linguistic and cultural resources used to influence public opinion and policy, given that with biotechnology ‘we deal with the “meaning of life” and the future of our planet’.

The articles that form this issue share an orientation in critical discourse analysis. Critical discourse analysis treats discourse as a form of social practice, a mode of action as well as a mode of representation (Fairclough, 1992). Discourse both constitutes and is constituted by social practices. While discourse is shaped by the institutions and social structures that frame it, it also has constructive effects on knowledge, social relations and social identities (Fairclough, 1992; Fairclough and Wodak, 1997; Iedema and Wodak, 1999). For van Dijk (1993, 2001), critical

discourse analysis focuses on the role of discourse in the exercise of social power – on how discourses produce, maintain and transform dominant positions, such as that occupied by science and its institutions in western society. As Calsamiglia (2003: 142) argues:

From the perspective of critical discourse analysis, what is needed is to explore the different settings in which knowledge circulates, setting out from the supposition that science forms part of the practices of human communities. As such, it takes a dynamic and changing course, is penetrated by the experiences and interests, conflicts and power relations present in social life and expresses itself through language which, in its variety of discourse styles, guides interpretation to determined ends.

The articles in this issue examine the discursive practices and strategies employed in the debate surrounding modern biotechnologies in a variety of public settings outside the laboratory, including agriculture, horticulture, medicine and public policy. They apply a range of discourse analytic techniques to the study of power and ideology in the discursive relations between science, industry, farmers, consumers, government and the public. These techniques include textual analysis, positioning theory and rhetorical criticism.

In 'Talking "facts": identity and rationality in industry perspectives on genetic modification', Alison Henderson, Kay Weaver and George Cheney focus on the rhetorical and discursive construction of public messages about genetic modification in the agricultural and horticultural industries. Using dairy and kiwifruit collectives from New Zealand as their case studies, the authors show how these industry groups manage multiple identities as they negotiate their positions on this controversial issue. In doing so, the industry groups draw on a range of discourses based around risk, the market and the environment. Henderson et al. provide a critical analysis of an under examined area in exploring the strategic use of discourse by industry to both maintain relations with consumers and influence public policy on genetic modification.

The second article, 'Strategic ambiguity as a discourse practice: the role of keywords in the discourse on "sustainable" biotechnology', by Shirley Leitch and Sally Davenport, provides an analysis of five government policy documents focused on the development of biotechnology in New Zealand. The authors identify 'sustainability' as a key discursive concept that was strategically deployed in these documents in order to accommodate multiple and potentially conflicting perspectives and ideologies on genetic modification. They extend Eisenberg's (1984) notion of 'strategic ambiguity' as a discourse strategy in more public domains, in this case by a government anxious to establish an inclusive, 'sustainable' future for biotechnology.

In 'Out of the laboratory: scientists' discursive practices in their encounters with activists', Judy Motion and Bill Doolin analyse the discursive practices of scientists in their narrated accounts of encounters with activists protesting about the use of animals in biomedical research and the genetic modification of crops and animals. These encounters typically occur outside the laboratory, in the context of public debate on these topics. The authors utilize the scientists' stories as a vehicle through which scientists' sense-making activities and identity work

can be examined. They conclude that in times of controversy over particular biotechnologies, scientists may utilise a multiplicity of subject positions to reinforce the knowledge and authority of science, identify with public interests and marginalize activists.

In the final article, 'Controversy over genetically modified crops in India: discursive strategies and social identities of farmers', Tomiko Yamaguchi draws on Gieryn's (1999) notion of 'boundary work' to examine the discursive strategies of 'elite' actors in credibility contests over their claims with regard to genetically modified crops. In her analysis, she explores how various actors in the Indian debate over genetically modified *Bt* cotton utilize the social category of 'farmer' in their discourse in order to construct a shared social identity with this symbolically influential group of actors and legitimate their efforts to influence public policies regarding genetically modified crops.

The articles in this special issue highlight the importance of discourse in understanding the negotiation of outcomes for controversial biotechnologies such as genetic modification in our societies. By using critical discourse analysis to study various aspects of the public debates about biotechnology, the authors are able to shed some light on the way that power and ideology are implicated in the complex relations between science, policy and various publics. A common theme in many of the articles is the strategic use of discourse to influence public opinion and policy, emphasizing the active role that discourse plays in constituting social practice around scientific research and its application. I hope that this special issue has made a contribution to both critical discourse analysis and our understanding of how the future of biotechnology is constructed in the discourse of society.

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