

Editors' Introduction

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If the first half of the twentieth century was a golden age for physics, the second half saw the coming of age of the life sciences. As we enter the twenty-first century, our individual and collective lives are being fundamentally altered by developments in cellular and molecular biology. The drivers of these developments, and the stakes in them, are not merely scientific—they are therapeutic, economic, political, ideological and ethical. Put another way, developments in genomics, stem cell research, pharmacology, neuroscience all raise questions, not just about the nature of living processes and their amenability to understanding and manipulation, but also about the forces and ambitions shaping progress in the life sciences themselves, and the ways in which the life sciences are transforming different societies, locally, nationally and globally, in a multitude of different practices from the clinic to the factory.

This is not just a matter of social 'implications'—the term implies that the process of science research and the things it claims to know can be separated from issues of values, consequences and applications. If we have learned anything from the social sciences, it is that social and cultural beliefs, choices, hopes, priorities and assumptions are built into the structure of work of the life sciences, from the bench to the clinic. These include views about the importance of health as a social and personal good, the ethical acceptability of certain kinds of research, the relative possibilities of obtaining grants and funding for different kinds of work, ways to maximize returns on investment, the significance of biotechnology for the national economy, the relationship between the research priorities of the academy and those of industry, increasingly biochemically based assumptions about the nature of mental pathology, and much more. Historical and social research has shown us that these processes are often far from harmonious; that different groups, professions and interests are often deeply committed to different positions; that controversy is intrinsic to scientific development; and that the path of science is shaped by hard-fought conflicts and hard-won alliances among divergent forces. To recognize that science is a social practice is not to deny its scientificity or its validity, merely to accept the realities that generate knowledge and applications in our contemporary world.

The stakes are high, no less so the imperative that all corners of the academy think carefully and well about those stakes. This is the major impetus behind the creation of *BioSocieties*, the first journal committed to publishing original research and debate across the spectrum of the social studies of life science: sociology, anthropology, ethics, philosophy, law, history, economics, politics, public policy research, science and technology studies, and various interdisciplinary combinations of these. It is the goal of *BioSocieties* to give researchers an opportunity to present their work in a forum that will be read, not only by

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their disciplinary peers, but by also by fellow social scientists working in fields that normally do not cross-fertilize—but perhaps should. If we do our job right, moreover, we will also emerge as the journal of choice for those life scientists who are interested in gaining insights into the spectrum of social science scholarship concerned with their field—and also interested in engaging constructively with that scholarship.

Reaching across the social sciences

Energizing this generous vision of both the scholarship and readership that will characterize *BioSocieties* is an idea that what people do well in isolation, they are likely to do even better in critical conversation with people who may not think in exactly the same ways as they do. Interdisciplinarity is difficult, since—by design—it challenges the habits ingrained in professional training and apprenticeship. We will certainly welcome original research from those rooted in specific disciplines. But we also envision this journal contributing to a future constellation of social science research marked by what one could call ‘disciplinary interpenetration’. Imagine a sociological study of the biomedical globalization processes that has been enriched with ethnographic investigations of the hopes, fears, ambitions and interactions of the citizens (scientists, patients, experimental subjects, politicians) involved. Or an economic analysis of ‘the bioeconomy’ that is informed by shrewd political analysis of mechanisms of regulation and governance. Or an analysis of a contemporary bioethical debate that does not merely provide another forum for moral evaluation (important as that can be), but investigates the historical roots of the debates, the reasons that they take particular forms, the styles of argument and their implications, the roles that they play in the political and moral management of the life sciences, and how far they map (or fail to map) onto the practical judgements of good and bad, right and wrong, acceptable or unacceptable, that ordinary people use when deciding whether to embrace or oppose a particular biotechnical or biomedical innovation. The list could go on—and, hopefully, will.

For all this cross-fertilization to work, we must be able to understand one another. This apparently simple hope is, in reality, no easy matter in the fractured world of the social sciences, where disciplines tend to favour their own hermetic languages and rely on unexplained ‘insider’ reference points. In considering submissions, *BioSocieties* is committed to an editorial policy of, if not exactly plain speaking, then at least cross-disciplinary intelligibility. Of course, we recognize that specific concepts are crucial in the social sciences no less than in the life sciences, and that to understand the significance of arguments that hope to generate new ways of thinking, not merely to repeat the already known, requires work on the part of the reader, no less than on the part of the author. Rigorous use of concepts and complex argument is one thing; however, arcane and baroque rhetoric masquerading as analysis is another. All authors will have to eschew unnecessary disciplinary jargon, and to make clear the meaning of any necessary uses of disciplinary-specific terms and concepts. Scholars who are strictly engaged with internal disciplinary quarrels, or are not willing to spell out the larger relevance or implications of their work for others outside the field, are unlikely to be published in *BioSocieties*.

BioSocieties has a further ambition: to overcome the national parochialism that plagues so many English-language journals in the social sciences. Developments in the life sciences

are having profound effects across the world; and not all of these are driven or led by North America or Western Europe. Scholarship in the social sciences must at least strive for an equally global scope. Of course, local and national studies remain valuable, and there is sometimes a tension between the wish for breadth and the insights gained by 'thick descriptions' of individual and specific sites and practices. However, much can be gained by bringing such local studies into contact with one another, and locating them in a wider field, charting a transnational landscape that is far from uniform. In this journal, we will consider themed issues that bring together studies of particular concern—for example, social aspects of stem cell technologies—carried out in different national and transnational spaces. We will also publish themed issues that aim to sharpen our understandings of how specific technologies or innovations are impacting different national contexts. And we will aim to identify and occasionally republish translations of some of less well-known work that has already been done by scholars working in China, Africa, India, Eastern Europe and elsewhere outside the usual purview of Euro-American social scientific research.

BioSocieties will engage with a wide range of issues: the bioeconomy and biocapital; intellectual property, 'biopiracy' and benefit sharing; regulation and governance of research in the life sciences and of resources such as biobanks; equity implications of novel developments in biomedicine; controversies over new therapeutic applications; the role of the pharmaceutical industry; the new decisions and dilemmas arising at the start and end of life; changing forms of individual and collective identity linked to new genetic and neuroscientific diagnoses; issues of risk and insurance in a world of genomic susceptibilities; the management and economics of clinical trials; emerging issues of biorisk, bioterrorism and biosecurity. This list is merely indicative of the scope of our concerns. But while our ambitions are very broad, we do have priorities. We believe that some issues in the life sciences demand our attention more immediately and urgently than others. It is a safe bet that two socially challenging and fast-changing areas will be of particular interest for us for some time to come: genomics and the associated genetic diagnostic and therapeutic technologies; and the brain sciences, including advances in neuroscience itself and the development and implications of psychopharmacology for conditions that greatly exceed conventional understandings of mental disorder. Our antenna will also be tuned to scholarly work concerned with 'frontier' science and issues of just-emerging social concern: organ transplantation, stem cells, the use of disease strains for military purposes, and social responses to new forms and trajectories of infectious disease in a globalized world.

Yet we also wish to avoid the breathless futurology that often pervades discussions in this area, and the assumption that we are on the verge of some fundamentally new epoch. We need to locate some of the changes that are occurring in the life sciences and biomedicine within some longer, slower and less visible mutations in our knowledge and our capacities to intervene in our biology. Thus we will also welcome papers that research by-gone frontiers, which can illuminate the present by examining the fate of earlier biotechnologies that once seemed so revolutionary. How, for example, has the routinization of such practices as contraception or *in vitro* fertilization transformed human lives, families and communities across the world in ways that futurologists and social science scholars of the time may or may not have predicted? Contemporary developments that are getting the most front-page news or exciting the greatest amount of ethical debate are not necessarily the ones with the most long-term social significance. Good social science scholarship can help us

identify some of the less noisy or less obvious developments in the life sciences that have had profound, if often unrecognized, social implications, and in doing so, using a range of disciplinary methods, reframe our understanding of the events that seem so important today, and place them in a new and illuminating context.

Reaching out to the life sciences

Even though *BioSocieties* is a journal in the social sciences, we hope that life scientists will want to read and contribute to it. This is no small ambition. If social scientists have useful insights to offer into the social, historical and ethical aspects of the life sciences, it does not follow that those working within the life sciences—even those who are interested in ethical, social, legal and political aspects of their work—are paying much attention to them. The plain fact of the matter is that, even though many life scientists themselves freely engage in discussion and debate about the social and ethical aspects of their work, they rarely read journals of the social studies of science, and seldom genuinely engage with social scientists on public platforms. In part, this is because many social scientists write in ways that working scientists find opaque. In part it is because the issues debated in the social sciences often seem arcane and removed from practical significance. But, in part, this is also because at least some schools of social science research, over recent decades, have approached developments in the life sciences with a kind of reflex suspicion, seeking hidden and unsavoury interests in aspects of the work. Social science critique of work in the life sciences has ranged from funding and priorities to the very form of the knowledge itself. Critics have doubted the ethical credentials or social insight of those who carry out the research or develop the resulting biotechnologies, and have warned of the dangerous or damaging consequences of almost every development from the sequencing of the human genome to the advances in molecular neuroscience. The result is that many working scientists believe that they are routinely misrepresented by their social science colleagues. More profoundly, perhaps, many scientists feel that the social sciences don't 'believe in reality' or turn everything into a 'social construction', and thus are incapable of recognizing real progress in the scientific understanding of basic biological processes. *BioSocieties* hopes to soothe the suspicions that handicap informed dialogue between the social sciences and the life sciences. While welcoming critical analyses conducted with subtlety and rigor, our journal will be wary of contributions from those whose arguments begin from the presupposition that developments in scientific understanding of biological processes are suspect, or that their implications can only be negative. The recycling of critical nostrums about the socio-political role of biology is no way to understand the genuine social, political, governmental and ethical challenges of today.

BioSocieties will not only strive to make the genuine insights of the social sciences accessible to those from other disciplinary background and traditions, it will also experiment with a range of forums designed to facilitate interaction between social scientists and life scientists. In this way, over time, we aim to demonstrate our commitment to fair-minded critical dialogue not only about, but also with the life sciences. In this way, too, we hope to contribute to the larger need we see for the academy to move beyond the defensiveness that has been called 'the science wars'—the social challenges and opportunities that the life sciences present to each and all of us in our times demand better.

If we are persuaded that life scientists should listen to social scientists, we are no less persuaded of the obverse. But this is not simply a matter of the scientists explaining the current state of the science to social scientists who need to be informed. Social scientists of the life sciences today need to be scientifically literate; they need to have an adequate understanding of the science they are studying on its own terms. But their engagement needs to go beyond this. In particular, we believe, they need to consider how far new forms of trans-disciplinary collaboration emerging in the life sciences (e.g. systems neuroscience, field biology) may demand a rethinking of conventional philosophical and social science categories of analysis. Is genetics 'deterministic'? Is the message of brain science 'reductionist'? Or, when we use such terms, are we working with a kind of cartoon of the life sciences that belies its actual and increasingly complexity? And if so, what meaning and substance can be given to this idea of 'complexity' in our knowledge of living systems and in social scientific analysis of that knowledge? It is worth reminding ourselves that the social sciences were born at the same time as the discipline of biology in the nineteenth century, and have taken many of their models, metaphors and styles of explanation from them—ideas of genesis, of function, of organic relations and much more. If the life sciences are now themselves transforming, moving to new styles of explanation, new methods and methodologies—indeed changing the very meaning of life—then it is reasonable to expect, perhaps even demand, that the social sciences change as well.

This is the vision, and these are the tasks, that we have set ourselves in *BioSocieties*. We look forward to hearing from our readers—responses, positive and negative; ideas; submissions—all are very welcome. We at *BioSocieties* will do our best to stimulate, encourage and contribute to a dialogue that we consider to be intellectually, politically, therapeutically and ethically timely and challenging.