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Ethical Challenges for the Social Sciences on the Threshold of the 21st Century

Continuous Transformation

Contrary to firmly established cultural beliefs that allow neither emotions nor values to intrude upon the core of science, it may be claimed that science at any time is part of a web of affect-saturated values that stand and function in well-defined relationship to one another and are integral to scientific ways of knowing (Daston, 1995: 3). They would answer old questions and pose new ones about how scientists at a given time and place dignify some objects of study at the expense of a great many others, trust some kinds of evidence and reject other sorts, and cultivate certain mental habits and methods of investigation.

Traditions or moral economies of science are historically created, modified and destroyed; enforced by culture rather than nature and therefore both mutable and violable. Nevertheless, despite being contingent, they have a certain logic to their composition and operations. Daston elaborates on the notion that the moral economies of science derive both their forms and their emotional force from the cultures in which they are embedded – gentlemanly honour, Protestant introspection, bourgeois punctiliousness – and she also provides evidence that once these cultural forms have been uprooted and combined within a moral economy of science, they became naturalized to that milieu. Honour among scientists has not been what it was among gentlemen, asceticism among scientists has not been what it was among the devout.

In the current mutations observable in science in the contemporary world, a different set of legitimating notions seems to be developing. The positioning of the social sciences both vis-a-vis science and society is

accordingly being revised. It is curious how there persists such a gap between the natural and exact sciences, on the one hand, and the social sciences, on the other. This is clearly visible, among other aspects, in two very different ones: (1) the expectations of the natural scientists that the function of the social sciences is purely instrumental, reproaching social scientists for social evils still unsolved, as if the role of the latter were to clean up the mess and repair the wrongs that society, including scientists and their science and technology, have created; and (2) the annoyance resulting from the possibility of there being interpretations and analyses of society and science produced autonomously by social scientists.

'Hard' scientists have serious difficulty in discerning a naturalist intention in a discourse *about* science. For example, when a sociologist argues that scientific representations are 'social constructs', scientists often resent this as being an implicit restriction implying that science is *purely* a social construction. It is as if, by this statement, scientific propositions were devalued and denied their application to the natural world. The truth is that the disciplinary intentions of sociologists and scientists are very different, as much in their possibilities as in their purposes and values.

Nevertheless, some scientists are today very critical of what they themselves consider the superficiality of reductionist programmes, the brutish tyranny of science's bureaucratization, the force of attraction of scientific fashions and the ensuing impoverishment of our general vision and of our faculty of imagination, the hegemony of 'big science' over 'little science', the inadequacy of the system of peer reviewing, and many other of the diagnosed ills of the contemporary scientific body. Some critics from within the exact and natural sciences appeal to the social sciences and humanities, trying to explain how it is that they reached this point, in search of remedy. To tell the truth, most refrain. Indeed, despite the important implications that several of these problems have, it has been the social scientists and historians who have realized that this theme was relevant. The possibility of an open dialogue between the members of different disciplinary communities, particularly in this case between the 'hard' and the 'soft' sciences, seems positive.

Social Science and Society

The practice of science today exposes a paradoxical situation. By contrast with the past when the cryptic language of science bred authority, at present the increasing rift between scientific and common sense knowledge, between professional and lay concepts of evidence and proof, has in fact devalued science as a cultural resource for promoting, in the wider social context, respect for the superiority of its claims about the world. The considerations

which are relevant to the confirmation or disconfirmation of scientific claims are usually inaccessible to the larger public because of their sheer complexity (Ezrahi, 1990: 263–82). Even if changes in the knowledge structure of science do not undermine the internal grounds of science and its practice, the theoretical pluralism and the intellectual provisionality which have come to be accepted as legitimate features of the modern scientific enterprise impose serious internal intellectual constraints on the rhetorical force with which scientists can present, in the context of social or political discourse, a uniform concept of reality as superior to all competing concepts.

When the dynamic and theoretically conditioned scientific conceptions of nature are construed by lay people as raising doubts about the capacity of science to assure the firmness of the facts of common-sense experience, the social resonance of the greater complexity and remoteness of contemporary science has the effect of weakening the authority of the very images and metaphors that mediated the earlier ideological and political import of science in modern society. The contemporary public image of science has thus taken a political turn, very different from the traditional view that depicted science as being completely separate from politics. The social sciences partake of this image, although their political significance and social scope are easily misunderstood.

The practices of social science involve multiple readings of social reality. Different people define the issues according to their cultural and social backgrounds and interests, identify the perspectives from which they should be addressed, and may even proffer potential policy solutions, and press for particular social responses. Legislators, ministers, civil servants, constituency groups, pressure groups, party leaders, potential beneficiaries of new policy, taxpayers, intellectuals, religious leaders, ethnic groups, all can take part in supporting and opposing new definitions, conceptual frames and policy proposals. The interpretation of research results acquires a new complexity when it has to be ‘negotiated’ with the subjects involved in the research.

Many social scientists pay special attention to the less powerful, usually non-governmental actors. The poor and/or disenfranchised are also stakeholders, real or potential users of the social sciences. What are the ethical problems derived from the social and historical context in which the research problem involves the poor? How is power linked to privacy, anonymity and autonomy? We have to face the paradox of researching stressed populations when the financial cost of the research could be put towards ameliorating that very stress. For example, it would be interesting to study how much money has already been invested in the study of poverty in the world and in the organizations to manage and reduce it, while the international figures for poverty are higher than ever.

The growing awareness that value-free science was a utopian dream and that, instead, there are values, interpretations, opinions and, inevitably,

politics fuels reactions to particular interpretations of cultures, societal groups and all sorts of subjects/participants. The implications for analysis, interpretation and diffusion of results are enormous. After all, their results are about real people and may have real and painful implications for those involved. What rights of representation of different people and groups do the social scientists have? Who defines the problems, the research agendas? Who decides what research is to be done?

Funding exerts an important influence upon social science. Research funding may be unrestricted or tied to particular issues and projects in which sponsors (be it governments or private clients) have an immediate interest. Some disciplines or topical research areas may receive funds aplenty while others are left to starve. In most countries, economics has flourished, while such fields as sociology or anthropology have struggled for funds. It has even been argued that some conservative governments, wary of government intervention in society, may come to oppose social sciences that seem to keep finding new problems for government 'to solve' (Weiss, 1999: 204). Funding decisions have critical effects on the development of the social sciences and the nature and scope of the research they produce.

It has been argued that the problems that are the subject matter of the social sciences tend to exceed their capacities of observation and analysis, which would be unable to respond adequately to the expectations of decision-makers. The issue has been posed in terms of funds in recent forums such as those of OECD about the Future of Social Sciences, which would eventually be forthcoming if decision-makers were convinced of their usefulness.¹ The coalition of international and national organizations involved in the realization of meetings such as the OECD series only illustrates that in different contexts similar concerns are widely ventilated. UNESCO, UNU, the European Commission, the academies of several countries, the ISA, try to assess the current nature, focus, status, health and contribution of the social sciences to society, gauge its characteristics through international indicators whenever possible, and construct a vision of the future development for the social sciences as well as an action programme that may be implemented.

The debate on the problem of ownership of the knowledge being sought and produced is growing to new heights among indigenous peoples who, today more than ever, recognize their rights and are exploring at both moral and legal levels the status of indigenous intellectual property rights. These rights are recognized by natural, biological and social scientists alike. The local, national and international levels pose ethical challenges that demand solutions at each level and the resolution of eventual conflicts arising between the various levels. In addition, a perception of social 'scientists as hired brains of social interests and lobbyists for their own' (Cozzens and Woodhouse, 1994: 533) reduces the moral standing of their disciplines as custodians of the common good producing objective knowledge.

Political Complexity and Science Policy

In the cultural climate of contemporary society, social scientists tend to be more keenly aware of the theatrical aspect of political actions and of the powers of political actors, including themselves as citizens, to shape the political universe. Indeed, the fact that they perceive this not as a deplorable deviance from political reality but as constitutive of the very reality of politics is part of the realization that 'to a disturbing extent our morality [is] disclosed as a theatre of illusions' (Macintyre, 1981: 74). Politics is the system for reconciling divergent interests and reaching accommodations that suit most of the people most of the time. What individuals and small groups do may change the system. Otherwise politics would be rendered impossible.

Policy-making is a part of politics and is not the strictly rational enterprise that some people would like it to be. Policy issues are complex and public policy today is an attempt to accommodate the newly appreciated complexities of the political components in the contemporary world. As public decision-making came to be perceived as a form of 'pluralistic accommodation', scientific research began to lose much of its earlier aura and authority. In particular, social science rarely comes up with definitive and consensual solutions to big questions. Social scientists have become more sophisticated in recent years about the impossibility of finding a 'single truth'. The current emphasis on the connection between science and application implies 'a contextual quality control exercised as a socially extended process which accommodates many interests in a given application process', that reduces science's rhetorical powers to rationalize and validate transpersonal and transpolitical norms of public discourse and action (Gibbons et al., 1994: 9–10).

In policy-making, 'negotiation' rather than seeking an unequivocally 'best' solution has become the rule. Policy is now seen to emerge from interaction rather than from a rational analysis of alternatives. The bargaining model of government decision-making and the perception of bureaucratic agencies as complex political systems which handle internal conflicts as well as policy issues through compromise and concessions, have gained wide acceptance since the 1960s and have altered the view of the role of research in policy-making.

Social science rarely translates directly into policy because of competing forces in the policy arenas – ideology, economic and political interests, prior information and institutional constraints. Policy-makers hear about social science research through a variety of channels: aides, consultants, advisory bodies, think tanks and the media. Knowledge turns out to be only one input into policy decisions, and then rarely the most important one (Weiss, 1999: 194). Even though decision-makers may call for research and pay substantial sums of money for it, when the results come in, they will likely neglect the

findings. Only when research justifies the course of action that they already want to pursue, do they drag out the reports and brandish the findings. Thus policy-makers use research results as a signal of pending problems, as political ammunition to support their predetermined stands, as a symbol of their knowledge and alertness, as general enlightenment and 'continuing education' about the nature of issues and, occasionally, as direct guidance for policy.

There is a vicious circle involved which should be transformed into a virtuous circle: the conditions conducive to using research include, among other things, an active social science community with dedication to policy-relevant work, established channels for disseminating research results, ongoing dialogue between researchers and policy-makers, and policy-makers with sufficient background in social science to value and understand its messages. Social science knowledge can help to make policy more appropriate to the situation and better calculated to achieve the desired ends but rarely does it determine the shape that policy takes (Weiss, 1999: 195). When social scientists can add to the knowledge available, so much the better, but their knowledge is just one input out of many, and it has to compete for a hearing with other knowledge in circulation. The complexity of decision-making systems and the endemic priority of 'politics' in every organization mean that social science does not carry the day.

More recent evidence has revealed a more variegated use and a generally more positive one of research than expected.

The Role of 'Lay Persons' and 'Lay Experts'

The classical queries related to scientific research were concerned with *who?* did research, and *how?* to investigate (behaviour, tools). A third query has gained currency in recent times: *cui bono, what for?* There is increasing recognition of the need that 'those affected by the operations of a particular domain of civil society should be presumed to have a say in its governance'.² 'If citizens ought to be empowered to participate in determining their society's basic structure, and technologies are an important species of social structure, it follows that technological design and practice should be democratised' (Sclove, 1995: 26-7). In recent decades, a sustained lay invasion of the domain of scientific fact making has taken place, particularly with regard to those scientific and technological controversial topics that have overtly public dimensions. While the analysis of social movements has been commonplace in connection with political phenomena, it is quite underdeveloped in connection with the social aspects of scientific and technological research. Examples like the case of AIDS activism studied by Epstein suggest that social movements can pursue distinctive forms of participation in science, and

conversely, that the engagement with science can shape such movements in powerful ways (Epstein, 1996: 337 et passim).

The subjects of research (social, biomedical, or of a different sort) are implicated within the experimental apparatus or the project design – they are part of the study – and thus they have insights into how such research might be better conducted. Lay experts can generate ‘situated knowledge’: ‘partial, locatable, critical knowledge’ produced by social actors on the basis of their position or location in society (Haraway, 1991: Ch. 9). A series of shifts in the nature of the researcher–subject relationship is beginning to be observed in a growing number of research contexts, accompanied and often fuelled by an unexpected social scientific sophistication on the part of the subjects. Acknowledgement of the full subjectivity of the subjects of research forces a rethinking of the power inherent in expertise and the deep dilemmas confronting social movements that seek to ‘democratize’ science and technology.

Thus, those who have a stake, particularly when they suffer the consequences of science and technology, need to be included in decisions taken in the workplace, in science and technology laboratories, in social science research, in education, in health care, in the arts, in the media, in the family and in the enforcement of law. A growing body of literature suggests means by which science and technology can be brought further under popular control – studies of ‘science shops’ that bring researchers into collaboration with citizens, ‘science courts’ that invite lay people to pass judgement on political controversies with scientific dimensions, and citizen boards to assess technological risks.

Of course, there are many difficulties involved.³ In particular, the practices of science by their nature presuppose specialization: no one can know everything: everyone must therefore acknowledge that others speak with authority – at least *some* others, *some* of the time. In connection with this, the democratization of science is inevitably a partial and uneven process and one that, ironically, proceeds hand in hand with the consolidation of new relationships of trust, authority and lawful representation. Thus, ‘lay expertise’ is not simply a question of more democracy. One must resist the temptation to lurch from technocracy into populism. Bringing ‘lay experts’ into the technological decision-making process should not be seen simply as a democratic necessity. Rather, it makes good sense in terms of using available expertise even when it is found in unexpected places (Collins and Pinch, 1998: Ch. 7). However, expertise is too precious for its recognition to be passed wholly into the sphere of politics. Lay political activism may sometimes be necessary to shake people out of their comfortable assumptions about the location of expertise, particularly in view of the power inherent in expertise. Effectiveness is sometimes part of a rhetoric of social control undeservedly attributed to some social actors both by themselves and by others, rather than a reality. Genuine expertise cannot be replaced by heartfelt concern, and this

hard core of expert knowledge is reflected in the dilemmas confronting social movements that seek to 'democratize' science and technology.

There may also be tension between the participation of lay persons in the construction of scientific knowledge and the requirements of movement-building: for the lay expert, winning credibility in the eyes of the research establishment once he or she understands and starts thinking like a researcher may conflict with ensuring continued credibility with the social movement the 'lay expert' seeks to represent. Even as far as science is concerned, more often than not the unique contribution to scientific knowledge occurs when the lay expert 'thinks' and 'responds' as member of his or her own group, independently of the scientific clichés. Environmental movements have struggled over 'insider' and 'outsider' strategies and the relative merits of professionalized activism when interacting with accredited experts.

The demands for more direct participation and lawful representation are not restricted to national boundaries; they become more stringent and pressing in the shrinking common world of the 21st century. The challenge today is to discover anew what is moral, what is right and what is virtuous, through interactions with others, whether at the individual or intercultural levels. Citizens should be free to participate, on an open and equal footing, in debates that have as their objectives not the negotiating among fixed preferences derived from individual or particular cultural values, but the joint discovery of what our common human values are. In these new conditions, it has been argued that 'only by making the world together, only by discovering what is right and what is wrong through discourse and action can we build knowledge, wisdom and a just society'. Social science has a double role, being part of citizenship and having the mission of contributing to inform, interpret and solve society (Busch, 2000: 148).

Morality in Disarray and Social Science

Throughout the 20th century, the idea that all peoples in the world are part of a unique humanity only painfully paved its way. This is clearly a recent notion in history. What for a long time distinguished men and women from the other animal species was precisely the fact that they did not recognize each other as fellow human beings. Anthropological evidence has innumerable examples from the human historical record that show that an individual who was an outsider to a community had to fulfil certain conditions in order not to be ostracized from the world of human beings. One of the central ethical challenges, if not the central one, of the 21st century is probably making true the notion of a common humanity.

Humanitarian feelings today, at least as lived in the West, seem to reflect less a concern for others than an invincible mistrust of their freedom

(Finkelkraut, 1996: 124). The globalization of markets is an idea that is being heavily promoted in the economic domain by the dominant agents in the international setting. So is the internationalization of telecommunications and the media, that are purported to feed a new acknowledgement that humankind is a single family inhabiting the planet Earth. However, these notions appear to cover up other realities. In the abstract postulation of universality are often concealed more partisan interests and practices. The effects of the new conquest of ubiquity through television and the World Wide Web are complex and still difficult to assess.

Finkelkraut (1996) has argued that the disillusionment from the selective and abstract altruism of previous eras has resulted in a feeling of pity by the contemporary individual, who is moved by media exposure to immediate suffering only when that suffering is devastating, crippling: boat-people, exclusion, hungry and agonizing refugees fleeing the horror of ethnic wars, i.e. subjects entirely penetrated by suffering and need, but not acting individuals, not free, i.e. uncontrollable, individuals. Current attitudes of pity, in his view, exclude suffering humanity from love for there is no interaction and reciprocity involved. The moral 'distance' created by the virtual reality of television removes the concern for a common destiny, for common projects, for the undeniable truth of the ailing portion of humanity.

The close of the 20th century left a record of great illusions and greater disillusionments and frustrations, of oppression, injustice and cruelty. The capacity of criticism, the imagination of new worlds, the construction of utopias, all activities to which a good segment of the social sciences contributed significantly, have been largely abandoned. Confronted with an uncertain future, nobody wants change and everyone tries hard not to rock the boat. In different aspects the moral experience of the 20th century has a paradoxical character. The individual who has been taught to see him- or herself as an autonomous moral agent becomes engaged by modes of practice which involve him or her in *manipulative* relationships with others. Seeking to protect the *autonomy* he or she has learned to prize, the individual aspires not to be manipulated by others; seeking to incarnate his or her own principles and standpoint in the world of practice, the individual finds no way open to do so except by directing towards others those very manipulative modes of relationship which he or she aspires to resist in his or her own case.

Recently, Busch (2000: 151–2) commented on the complexities of social participation and the manipulation of the notion in actual practice. In the workplace, education, technology, health care and the retail store, our participation is usually sharply constrained. For example, as consumers, our participation is limited to decisions as to whether to purchase or not. Certainly, the range of goods at our individual disposal has grown logarithmically, but with few exceptions, we still are left with simple, binary decisions to make about them. As workers, our options are equally limited. We live in

societies in which employment is not so much a choice but a requirement for obtaining the means of subsistence. In a world of unprecedented technical change, most of us have little or no control over the technologies that invade our lives before which we stand either in wonder or in despair. Economists tell us that we participate through the market for these 'goods', but they ignore the way these technologies transform the lives of even those who reject them. In education, too, we have few opportunities to participate in the decisions that affect our lives. In health care, the arrogance of physicians is legendary. Rarely do patients obtain the information they need to make intelligent decisions about medical care. Even the arts and media are a dimension which has become far removed from our participation.

'Human rights' – those alleged to belong to human beings as such and which are cited as a reason for holding that people ought not to be interfered with in their pursuit of life, liberty and happiness – are a recent notion in history, invented as part of the social invention of the autonomous individual moral agent. The concept of utility is another component of contemporary morality which was devised for quite another set of purposes, basically linked to forms of bureaucratic organizations, and largely incompatible with the former (Macintyre, 1981). The juxtaposition of these concepts and other ill-combined conceptual fragments of the past which lack the contexts in which their original meanings derived, result in incommensurability, as evidenced in the arbitrariness of the will and power at work in the resolution of debates.

Given the apparent arbitrariness of the contending parties, *controversies* assume an insoluble character and become a distinctive moral feature of the contemporary age. We may witness novel expressions of protest at global level on the threshold of the 21st century, such as the recent mobilizations against the World Trade Organization and globalization. Clearly, there is no novelty in the claim that what prevails is a rhetoric which serves to conceal behind the masks of morality what are in fact the preferences of arbitrary will and desire. *Unmasking* the unacknowledged motives of arbitrary will and desire which sustain the moral masks of the present is itself one of the more characteristically modern activities. Psychoanalysis is one of the social disciplines that contributed the most to this, although Freud believed he had made a discovery about morality as such and not just about morality in 19th-century and early 20th-century Europe (Macintyre, 1981).

Manipulation, mistrust, unmasking, disillusionment, illegitimacy, corruption, rights, protest, resentment, are all notions that appear in discourses about the moral standing of contemporary society. Being a product of a particular historical conjunction, it is impossible to find a rational way of deciding which type of claim should be given priority. The incoherence of individual attitudes and experience arises from the incoherent conceptual scheme which is the modern legacy.

The forces of society act to diminish trust in most spheres of life, and in

particular in experts and expert systems. The claims to objective scientific knowledge of society made the social sciences the most ideologically and politically significant expression of the cognitive norms and cultural strategies of science in the modern state (Ezrahi, 1990: 167). Despite their respectively distinct orientations and objectives, both ideology and social science have tried to give authoritative accounts of human conduct and social phenomena. Much attention has been given to such questions as whether ethical and political problems can be reduced to scientific and technical ones, whether science can be politically or ideologically neutral, or if there is such a thing as scientific ideology. Despite non-democratic uses of social research, the social sciences have furnished some of the most potent ideological resources for the promotion of liberal-democratic political values and practices.

The growth of awareness of the social sciences' reflexivity has contributed to diminish their authority. The 'methodological horrors' of reflexivity pose a number of challenges to social scientists and natural scientists alike. It has become an ever more pressing need in the different social sciences, demanding a considerable personal engagement of researchers with justice and fairness, not contaminated by their own self-interest. It has been argued that these should not be managed by erecting a hierarchy of types of knowledge that are variably infected by problems of representation, nor managed by supposing that the horrors only affect other researchers' work. One should not suppose that some sciences escape the problems of representation and reflexivity; nor should one suppose that one's own work is invulnerable.

Any interpretive enterprise will confront this version of the hermeneutic circle (Schaffer, 1996: 209; Woolgar, 1988: 30–7, 91–4). In a complex loop, social reflexivity, the process whereby society is compelled to confront the unintended, quasi-autonomous undesired consequences of modern industrial society,⁴ must be taken into account as well, while being distinguished from the reflective processes one may use to study the problems once they have been identified. The phenomenon of industrial and transport-generated pollution provides a good example of what we are saying. As pollution becomes more intense, the trust of society in its own constituent parts starts to be repeatedly confronted by new evidence of harm generated by essential functions like production, land clearing and transport. The whole meaning of society is continually challenged by the byproducts of society's own development (cf. Fukuyama, 1995).

Power is unbalanced when there is a distance of education, training, skills, capabilities or attainments, as is the case of the social sciences vis-a-vis the lay public. The integrity of trust relationships can be tested by determining whether either party is manipulating the other by preying upon qualities of the other in ways that require concealment if the relationship is to continue (Baier, 1995: 123–4). To rehabilitate trust will be difficult, but not to try would be self-destructive. Better science alone cannot restore trust. There

would need to be a very public advocacy of ethics and values if restoration is to be achieved. Social science education would need to stress that ethics and values deserve at least as much attention and respect as the scientific and positivist side of social research.

In the formulation of the aims of research, the role of the individual researcher is increasingly reduced, integrated into a gear of which he or she is simply one more piece. The final ethic of his or her activity is imposed by criteria in which the individual has often had no intervention. In these conditions, it is important that the ethic of ends be supplemented with a reinvigorated individual responsibility to attend to the moral dilemmas of plural societies. The researcher must act in such a way that the effects of his or her actions be compatible with human life and its environmental, genetic and cultural legacy. These dilemmas and tensions are clearly perceptible in the clinical sciences, and their moral experience may serve as a model and example to the other sciences. However, it is important that in any discipline the community of scientific researchers revise as individuals, groups and collectivities, their moral conduct and the ethical rigour of the internal rules of the game of the community in its implications for science and society, in terms of greater social responsibility and transparency.

This inconsistent ethical background weighs heavily upon the politics of modern societies, their economics, law and all the social tissue, and obviously impinges upon the social sciences and their interpretative and heuristic functions. They have as one of their basic tasks to bring out the implications of contemporary moral utterance and practice characteristic of the principal actors of modern society, the rhetoric involved in their claims, the pretensions of social control behind them. The unprecedented current growth of the capacity of intervention upon the natural world and of manipulation of the other in the social context as a consequence of scientific-technological advancement, will have far-reaching consequences.

Concluding Remarks

Today, much more power is available than ever before and there is a larger margin of manoeuvre in decision-making, given the extension of the scope of human action. The broadened choices by human agents give a new importance to the consideration of limits (economic or otherwise). They need play no special theoretical or practical role in terms of knowledge. One can enquire about them, as one can about any other feature of the unitary causal process, but it is not necessary to do it. In the perspective of human action, however, limits clearly occupy a far more important and privileged position. For an individual to fail to consider limits, except for extremely strong and specific reasons, is necessarily perverse, irresponsible, or inept. The limits on

possible outcomes define the possibilities for human actors (or, in our case, social sciences), establish what these can or cannot bring about, inform them of what there is really for them to fear or hope for, and focus, as nothing else could, the question of what they do in fact have reason to do (Dunn, 1990: 6 *et passim*).

With the growing need for imposing limits, the weight of responsibility in choices, both at an individual and collective level, has significantly increased, and the changes of scale and nature lead to deep-seated redefinitions. The two basic elements of specific responsibility of contemporary scientific research (including social scientific research), are the possession by the researcher of a specialized range of *effective knowledge* – knowledge that enters, through its effects, into the very structure of the natural and social environments with which present and future practices will have to deal, and the *general expertise* developed by the systems and organizations in the course of scientific research activity of weighing and predicting the probable consequences of complex actions and communicating them to the population in general. In their combination is what in ethical terms appears to be the foundation of a new social project. Despite their lack of authoritative ‘answers’ to the most complex problems, the social sciences have much to offer local, state, national and international agencies. Their evidence and theories provide ways of making sense of the world – no minor achievement in today’s complicated, multidimensional world.

Large portions of the social sciences have been instrumentalized by dominant interests in the economic and political world. A disproportionate, and often very partisan, concern is devoted to how the social sciences can make more palatable or better manage the usually painful technological and social changes, helping to overcome barriers and to discipline the workforce, civil society or the market. It is imperative to make explicit the limits of market-driven development, defining social and political barriers (linked to justice) and natural ones (linked to sustainability) in connection with science. By contrast, the broader debate of pros and cons, of values and options in society and technological innovation, or of scientific knowledge and government authority, is somewhat unusual because the literature is highly fragmented.

However, there are issues which concern the integrity of society and its different components. When much of the conventional wisdom about research is being challenged, questions are being asked about the ethical standards that impinge upon research endeavours from the very outset, from the creation of projects and programmes, passing through research and the challenging problems of interpretation and representation, the dissemination of knowledge in teaching and publications, to applications. Such standards not only regulate the social sciences, they are produced by them (Whittaker, 1999: 218).

As eloquently posed by Busch (2000: 6), scientism, statism and marketism are dominant forms of guardianship in contemporary society. Their advocates claim that we must yield to the superior moral wisdom of science, the state, or the market. That claim to wisdom, clearly, is not simply floating around in space somewhere. It is manifested in a set of practices by scientists, government officials, or those who organize and control the market. Busch is not quarrelling with the idea that some such persons have superior *technical* knowledge. What concerns him – and us – are their claims to superior *moral* knowledge, which appear naive at best, self-serving and fraudulent at worst. Faith in science, the state, or the market as a solution to the problem of providing us with a well-ordered society would rest on unexamined and erroneous beliefs in the existence of autonomous individuals and a reified society. This individualism, and its collectivist counterpart, enable us to avoid having to come to grips with moral conflicts. Each camp offers easy alternatives to moral responsibility (Busch, 2000: 6). We may live in a society comprised of specialists, but for any given issue we are all lay persons. As lay persons, the questions we pose of the specialist may be technically naive but they often, if not always, incorporate the situation within which technical knowledge is desired (see also Giddens, 1990).

Participation in politics requires a certain level of economic equality. While complete income equality is not feasible, the current situation makes a mockery of claimed notions of equal opportunity, even in advanced countries. Without greater equality in the distribution of income, political democracy has a hollow ring to it (Busch, 2000: 155). Political and social democratization calls for the research policy agenda to incorporate the unresolved question of social needs and collective welfare. This necessitates a new approach. What applies inside nation-states applies equally well in the outside world. In international relations, democratic states need to encourage and support democratic movements in other nations. Western advice and financial support have focused almost entirely on building markets and have neglected to build strong democracies. Indeed, western advice has often conflated the free market with freedom while ignoring rapidly growing inequalities and corruption.

It is the ethical challenge of the 21st century to make the synthesis that will integrate knowledge and morality at a more advanced level of collective justice and virtue. New forms of community should be constructed within which moral life can be sustained in such a way that both morality and civility may survive future threats of injustice and darkness. Scientists of the most varied persuasions are, consciously or unconsciously, helping to build the future research cultures. Committed to experience, partaking of contemporary theoretical and political discourses,

... they listen with one ear to the philosophical issues of utilitarianism vs. deontology, casuistry vs. universalism, normativism vs. relativism, with the

other straining to hear, half in hope and half in dread, how ethics is playing out in the most recent fields of biomedicine, business and industry, and in the mammoth domain of the computer. (Whittaker, 1999: 218)

Notes

An earlier version of this article was presented at the UNU-OECD International Workshop on Social Sciences and Innovation in Tokyo, 2000, and published in the OECD Proceedings published in Paris, June 2001, pp. 177–88.

- 1 In April 1998 the OECD organized a seminar in Paris about the social sciences today and the road to follow. It was then decided to organize a series of international workshops under the title 'Reinventing the Social Sciences': (1) Ottawa, 1999: 'Social Sciences in a Digital Earth'; (2) Bruges, 2000: 'The Contribution of the Social Sciences to Knowledge and Decision-Making'; (3) Tokyo, 2000: 'Social Sciences and Innovation'; and (4) Lisbon, 2001: 'Social Sciences and Public Policies'.
- 2 Shapiro, quoted in Busch (2000).
- 3 For these arguments, we rely heavily on Epstein (1996).
- 4 Beck (1994), quoted in Little and Fearnside (1997).

References

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