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Shifting Heuristics in the Sociological 67
Approach to Professional
Trustworthiness

The Sociology of Science

Vittorio Olgiati University of Urbino

abstract: The aim of this article is to raise social-scientific-aiwareness about the growing disenchantment with basic assumptions about the progressive outcomes of western-styled 'modernity' and 'modernization' and how western society is standing up to such a disquieting historical trajectory and facing the challenge of other emerging models. As there is no doubt that only a substantial cultural change could counteract the trend, the article deals with that part of the western epistemic community that embodies the highest cultural capital, namely learned professions, by asking what theoretical and practical limits are they reaching? Are they accountable for the ongoing general situation? Are their knowledge, commitment and performance socially adequate? If not, do professional work, action and trustworthiness require new analytical, social and moral foundations? A plausible answer to these questions seems to be offered by the abandonment of traditionally dominant formal-rational methodology, a return to the concept of substantive rationality and the appraisal of the multidisciplinary advancements provided by sociology of science. In this respect, the analysis stresses the limits of dominant sociological approaches to professions, by centring on the notion of status-role and by enlightening the pivotal importance of the indeterminacy of knowledge as primary professional traits of professionalism. Consequently, it suggests the need for a radical theoretical revision of common views about sources, forms and degrees of socioprofessional reliability, trustworthiness and confidence, given the fact that such a revision is anyhow required in practice by the new trajectories of the profession power-knowledge nexus in the age of the risk-knowledge society.

keywords: sociology of professions + sociology of science + trust

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#### Foreword

Leafing through sociological studies carried out in the last 50 years one cannot but notice recurrent analytical shifts as regards the interpretation of general patterns of western society.

At the beginning of the second half of the last century it was usual among sociologists to define the West as an 'advanced' model of society, worthy of being a frame of reference for non-western societies, labelled as 'underdeveloped' by definition. Terms such as 'modernity' and 'modernization' - as synonymous with western-styled 'progress' - characterized any comparative approach. Then, in the 1970s and 1980s, sociopolitical and economic transformations required a relabelling. Western society began to be described as a 'ripe', 'mature' system. Nonwestern societies, in turn, were depicted as 'modernizing', and therefore 'developing', countries. In the meantime, however, basic assumptions about the progressive outcomes of 'modernity' and 'modernization' began to be questioned. In the last two decades, a further analytical change occurred. Because of a rising disenchantment with certain promises, as well as notable country-specific achievements in a variety of non-western countries, the western system lost a great deal of its original appeal and had to face seriously the challenge of other models.

These shifts not only raise the problem of the 'intelligence failure' of western modernity but also the problem of how western society is standing up to such a disquieting historical trajectory. As there is no doubt that only a substantial cultural change could counteract the trend, we need to ask: what is occurring within the western 'epistemic community' (that is, within the province of those agents such as politicians, entrepreneurs and experts) who, being provided with power–knowledge, are constructing western society as it is now? What sort of theoretical and practical limits are they reaching? What cultural resources have they at their disposal? In brief: what about the state of the western power–knowledge nexus vis-a-vis global–local dynamics?

The aim of this article is to raise social-scientific awareness about the strategic relevance of these interrogatives. Accordingly, the article deals with that subgroup of the western epistemic community that physically embodies the highest creative cultural capital, namely the learned professions. The questions can thus be reframed as follows: are western learned professions accountable for the ongoing general situation? Can they be expected to address the kind of social mandates that are emerging? Are their social-scientific knowledge, commitment and performance socially adequate? If not, do professional work, action and trustworthiness require new analytical, social and moral foundations?

These interrogatives are pivotal for non-western countries also. Notwithstanding the declining hegemony of the West, the academic and technical dependency of non-western scholars, intellectuals and experts on their western counterparts is still a quite generalized matter of fact (Atlas, 2003). In turn, the need for a new kind of 'participatory convergence' in science making is definitively on the agenda at world-system level due to the number of global problems at stake (Fals Borda, 1998). Certainly a concern for the way in which (western and non-western) learned professions interact with society cannot be reasonably avoided (Ezrahi, 1990; Hacking, 1999; Knorr-Cetina, 1999; Nowotny et al., 2001).

### The Vanishing Guarantees of Western Rationality

A preliminary reference to some historical antecedents seems appropriate. It is well known that western society owed a great deal of its hegemonic political-institutional role in the world for almost four centuries to military supremacy provided by high-tech innovation.

Yet, the Promethean era of western society at world level reached its apex as soon as the potentials offered by the application of a particular scientific method, based on a special type of rationality, reached a threshold – the imposition of not only counter-factual 'grand divisions' predicating a self-referential differentiation for any sort of action system (i.e. state/society, nature/culture, law/economy, etc.), but also utopian 'grand theories' asserting an unrestrained social emancipation (freedom, equality, etc.) and/or a prospective never-ending eudemonistic way of life (happiness, welfare, etc.).

Typical of such models was their virtual-fictional and formal-abstract content, as authors as varied as Burke, Bentham and Marx repeatedly warned. Besides, they were not 'neutral' or value-free. They embodied a cluster of particularistic (Eurocentric) interests. So much so that, by pursuing them at a symbolic level also, western society was able to assess its self-claimed 'world civilizing mission' over non-western societies as if it had indeed a 'universal' task in this respect (up to the point where world conflicts were brought about). To put this another way: to the extent that dominant western scientific method acted as a creative spill-over for the kind of technological advancements required by western capitalism, at the same time western science and scientific narratives turned into intellectual pendants of the dominant institutions of western liberalism (Veblen, 1919; Scheler, 1924).

Despite a number of systematizing efforts devoted to refine such a political entanglement, however, western constituencies were not as strong as they were (and often still are) officially proclaimed to be. Therefore, they could not but embody and actualize – as Spengler and Toynbee

noted – the disquieting evolutionary trend mentioned earlier. But why was the social-scientific domain constructed in that way?

In a synthesized but remarkable paper, Wallerstein had no hesitation but to relate modern science construction to a turning point historically occurring in the aftermath of the French Revolution. There was a need for those who had power, authority and/or social prestige to politically foster social pressure for change, but also to manage it 'so as to minimize turmoil, disruption and in fact social change itself' (Wallerstein, 1996: 15).

Only a paradigmatic cultural shift could have provided a solution. Only by disseminating counter-factual schemes and utopian narratives, producing a systematic hypostatization of virtual-fictional and formal-abstract concepts and values, could the western epistemic community have been able to provide the western sociopolitical system with cultural conditions required to set up and enforce a (self-styled) 'enlightened' governance model specifically tailored to give credit, and export world-wide, a (self-claimed) 'rationalized' social change. In this respect, not so much the rise of professionalism per se, but the rise of what has been called 'social science' became emblematically enlightening.

A scientific discipline of this sort was required – Wallerstein says – to instrumentally support the ideology of political and economic liberalism predicating an (alleged) unrestrained popular participation and an (alleged) unrestrained progress. Therefore, 'an absurd distinction' was made within the disciplinary domain of 'the humanities' to meet such a double task: 'social science proclaimed itself science and not philosophy' (Wallerstein, 1996: 23) in order to assess its empirical findings as undisputed scientific truths and not as debatable ideological narratives, just like 'experimental' (not humanistic) sciences had claimed about two centuries earlier. In turn, to reinforce the split between 'empirical' and 'speculative' social knowledge, an additional scientific cleavage was imposed: that between 'formal' and 'substantive' rationality, so as to assess the supremacy of 'formal rationality' as the only 'rational' (that is scientific) truth-searching method. Altogether, therefore, empiricism prevailed over theoreticism and a great part of the self-same social science turned - as Schumpeter put it - into a mere 'cameral science', fit for social-engineering political projects (Schumpeter, 1954).

The historical evolution of such disciplinary stepping-stones cannot be dealt with in detail here. What matters, however, is that the identity of the western epistemic community changed accordingly. As regards learned agents – either the intelligentsia or the learned experts – their socially established power–knowledge underwent a radical turnabout. They were compelled to conform to a moral split between civic and private use of reason as formally required by the Kantian distinction between (public) actions concerned with citizenship and (private) actions

concerned with personal issues. Besides, a clear division was increasingly established between political-ideological and technical-operational knowledge and know-how, as the distinction between (cosmopolitan) intellectuals and (urban) professionals still indicates. At the same time, the aforementioned distinctions led to an additional fracture internal to the community. For ethical reasons also, some learned agents became prone, or anyhow conformed, to the tyranny of political and economic imperatives, while others resisted such reductionism and became politically engaged as radical critics of the status quo (Arendt, 1961).

These internal cleavages made apparent, in turn, that any scientific claim predicating either a rationalizing or intellectualizing evolution of western society could not but have paradoxical effects. It made clear also – as Gramsci noted – that a common, organic technopolitical loyalty of learned professions towards hegemonic constituencies could not be taken for granted anymore. Hence, it is not by chance that, to resist the deriving of established professional ideology and to counteract the so-called 'betrayal' of certain intellectuals (Brenda, 1969), as well as to keep under control cultural 'anomie' and moral 'politeism' within the fieldwork, a scholar like Weber felt himself obliged to draft a new model of professional ethics based on a unique value: namely 'mere intellectual probity', as implied, not by dominant structural and ideological constraints, but by an individualistic vocational 'calling' (Weber, 1980: 19).

Weber's idealistic claim, however, clashed with an additional structural cleavage: that between individual(ized) (private or freelance) and institutional(ized) (public or corporate) professional action systems. The pressure of a 'Fordist' organizational strategy aimed at resetting a great deal of the professional realm, in particular, reinforced the already running social division of technical and moral performances (Ziman, 1996). If we then add that all the above occurred at the same time in which social science endured an internal subdisciplinary fragmentation and the 'enlightened' architecture of western society was challenged by internal and international political turmoils, it is easy to understand why the 'vanishing guarantees' of western modern rationality and the 'vanishing guarantees' of traditional identity and reliability of western professions are two aspects of the same general trend.

## The Challenges of Sociology of Science to Sociology of Professions

Having recognized that the promises of western modernity proved to be unfulfillable, and, as such, no more trusted, the key element that – according to Wallerstein – could restore the guarantees of (western) rationality is 'to return to the concept of substantive rationality', that is that type of

rationality which is the result of realistic choice: a choice made out of a conscious, but historically determined, balance of not less historically determined options. This 'return' envisages a veritable paradigmatic shift for social science. In fact, Wallerstein says, social science 'must recreate itself' by recognizing that 'it is not and cannot be disinterested', that scientific truths 'are not universal', that reality is 'complex, contradictory and plural', that 'rationality involves the choice of a moral politics', and that the role of the intellectual class is to 'illuminate the historical choices that we collectively have' (Wallerstein, 1996: 24; 1998).

Interestingly, these statements do not come as a surprise. They match with a relevant line of thought already emerging within the same social science: the one that takes advantage of most advanced studies carried out in the field of experimental sciences such as bioenergy, as the implicit, but clear, correlation of human choices to multiple historically determined occasional contexts suggests. The same statements also match with a more general approach to scientific system that calls for a conceptual reinterpretation of certain variables – academic disciplinary differentiation, intellectual work conditions, knowledge control devices and knowledge producers' socialization processes, etc. – in the light of the new historical context in which science itself is now embedded (Gulbenkian Commission, 1996; Engelstad and Kalleberg, 2000; Arjomand, 2004).

As far as these new theoretical trends are concerned, the most interesting results are those implied by multidisciplinary interlinkages within and among scientific domains. In this respect, a significant case in point is the advancement made, within the sociological fieldwork, by sociology of science. An original evolutionary trait of sociology of science is indeed its analytical and methodological alliance with the history of science and technology, as well as its steady opposition to the idea that theoretical knowledge had to be the exclusive fieldwork of sociology of knowledge only. It is not by chance, therefore, that, by conceiving science as a multidimensional social process, sociology of science also developed as a veritable sociology of scientific professions (Merton, 1957).

As such, sociology of science has been able to enlighten a number of historically determined issues such as the rising political and economic pressure for science's social achievements; extra-scientific control mechanisms on science production and regulation; erosion of established scientific truths as a consequence of social changes fostered by scientific discoveries; and, last but not least, conditions and impact of more or less intentional dysfunctional, pathogenic and even perverse outcomes of certain professional performances. In turn, it has been able to provide valuable explanations about the decline of scientific authority over scientific jurisdictions, or the spreading of a low trust spiral within and outside the peer's scientific community (Ancarani, 1996). By virtue of this line of

enquiry, sociology of science made apparent the idealistic content of certain official narratives, such as that epitomized in Vannevar Bush's report to US President Roosevelt in 1945 (Bush, 1945) about science as an endless frontier leading to unrestrained positive outcomes. It also falsified the idealogical nature of economic theories predicating the so-called 'manna approach' to science: that is, the idea that higher knowledge is an environment somewhat detached from other social systems so that it falls on them, as the manna's metaphorical image suggests, devoid of certain social costs and according to a linear course, as a merely exploitable good thing.

In doing so, it also focused attention on problems such as the coupling between the uncertainty of tasks and outcomes of scientific work and the coordination of needs and wills stemming from collective social action the degree of rationality and reasonableness of normative standards as regards scientific fieldwork and research projects, the changing strategies to provide scientific reputation of science as a political arena, and so on (Cannavò, 1997). Needless to say, all these items also threw new light on how professional action, in general, and socioprofessional interactions, in particular, are performed. An emblematic case in point is, for example, a study by Burns and de Man (1987).

According to these scholars, the logic of science production in scientific organizations and research units is neither linear nor onedimensional. In econtext of generalized processes of negotiation about issues raised by different systems, science agents usually claim for the social recognition and protection of the functional differentiation of their fieldwork. In instirational terms this is called autonomy of science. Yet science's autonomy as an institutionalized means of self-regulation, does not solve the problem of the social-scientific validation of its own methods, proceedings and results. In fact, the social validation of the scientific rules of validation of science relies, by rule, on public acceptance of what is considered the given scientific truth. This implies a further institutionalization: namely the normalization of the corresponding scientific domain. Contrary to these two normative layers, however, social dynamics is always unstable, and therefore unpredictable. In its turn, scientific work continuously raises new social-scientific problems, for science is not only routinely concerned with the search for new truths and new validation criteria, but also with the limits - error, falsity, partiality - of such a search and its results. That is why science's inner logic has to consider social movement, turbulence and even chaos - not institutional certainty - as its basic epistemic condition. Social instability and science indeterminacy therefore are the primary reference for science's social validation and legitimacy. Accordingly, although science's autonomy is socially and politically framed, it is not and never will be totally subjugated by any normative constraints.

The analysis by Burns and de Man also fits with the way science works. Even though science undergoes negotiation, and institutionalization, its content and structure are, and will always be, loosely coupled, because science's lines of enquiry and results bypass, by definition, the space–time dimensions of their organization-sets. Social-scientific indeterminacy of science, therefore, not normative expectations about a given framework, is the primary pattern of its social validation and reputation. Accordingly, although the autonomy of scientific activity is conditioned by certain structures and values, it is and will always be able to dismantle or revise them, for science nurtures social dynamics and vice versa (Burns and de Man, 1987).

As one can see, all this challenges, in particular, both traditional rational-choice and institutional approaches to professional action, as what really matters is the relationship between the unpredictable creativity of scientific work and the co-presence of a variety of competing logics within/outside the same professional action system. In this respect, the problem of social reliability, accountability, trust and confidence in both professional structures and professional performances takes on its full meaning: these items also endure a never-ending state of instability and uncertainty that is irreducible to normalization. Hence indeterminacy – not formal rationality and institutionalization – has to be recognized as the pivotal item of socioprofessional interaction at technical, political and moral levels also.

# The Relationship between Knowledge and Status and the Limits of Dominant Approaches to Sociology of Professions

Even though the erosion of formally vested traditional tenets of western learned professions has been widely investigated for decades by the sociology of professions, it is quite surprising to note that this discipline rarely took full account of the insights of the sociology of science. For example, the notion of the irrepressible indeterminacy of knowledge could have proved important as a theoretical and empirical guideline for the analysis of socioprofessional interaction and its attributes. Save a few cases (e.g. Torstendhal and Burrage, 1990), vice versa, the problem of professions' technical reliability, social trustworthiness and moral standards is still related, by rule, to normative and institutional dimensions, rather than to the degree of indeterminism of scientific logic.

Brante (2001) recently summarized Anglo-American and continental European sociology of professions' debate on taxonomic (descriptive) and narrative (essentialist) definitions of professions. He noted that the only common pattern whose existence is shared by all specialists (and thereby distinguishing professions from other occupations) is the connection of profession with a particular educational training and the practice of a particular type of knowledge, basically academic knowledge. This fact, he concludes, allows professions to gain certain social positions in the social ladder, and by rule, a relatively high status.

This shared view indeed recognizes science as a common denominator for what is meant by professionalism. Professional status, in turn, is rightly assessed as a secondary (ascribed/acquired) trait, necessarily stemming from the embodiment of a given knowledge. Given this, one should reasonably expect to find a clear, explicit account about the crucial importance of the logic of science production to the definition of profession and professionalism. Unfortunately, however, there is a distinct lack of systematic analysis of science-in-the-making and knowledge work as the primary source of professionalism, either as determining the state of professional realms vis-a-vis society, or as a precondition of professional status as a mere secondary trait. In short, how and why professional trustworthiness and science indeterminacy are the two sides of the same coin is not clear.

Paradoxically enough, the lack of serious concern about science indeterminacy in the sociology of professions is particularly apparent in the work of the most quoted contemporary scholars such as Freidson (1986, 2001), Larson (1977, 1990) and Abbott (1988).

In Freidson's work, science production and application are not underestimated, but the focus is on the social embodiment of professionalism as an already formalized body of knowledge. Hence the main analytical effort is devoted to assessing the contours of professional status-roles. In fact, professions are conceived as carriers of their embodied knowledge, acting not so much in relation to the degree of indeterminacy that science implies, but rather within the limits and according to the procedural framework (chances and constraints) set up by political and institutional settings. Socioprofessional interaction, therefore, reflects the logic of status arrangements and established ethical standards rather than that of the irrepressible scientific dynamic (Freidson, 1986, 2001).

In Larson's work, technological discoveries, science's disciplinary differentiation, sociotechnical rationalization and the enlargement of educational systems are at the core of the rise of professionalism. Yet a political strategy of professional closure is the leading rationale of professional action. Such a closure is ideologically pursued in the name of high quality knowledge, but, in actual practice, it aims at increasing status and adding status symbols. In this respect, the doxa of the scientific fieldwork is also a means of social closure, to the extent that it provides the elite practitioners with the ultimate authority to speak within the given field. Closure not only shelters the professional monopoly but

also ultimately leads professions to become agents of governmentality rather than of science's indeterminacy (Larson, 1977, 1990).

In Abbott's works, knowledge-based professional activity is typical of professionalism. Only a specific education in certain abstract theories and a continuing training in ad hoc scientific methods can provide professions with the cognition and skill necessary to investigate, interpret, treat and decide about any sort of cases. Yet, higher knowledge, as such, is conceived as an environment, instrumentally involved in everlasting interprofessional competitions in accordance with market logic. Therefore what really counts is the exploitation of that part of knowledge production, distribution and application that provides legitimacy for exclusive market benefits (i.e. successful statuses, economic rewards and organizational dominance) not for the dynamics of social-scientific logic and its creative advancement (Abbott, 1988).

The brief comments made here make clear that the most quoted theoretical approaches in contemporary sociology of professions recognize that professions presuppose and live on given stages and processes of science production, yet they suggest that the most remarkable issue in the historical evolution of professionalism is the establishment of status structures and status symbols, as determined by political, economic and social constraints, rather than by the overwhelming reality of social-scientific uncertainty and indeterminacy. In other words, one can say that, in general, professions' epistemic foundation and its overall implications are not taken seriously enough. One might even say that the latent aims of such approaches is to offer a rational(ized) picture of western social systems and give credit to a formal(ized) image of professionalism as a non-problematic, socially embedded welfare constituency. Or – to put this another way - to repress the fact that learned professions' embodied knowledge can only be formalized and normalized to a limited space-time extent, as the degree of creativity that substantiates it is always able to transcend, bypass and even corrupt and destroy any established social order as well as any vested interest and value (Jamous and Peloille, 1970).

# New Trajectories of Professions' Power-Knowledge in Western Risk-Knowledge Society

If all the preceding is correct, it follows that not only the most credited views about (western) professionalism provided by dominant sociology of professions' approaches deserve substantial revision, but that such a revision cannot but imply, first and foremost, the abandonment of major assumptions derived by formal rationality paradigms, especially those

about sources, forms and degrees of (western) professions' social reliability, accountability, trustworthiness and confidence. Even in the case of professional performances – including the hidden aspects such as professional burn-outs, drop-outs, anomie, etc. – only a substantive rationality paradigm could provide a more plausible and socially adequate account of what they are about.

Indeed, a radical heuristic shift is urgently required in the field of sociology of professions, for what is at stake is precisely the future of western society. In fact, contemporary western society is now entering a new phase of its already highly problematic Civilizational Age: a phase characterized by the social-structural coupling of two contradictory epochal frameworks: the one epitomized by the notion of 'risk society', the other epitomized by the notion of 'knowledge society'. In the 'risk society', professionalism has to face and possibly counteract the pathogenic outcomes of the vanishing guarantees of modernity. In the 'knowledge society', professionalism has to respond in a new way to the global-local challenges that its creative potentials have put to the fore at world-system level in the last decades.

The impact of the risk society cannot be discussed here, except to stress that the major works on the topic (e.g. Beck, 1986; Luhmann, 1988) owe a lot to the path-breaking insights provided by Merton's (1957) sociology of science. What it is worth noting is that one of the most apparent consequences of such impact is the systematic theoretical and practical deconstruction of the power–knowledge nexus based on status and its socioinstitutional arrangements (Olgiati, 1998, 1999). Consequently, as a number of analyses are showing, it is also increasingly apparent that risk – and social insecurity about risk – rather than status, is the epistemic precondition of trust.

This evidence in turn gains greater relevance as daily experience shows the frailty and inconsistency of the broader institutional realm upon which professional status and status symbols are constructed at present. Indeed, formal-official legal orders, the market system and class structure are all, at the same time, undermined by a disquieting constitutional instability (Olgiati, 2001, 2004). Status and status symbols cannot therefore be regarded seriously as trustworthy reference points as they were in the past. Broadly speaking, in sum, the dark side of modernity compels either the abandonment of traditional ideas of professions as problem-solving agents, or alternatively the questioning of the premises of the nomic (i.e. ordering and stabilizing) social function of professions in society (Larson, 2000). That is why scholars such as Hellberg and Oevermann are correct to suggest the search for a new heuristic model of professionalization based, respectively, on multiple learning strategies (Hellberg, 1999) and on the notion of professions as risk managers (Oevermann, 2001).

In addition to the risk society, contemporary western society has to cope with the impact of what has been called the knowledge society. The rise of the knowledge society as a political programme within contemporary western society is the structural outcome of two interrelated trends: the one stemming from the stretching and disembedding of western resources at world-system level due to globalization policy, the other stemming from the very nature of current information and transgenic scientific revolutions.

As a result of the relocation of a significant amount of western industrial activity to non-western countries, carried out under the label of globalization, some types of professional know-how and skills, directly connected with material production, are now declining in the West. Other types, basically concerned with dead work – such as logistics, distribution, consumption, etc. - are expanding and being refined. The fact that, via globalization, western scientific discoveries and applications depowered certain western occupational groups rather than others, did not occur by chance: the indeterminacy of new scientific potentials structurally fits with asymmetric and asynchronous power relations at world-system level. For this very reason, therefore, western society can now promote competition worldwide with other countries basically by fostering the remaining country-specific living work, i.e. that concerned with cultural creativity, science production and high-tech innovation. Indeed, in the last few years, a social-scientific engineering strategy - labelled research and development – has been enhanced to reset the western epistemic community as a joint power-knowledge enterprise between scientists, politicians and entrepreneurs. Within this framework, learned professions are required to reduce their field autonomy in order to favour market and state imper atives. The aim is to keep steady at least existing competition advantages, given the fact that western society has become in the meanwhile a veritable steady state system (Ziman, 1996).

Unfortunately for western society, however, all the above entails the risk of an even greater constitutional destabilization, for, by definition, a knowledge society policy can neither normalize its creative potentials, nor enforce steady state social dynamics. Learned professions, therefore, could hardly establish unquestionable trust relations on those grounds and it is likely that they will endure serious moral and practical difficulties.

As has been said, besides the paradoxical trends of globalization, the rise of knowledge society stems also from the impact of information and transgenic scientific revolutions. As happened in any previous industrial revolutions, in this case also consequential social changes and political conflicts might have a tremendous impact on learned professions (Torstendhal, 1984). A major problem with both information and transgenic revolution is that they provide high-tech means of enabling a

radically artificial deconstruction of the whole existing symbolic and physical social domain. The rise and spread of virtual interactions and the artificial manipulation of living species, in particular, compel the social system to adopt, in turn, newly created, ad hoc, interactional, communicative and moral commitments. Given both the positive and negative potentials of such means, higher education, cultural capital and creative work, as embodied either by human agents or by old and new institutions of learning, are therefore a matter of a significant restructuration. Altogether, it is likely that, due to the rising competition about the 'organizational dominance' on the overall symbolic social domain, on the one hand, and the rising complexity and uncertainty of the 'relevant knowledge', on the other, western professions, whether or not involved in a 'democratization' policy (Funtowicz, 2004), will undergo either a generalized ideological reconversion, or a diffuse existential and moral insecurity about the contours of their professional jurisdictions, mandates and values. In general, to the extent that their entire setting and their habitus will be basically devoted to the imperatives of an all-embracing risk-knowledge management, they will also have to act as risk managers of their own sociotechnical competence. If this is so, then the need to analytically deal, from now on, with a sort of fluid professional trustworthiness should not be excluded.

#### References

Abiott, A. (1988) The System of Professions: An Essay on the Division of Expert Labour. Enicago, IL: Chicago University Press.

Ancarani, V. (1996) La scienza decostruita. Teorie sociologiche della conoscenza sciendifica. Milan: Franco Angeli.

Arendt, H. (1961) Between Past and Future: Six Exercises in Political Thought. New York: The Viking Press.

Arjomand, S. A. (2004) 'Social Theory and the Changing World', International Sociology 19(3): 321–53.

Atlas, S. F. (2003) 'Academic Dependency and the Global Division of Labour in the Social Sciences', Current Sociology 51(6): 599-613.

Beck, U. (1986) Risikogesellshaft. Auf dem weg in eine andere Moderne. Frankfurt-am-Main: Suhrkamp.

Brante, T. (2001) 'A Theory of Professional Types and Professional Waves: The Case of Sweden', paper presented at the ESA Research Network on Profession Conference 'Professional Identities in Transition', Paris.

Brenda, J. (1969) The Treason of Intellectuals, trans. Richard Aldington. New York and London: Norton.

Burns, T. R. and de Man, R. (1987) 'Science and Practical Action: Studies in Competing Logics', in T. Burns and H. Flam (eds) *The Shaping of Social Organizations*, pp. 348–65. London: Sage.

- Bush, V. (1945) Science The Endless Frontier: A Report to the President on a Program for Post-War Scientific Research, July 1945. Washington, DC: National Science Foundation, 1990.
- Cannavò, L. (1997) 'Sociological Models of Scientific Knowledge', *International Sociology* 12(4): 475–96.
- Engelstad, F. and Kalleberg, R. (eds) (2000) Social Time and Social Change: Perspectives on Sociology and History. Oslo: Scandinavian University Press.
- Ezrahi, Y. (1990) *The Descent of Icarus*. Cambridge, MA: Harvard University Press. Fals Borda, O. (1998) 'Reflections on the Participatory Research World Congress', *International Sociology* 13(3): 399–402.
- Freidson, E. (1986) Professional Powers: A Study of the Institutionalization of Formal Knowledge. Chicago, IL and London: University of Chicago Press.
- Freidson, E. (2001) Professionalism: The Third Logic. Oxford: Polity Press.
- Funtowicz, S. (2004) 'Models of Science and Policy: From Expert Demonstration to Post Normal Science', paper presented at the UPEM Meeting, Copenhagen; at: upem.er.dtu.dk/files/Funtowicz.pdf
- Gulbenkian Commission for the Restructuring of the Social Science Report (1996)

  Open the Social Sciences, ed. I. Wallerstein et al. Stanford, CA: Stanford
  University Press.
- Hacking, I. (1999) The Social Construction of What? Cambridge, MA: Harvard University Press.
- Hellberg, I. (1999) 'Altruism and Utility: Two Logics of Professional Action', in I. Hellberg, M. Saks and C. Benoit (eds) *Professional Identities in Transition: Cross-Cultural Dimensions*. Södertälhe: Almqvist and Wiksell.
- Jamous, H. and Peloille, B. (1970) 'Professions or Self-Perpetuating System?', in A. J. Jackson (ed.) *Professions and Professionalism*, pp. 110–12. Cambridge: Cambridge University Press.
- Knorr-Cetina, K. (1999) Epistemic Cultures: How the Sciences Make the Knowledge. Cambridge, MA: Harvard University Press.
- Larson, M. S. (1977) The Rise of Professionalism: Sociological Analysis. Los Angeles: University of California Press.
- Larson, M. S. (1990) 'In the Matter of Expert and Professionals, or How Impossible it is to Leave Nothing Unsaid', in R. Torstendhal and M. Burrage (eds) *The Formation of Professions: Knowledge, State and Strategy*, pp. 24–50. London: Sage.
- Larson, M. S. (2000) 'The Professions' Nomic Functions and the End of Modernity', s, in A. Febbrajo, D. Nelken and V. Olgiati (eds) Social Processes and Patterns of Social Control, European Yearbook on Sociology of Law, pp. 145–72. Milan: Giuffre.
- Luhmann, N. (1988) Trust and Power. New York: Wiley and Sons.
- Merton, R. K. (1957) 'Priorities in Scientific Discovery: A Chapter in the Sociology of Science', American Sociological Review 22(6): 635–59.
- Nowotny, H., Scott, P. and Michael, G. (2001) Rethinking Science: Knowledge and the Public in an Age of Uncertainty. London: Polity Press.
- Oevermann, U. (2001) 'A Revised Structural Model of Professionalisation', paper presented at ESA Research Network on Professions Conference 'Professional Identities in Transition', Paris.
- Olgiati, V. (1998) 'Risk, Professions and the Claim for Human Rights', in V. Olgiati, L. H. Orzack and M. Saks (eds) *Professions, Identity and Order in Comparative*

- Perspective, Oñati Papers 4/5, pp. 379-98. Spain: Oñati International Institute for the Sociology of Law.
- Olgiati, V. (1999) 'Crime as a Socio-Technical Opportunity: A Geopolitical Challenge to Security Policy and Social Trust', in A. Laithinen and V. Olgiati (eds) Crime-Risk-Security, University of Turku Publications of the Faculty of Law, B series, 8, pp. 7–40. Turku: University of Turku.
- Olgiati, V. (2001) 'Vers une refonte des communautès épistemiques en Europe', in L. Parini (ed.) États et mondialisation: strategies et roles, pp. 191-223. Paris: L'Harmattan.
- Olgiati, V. (2004) 'Constitutional Instability: A World-System Issue', in A. Gobbicchi (ed.) Globalization, Armed Conflicts and Security, pp. 25–46. Soveria Manuelli: Rubettino.
- Scheler, M. (1924) Versuche zu einer soziologie des wissens. Munich: Duncker und Humblot.
- Schumpeter, J. (1954) History of Economical Analysis. London: Allen and Unwin. Torstendhal, R. (1984) 'Technology and Development of Society, 1850–1980: Four
- Phases of Industrial Capitalism in Western Europe', History and Technology
  No. 1.
- Torstendhal, R. and Burrage, M. (eds) (1990) The Formation of Professions: Knowledge, State and Strategy. London: Sage.
- Veblen, T. (1919) The Place of Science in Modern Civilisation and Other Essays. New York: B. W. Huebsch.
- Wallerstein, I. (1996) 'Social Science and Contemporary Society: The Vanishing Guarantees of Rationality', International Sociology 11(1): 7–25.
- Wallerstein, I. (1998) 'Social Knowledge: Heritage, Challenges, Perspectives', presidential address, XIVth ISA World Congress, Montreal.
- Weber, M. (1980) Il lavoro intellettuale come professione. Torino: Einaudi.
- Ziman, J. (1996) Prometheus Bound: Science in a Dynamic Steady State. Cambridge: Cambridge University Press.

Biographical Note: Vittorio Olgiati is associate professor in the faculty of sociology, University of Urbino, Italy. He is a qualified lawyer. He has been acting as vice-director and is fellow of the Oñati International Institute for the Sociology of Law, Spain; he has been visiting scholar at the Centre for Sociology of Law, Wolfson College, Oxford, and he is currently lecturer within the framework of the EU ECTS Mobility Programme at the Faculty of Law, Turku University, Finland. He is a member of the governing board of the ISA Research Committee on Sociology of Law; and a member of the Scientific Committee of the AIS-Sezione di Sociologia del Diritto. His research focuses on sociological theory of law and sociology of legal professions. He is on the editorial and international advisory boards of a number of journals and book series, and is author of more than 100 publications (including volumes, journal articles and contributions to books).

Address: Faculty of Sociology, University of Urbino 'Carlo Bo', Via Saffi 15, Urbino 61029, Italy. [email: olgiati@soc.uniurb.it]