

Reflections from within: nature-society relations, interdisciplinarity, and knowledge production in rural sociology

Hilary Tovey

Sociologist, Trinity College, Dublin, Ireland

L'article de Hilary Tovey, comme celui de Karl Bruckmeier (p. 3), a pour origine le XXIII^e congrès de l'*European Society for Rural Sociology* intitulé "Reinventing the rural: between the social and the natural" qui s'est tenu en 2009 à Vaasa en Finlande. [. . .] Lire la suite dans le texte introductif placé en tête de l'article de K. Bruckmeier, dans ce numéro.

La Rédaction

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Abstract – This paper reflects on the distinctive character of sociological knowledge production, particularly in rural and environmental sociology, which is called into question by the huge current interest in understanding human encounters with nature and by increasing calls for interdisciplinarity in researching these. It attempts to re-state some foundational strengths of sociology as a discipline, as well as to identify some theoretical dilemmas for sociologists undertaking socio-natural research.

Mots-clés :
sociologies de la
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de connaissances
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interdisciplinarité

Résumé – Une sociologue s'interroge : rapports nature-société, interdisciplinarité et production de connaissances en sociologie rurale. Cet article examine ce que la sociologie en tant que discipline apporte de distinct à la connaissance scientifique. L'analyse porte en particulier sur la sociologie rurale et la sociologie de l'environnement. La nécessité de réfléchir à cette distinction découle de l'intérêt grandissant accordé à l'interprétation du sens de la relation entre société et nature, ainsi que des demandes pressantes pour conduire ces recherches de façon interdisciplinaire. Quelques-unes des valeurs fondamentales de la sociologie en tant que discipline sont soulignées, de même que les problèmes théoriques qui apparaissent dès lors que l'on commence à interpréter un monde défini comme « socio-naturel ».

Introduction

Karl Bruckmeier's paper in this issue¹ suggests that rural sociology needs to open itself up to dialogue with a number of new, interdisciplinary fields of research – ecological economics, social and political ecology, Sustainability Science – which offer "innovative discourses about rurality" but have been largely ignored by rural sociologists. While these approaches under-theorise society-nature relations, they focus, Bruckmeier argues, on some common themes which rural sociology could do well to adopt – specifically, an interest in rural resource use, and in the power, property and knowledge relations which surround this. Social ecology in particular challenges the conventional disciplinary division of labour which has encouraged sociologists (rural and other) to

attend predominantly to the symbolic or cultural dimension of nature-society relations and leave analysis of the material dimension to other disciplines. He calls for a more "problem-oriented" than "discipline-oriented" approach to rural research which could transcend dichotomised understandings of "nature" and "society", offering instead a critical system analysis of their mutual interaction and co-evolution.

My paper also addresses the difficult issue of theorising society-nature relations, but from a different standpoint – that of a rural and environmental sociologist who is strongly embedded within the discipline of sociology. Both these papers, it might be noted, were originally drafted as contributions to the 2009 European Society for Rural Sociology's conference in Vaasa, Finland, on "Reinventing the rural: between the social and the natural" – specifically to Theme 4, "The sciences of the rural". The ESRS Scientific Committee articulated Theme 4 as concerned with opening up to scrutiny "the expertise and

Corresponding author: htovey@tcd.ie

¹ See Bruckmeier, K., "Towards interdisciplinary rural research – theorizing nature-society relations".

performativity" of "rural social science", that is, its politics and the world that it enacts through research, in order to bring "new critical approaches to bear" on the processes of social and technical change affecting contemporary rurality. They identified the diversity of disciplines engaged in rural research as an issue for discussion, asking can or should there be a "specific rural sociology" or would it not be better to redefine the ESRS's research enterprise as "rural studies". My presentation grew out of dissatisfaction with their claim that only interdisciplinary studies can "fully acknowledge" the "irreducibly" different dimensions of rural reality, which include the spatial, political and economic (but oddly, not the "natural") as well as the social. I wanted to question whether interdisciplinary knowledge does necessarily give a more adequate understanding of rural social reality, and also what we mean in all this by "interdisciplinarity" – within the "social sciences" or between social and natural sciences. The two appear to pose different problems for rural sociologists.

The paper published here, although reworked, still carries evidence of its origins in these debates. While I agree with Bruckmeier that dialogue between rural sociology and other emerging perspectives within what we might call the "social sciences of nature" can be enriching and illuminating, I am not convinced that rural sociology has been unable to move beyond a focus on culture, or social constructions of nature, to offer more integrated analyses of how the material and the symbolic mediate each other in changing historical circumstances. Thus, while the first part of this paper tries to defend sociology against certain narratives about its encounter with "nature", the second part raises some questions about interdisciplinarity as a useful way of moving forward our understanding of rural and environmental issues. I ask whether sociology offers a stance which is distinctive towards knowledge production for rural actors, and whether this is in danger of being lost in interdisciplinary forms of research. Questions about the politics of rural sociology, and about the social and natural worlds it enacts through research, arise as much in relation to "rural studies" as to "rural sociology".

The discussion is of course bedevilled by the difficulty of drawing boundaries around "rural sociology", or indeed, sociology *per se*. Many teachers in departments of sociology read and cite thinkers who have other disciplinary affiliations, and publish in journals which are not core sociology outlets. Papers by the same authors appear in both sociology and non-sociology publications. What can be included as "sociology" and what can not is an ongoing object of debate within the discipline – views diverge, for example, over whether Marxist analysis is outside the sociological canon or a founding contribution to it, or whether economic thought is antithetic to sociological or just another perspective on the social which

must be integrated into sociological analysis. Journals, handbooks and anthologies of rural sociology are usually attempts to claim a definition and content for the discipline as much as attempts to assemble materials that faithfully represent its scope. Defining its object as "the social" means that sociology is necessarily engaged in dialogue with other social sciences; dialogue is more difficult when the object is redefined as "the social-natural", bringing engagement with natural scientific thought and modes of explanation.

Nature and society in sociology

Despite the emergence, some thirty years ago, of a specific subfield within sociology designated as "environmental sociology", debate continues over whether the historical constitution of sociology as a discipline disables it from adequately addressing nature (see e.g. Buttel and Gisjwit, 2001; Dunlap *et al.*, 2002). Catton and Dunlap (1978) famously claimed that sociology operates with a "human exceptionalism" paradigm which assumes that human beings are uniquely exempt from biological and physical determinism and treats social action as fully accounted for by reference to culture and social structure. Walker (2005) adds that sociology is predominantly about explaining the rise and forms of Western modernity and this, given the largely benign environmental conditions found in Europe, has made it blind to the capacity of nature to shape social structure and culture through its production of hazards and threats. Among the "classic" thinkers who shaped the discipline Durkheim is often identified as the greatest obstacle to the emergence of an adequate sociology of nature, with his foundational argument that social processes and conditions be explained only by social facts. All these claims can be contested – and perhaps if anything challenges the claim that sociology universally assumes a "human exceptionalism" paradigm, this is the existence of rural sociology – but the suspicion that sociology cannot theorise nature persists. But so too does the suspicion that embracing greater interdisciplinarity will not overcome the problem, which may be rooted deep in social thought about human development and the evolution of civilisation.

Environmental sociology certainly seems to have been "disabled" by adherence to a too narrow range of foundational disciplinary ideas. In the Anglophone world at least, it early adopted a business-as-usual approach to studying environmental issues, seeing these as one more topical field to which conventional theories and methodologies could be extended, for example with the endorsement of social constructionism, or the identification and analysis of "social problem claim-making", as the key theoretical asset sociology could bring into cross-disciplinary research on the environment (Hannigan, 1995; Yearley, 1996). In turn this encouraged

a focus on the environment as a problem (“crisis”) for society and on analysis of the politics, policies and types of knowledges implicated in both the creation and the resolution of the problem (e.g. Beck, 1992), and correspondingly less interest in exploring human relations to nature as a routine material and cultural resource (Duarte, 2001; Franklin, 2002; Walker, 2005). The study of routine uses of natural resources has largely been the domain of rural sociology and anthropology – indeed, we might argue that an interest in the material and cultural uses of land, soil, climatic conditions, plants and animals, whether routine or changing, is a defining characteristic of the field of rural sociology, and that environmental sociology would benefit from a broader grounding within that field, treating anthropogenic environmental crisis as merely one aspect of human relations to nature more generally.

However some influential theorists claim that social constructionism is the major theoretical lens through which rural studies also have addressed nature in the past 20 to 30 years. Castree and Braun (2006), for example, link such a claim to an interesting narrative about the way in which “nature” has entered rural social scientific concerns in recent years, and in turn, to the significance of interdisciplinarity for a revitalised “rural studies”. In their account, from the post-war period to the late 1980s “nature” was neglected (assumed but taken for granted); during the 1990s and into the present decade, “nature” became strongly present, and was addressed primarily through a social constructionist lens; most recently, interest in “nature” continues, although constructionism has waned and we are moving into a “post-constructionist” phase characterised by a wide diversity of new theoretical approaches, including some inspired by environmental sciences. The point of the narrative is to support a claim that rediscovery of nature as an object for social research and theorisation has profoundly revitalised rural studies, bringing a new recognition of the importance of interdisciplinarity in rural research and the importation of “exciting”, “fresh” ideas and theoretical frameworks.

Castree and Braun wrap together issues which need to be unbundled. We can agree that rural sociology has been revitalised in the past 30 years or so (if often under other labels – regional and local studies, transport studies, sociology of food, social movements, sociology of consumption, recreation, tourism) without attributing this to some “new” recognition of the centrality of nature to the rural. Plenty of other contenders for this role are available – the rediscovery by some rural sociologists of Marxism, political economy, feminist theory and other “grand theories” of society from the 1970s on; the discovery of globalisation in the 1980s, opening up research into both homogenising pressures across space and the ongoing distinctiveness of localities as they are reshaped by insertion into a global division of labour; rediscovery of food as an issue which bridges production and

consumption and dissolves and recreates boundaries between rural and urban worlds, as part of a renewed interest in consumption generally within sociology from the late 1980s on; rising criticism by rural movement actors, in the context of emergent global discourses of “participatory democracy” and “sustainable development”, of the impacts of transnational and supranational food and agriculture policies (the CAP, the WTO) on rural peoples and places, again from the mid to late 1980s through to the present day; and perhaps also the debates around non-human animals and animal-human relations which were stimulated by deep ecologist and animals rights philosophers and movements over the same period, which have renewed significant questions within sociology about how to conceive of subjectivity, agency, rights, and “society” itself as a bounded system.

Even more problematic, I find, is Castree and Braun’s suggestion that if rural studies do not adopt some type of constructionist approach, broadly understood, they tend to fall back into a natural scientific perspective on nature, seen as a rather crude form of “realism”. This echoes Hannigan and Yearley’s argument above that a sociology of the environment must apply a form of analysis which is distinctively social, viz analysis of cultural or social constructions, to a cross-disciplinarily shared object, viz nature. This approach subsumes realism into a positivistic treatment of nature as an objective reality governed by its own law-like processes. Castree and Braun note that theoretical realism enjoyed a brief popularity among sociologists in the 1990s, but see this as a response to the introduction into rural studies of environmental concerns and issues, particularly discourses of “sustainability”. In other words, realism is or was a contamination of rural studies due to the unreflexive adoption of problems and concepts originally developed within other disciplinary worlds. This seems to imply that interdisciplinarity between the social sciences is possible because all share a commitment to cultural or symbolic forms of analysis, but is not possible with the natural sciences, which remain obdurately realist in their approach to studying nature.

The “either-or” approach (either constructionist or realist) to theorising “nature” has been discussed and criticised by many different social theorists, from Latour (1993) to Ingold (2000); it is also addressed by Bruckmeier who argues that we need to replace it with a theoretical approach which combines the material-energetic and the symbolic-cultural in a critical systems approach. Sociology, as a reflexive science (Giddens, 1976) which is aware that it studies a world of subjects rather than objects and must therefore consider how its own ontological categories and methodological procedures enter into the consciousness of those it studies, cannot avoid being “constructionist” to some degree. Equally, a constructionist approach to nature can

encourage critique of misrepresentation and of reification, tools which can usefully be turned back on them to understand the performativity of sociological knowledge alongside the politics of identity, power and resistance. How the rural is constructed as a cultural idea is contingent on many factors including the gender, class, occupation, interest (economic, environmental, developmental, etc.), network affiliation and so on of the constructors; thus there is no single nature but a plurality of natures, constructed through a plurality of discourses, even as those with discursive power help to create a singular "rural" that they purport only to describe. But recognition of discursive diversity does not seem in the end to be of much help in reconciling differences in disciplinary research models, especially realist versus constructionist ones. And not everything which sociology has to say about rural processes and social-natural relations can intelligibly be subsumed under the social constructionist banner.

There are, I argue, some types of rural sociological analysis which step decisively beyond the study of the rural as representation(s). Examples include analyses of the role of the social in the reproduction and transformation of natural entities and processes – approaches that explore "the death of nature", or how nature has become "social" in the sense that it no longer has an independent existence but is materially produced within specific social arrangements and relationships; and analyses of the interplay between the material and the discursive-symbolic in accounts of rural transformation as a dialectical interplay between discourse, science, technology, new forms of property rights in nature, and ecological processes. What underpins such analyses is an appreciation that human interaction with nature brings about material changes in nature itself, and – to a greater or less degree – that this "refashioned nature" (Goodman and Redclift, 1991) in turn can bring about change in the social organization, structure and culture of society. Theoretically named as "productionist" or "co-productionist", they rest on an assumption of the "co-evolution" of natural and social processes and arrangements which requires simultaneous analysis of the material and the cultural and of the interaction between these.

Marxist or neo-Marxist sociology theorisations of the rural could claim to have discovered nature as a major player within social affairs well before the claimed "reappearance" of constructionism in rural studies in the 1990s. Mann and Dickinson (1978) discussed how natural barriers to accumulation in farming and the dependence of agriculture on biological and seasonal processes transformed farmers into propertied wage labourers; Goodman *et al.* (1987), in *From Farming to Biotechnology*, made use of a similar idea to explain the distinctive path taken by the industrialisation of food in capitalist societies. Much interesting work by rural so-

ciologists today attempts to take seriously the idea that "nature" (in the sense of biophysical processes) is a separate level of reality which continually intersects with but is never totally subsumed by social, political, scientific or economic actors. Examples include work which brings elements of Beck's "risk society" theory to bear to understand food production processes as processes of both material and symbolic transformation in the context of a political economy of knowledge, in particular work on transgenic cropping or genetically modified food (e.g. Lotter, 2009); or work on governance of natural resources, developed through a focus on property rights and property regimes (e.g. Laschewski and Penker, 2009). Such approaches conceptualise nature as "second nature", continually remade as new technologies and legal frameworks expand their reach into control over life processes themselves. Neo-Marxist approaches to social ecological relations could be seen as theoretical rivals to the Social-Ecological Regime theory discussed by Bruckmeier, which also analyses how human uses of material nature, through the appropriation of energy flows, transform social-natural relations over long historical epochs. Indeed, through their emphasis on the social relations (relations of labour: Swyngedouw, 2006; relations of capital and power: Huber, 2008) which structure the mobilisation of metabolic exchanges, they may explain better the processes of creation, appropriation and exploitation of energy sources than do those found within the social-ecological perspective, which can generate extremely interesting historical descriptions of metabolic exchanges of energy between nature and society (Krausmann *et al.*, 2008) without providing any higher-level explanations of how these arise or change over time.

Constructionists might reply, however, that a problem with all theoretical approaches which seek to overcome the "nature-society divide" by addressing nature and society as interacting systems within a larger socio-natural whole is that they still work with the assumption that the boundaries between "society" and "nature" can be taken as given. Arguably, these have been "given" by previous intellectual constructions such as the establishment and legitimisation of a division of labour between natural and social sciences during the XIXth century. And they are unsettled by some more recent work. Research on animals raises the question whether they should be addressed as part of "society" or part of "nature" (Buller and Morris, 2006). Should the boundary whose crossings we want to study be located, in fact, between all living subjects and "inanimate" nature? Between the biosphere and the geosphere? The concept of a "natural resource" also surely means that this is as much a social product (through "valorisation") as it is a material entity or process. When we call for an integrated approach which studies the interaction of nature and society as a complete system, are we simply calling on researchers to do

more “boundary-work” (Gieryn, 1995), separating “nature” and “society” more completely from one another in order to understand the exchanges between them?

Benton (1994) and more recently Jansen (2009) suggest that the most difficult question facing rural and environmental researchers is how to divide up ontological reality in order to identify phenomena and causal relationships which we want to understand further: talk of “society” and “nature”, or even of “socio-natures”, may not give us a useful answer. In setting out to study nature-society exchanges, it seems, we can divide up “reality” in different ways. We can make the cut horizontally, seeing nature and society as parallel systems linked by boundary-crossing interactions; or we can make it vertically (as in Actor Network Theory), addressing specific “problems” which are essentially hybrid creations of social and natural actors. A more “problem-oriented” approach to understanding the socio-natural world in which we live seems to demand the latter, but how compatible is that with a systems-based form of theorising? How compatible is the notion of “interdisciplinarity” with either method of “reality-production”?

Rural sociological knowledge – performativity and interdisciplinarity

So far, my paper has tried to establish that there is no necessary connection between “exciting” and “novel” rural research, rediscovery of (representations of) nature as a topic for cultural analysis, and a shift away from rural sociology towards an interdisciplinary form of “rural studies”. But what about performativity? What sort of knowledge has rural research produced in recent decades, and with what sorts of effects on the subjects it studies and on the wider society? The question of “knowledge for what” or “for whom” has been forcefully returned to the sociological agenda by Michael Burawoy (2005 and 2008), although rural sociologists appear to have been relatively slow to discuss its relevance for them. Echoing earlier theorists such as Howard Becker (1964) who asked “Whose side are we on?”, and the ongoing discussions within sociological methodology about “studying up” versus “studying down”, Burawoy’s key point is that sociology is fundamentally an emancipatory science which is addressed in the first place to empowering and giving a voice to the ordinary citizen.

Burawoy (2008) distinguishes four different categories of sociologist (or of contemporary sociological practice): (i) policy sociologists who hope to influence an increasingly marketised society through an alliance with the state (not recognising, he says, that the state has already ceded to markets most of its own independent authority and agency); (ii) professional sociologists who work mainly with and for their peers – they are

afraid to go outside the academic world in case this brings their discipline into disrepute and threatens its already fragile legitimacy; (iii) critical sociologists who attack professional sociology’s withdrawal from the moral stances which were embedded in the discipline’s formative years, but who are themselves equally confined within academic debates and concerns largely irrelevant to the public; and (iv) public sociologists who try to dialogue with and to defend diverse publics in the face of a “third-wave marketisation” which is destroying their human rights and even destroying nature, the “very source of human existence”. Only the latter, he suggests, produce “performative” knowledge, in the sense of knowledge that is intentionally constructed to bring about social change.

Burawoy’s four-fold typology has been endlessly criticised, reworked and re-theorised. Wieviorka (2008) shifts the discussion away from types of sociologist towards questions about the production and validating of sociological knowledge: he asks, what is the “actual status” of sociological knowledge, and in particular of “the proof that enables us to validate it and to speak of ‘science’?”. The key dividing line between sociologists is less to do with their politics than their epistemology: some believe that scientific validation of their work can only come from within their own professional circle which alone understands the appropriate methodological procedures for conducting research, while others believe that sociological knowledge is validated when it is shown to be useful, meaningful, usable, etc. by one or more publics. Thus, the audiences we envision for the sociological knowledge we produce influence the criteria we use to determine good or valid knowledge. The ideal of the “public sociologist”, in other words, is more likely to be realised in debates about methodology than in the adoption of political stances.

The decision to engage in a “public” or other type of sociological practice, then, happens at an early stage of the research process, when choices are being made about what to study (the object of the research) and what methods are to be used, both of which are inseparable from the researcher’s more or less implicit view of what would count as a demonstration of the scientific validity of the findings. It is unfortunately increasingly rare for sociologists to have a free choice over these basic issues; even in an academic setting such choices are increasingly constrained, by peer pressures and by pressure to bring in external funding in order to construct an academic career for oneself. Rural sociologists have historically been more constrained than most, with so much rural research taking place not within academic but within relatively applied and policy-driven institutional settings. The choice of what to study and how to study it has often been made externally to the discipline. Yet the discipline of sociology is what affords researchers whatever protection they have

from such external ontologies and knowledge interests; that is, it is because rural sociology is part of the wider, theoretically developed and self-reflexive discipline of sociology that it has sometimes been able to escape from constraint and develop its own distinctive understandings of how the contemporary world is evolving and how this interconnects with rural transformations.

But the “performativity” of knowledge does not depend only on the intentions and epistemological values of the knowledge producer. Scientific knowledge may reconstitute the world it arrives into, but only if it is taken up and “translated” by other actors who see an interest to themselves in doing so, and this can be quite contingent, as Latour (1988) reveals in his discussion of the different ways in which army physicians and private practice doctors responded to the discovery of the tuberculosis vaccine in XIXth century France. The processes through which scientific knowledge circulates around and alters the world are strongly network-based; certain network nodes act as “fortresses” or “strongholds” (*ibid.*) because they command access to others in the same network or in related networks, and knowledge must “pass” through these fortresses if it is to gain legitimacy and performativity within society at large. The performativity of rural sociological knowledge is shaped by some strong fortresses: the sorts of agricultural research institutions referred to above; policy networks around EU, national government or global development institutions; academic associations such as the ESRS and IRSA, congress manifestos, publications such as the *Handbook of Rural Studies* (Cloke *et al.*, 2006), all more or less embroiled in what Bourdieu called a struggle for academic orthodoxy. Increasingly, these fortresses are characterised by a preference for interdisciplinarity over disciplinarity. What are the consequences of this for the future of rural sociology and the capacity of rural sociologists to represent themselves as constructors of “valid” knowledge of the rural, in coming years?

Burawoy (2008, p. 354) believes that sociology, alone among the social sciences, “takes the standpoint” of civil society or of “the social”. This for him is why sociologists should take a “public” stance. Whatever the ambiguities and exclusionary practices of civil society are, it is still “the best possible terrain for limiting colonisation by state and market”. The standpoints of economics and politics are quite different: economics takes that of the market, about which it claims a monopoly of knowledge, and its underpinning value is expansion of the market; political science takes the standpoint of the state, or of the political order in general, and is underpinned by a value commitment to political stability. Only sociology “valorises the social” resting on the values of human emancipation and autonomous development. The implication is that social science disciplines are essentially in competition with each other, even in conflict; and that calls for

interdisciplinarity among the social sciences, particularly in a world being shaped by a third wave of marketisation in which market and state are (unequal) allies, are peculiarly threatening to the discipline of sociology, and are profoundly de-politicising.

Wieviorka (2008) suggests that what shapes the discipline of sociology is an internal competition between two epistemological positions, one of which recognises only peer professional evaluations as confirmations of sociological “truth”, the other adds as an important criterion the reception of such truths by lay actors. Similarly, Burawoy (2008) distinguishes between “traditional” and “organic” public sociologists in terms of how they regard the “commonsense” of local civil societies: either as inferior to their own professional standards of truth-seeking (“publics do not and cannot understand the conditions of their own subjugation”, *ibid.*, p. 355), or as valuable insights which demand that communication with publics be “two-way and reciprocal” (*ibid.*). In effect, both seem to suggest that sociologists seeking to produce valid understandings of the world aspire either to disciplinarity or to transdisciplinarity, but not to interdisciplinarity.

But neither address interdisciplinary research and boundary crossing between the natural and the social sciences. This is a type of interdisciplinarity of which rural sociologists have long experience, given its history of political support as one element in a basket of disciplines which were expected to get together to solve practical problems of agricultural productivity or (more recently) environmental degradation stemming from agriculture. “Interdisciplinarity” in this case may not often go beyond rhetorical gloss: the disciplines involved are not called on to question or alter their fundamental knowledge-production and knowledge-legitimation procedures. However that may be just an initial stage in a process which will give way over time to more fundamental disciplinary unpicking. Considerable recent work on contemporary “knowledge society” (see Tovey, 2008) argues that “science”, hauled out from its academic tower, is now expected to produce knowledge of use in solving “real-life” – that is, non-disciplinary – problems. Supporters of “knowledge society” ideas argue that “new” problems of social and natural governance are essentially so complex, multifaceted and uncertain in their dimensions that they require the integrated input of many different disciplinary perspectives. A more sceptical interpretation is that we are witnessing the emergence of “academic capitalism” (Slaughter and Leslie, 1997) – a harnessing of scientific research to new circuits of knowledge, linking academic researchers to economic interests in order to embed science in commercial property, profoundly altering the research questions that can be asked and the methodological procedures used to answer them. To contest this, the survival of a discipline which takes as its fundamental interest that of the citizen-subject and is

shaped around a methodological debate over how best to realise that interest (i.e. by the inclusion or exclusion of transdisciplinary knowledge production procedures) is critical.

Rural sociology clearly experiences strong pressures to move towards Burawoy's "policy" type of sociology, in which its role is to address and identify as "problems" what are obstacles to the goals of policy-makers more than what are experienced as crises or difficulties in the lives of citizens. And it may well be that an important Trojan horse in this process is precisely "nature" – or rather, "environmental problems". As the interest of agricultural policy-makers shifts away (at least in developed countries, and at least for the moment) from food production to environmental impacts and from agricultural development to rural development policy, often understood, as Marsden (2003) has noted, as a sort of hygienicist programme for cleaning up the countryside, rural sociology is increasingly expected to contribute to interdisciplinary work with natural scientists on problems of nature. The degradation of nature as part of the third wave marketisation, which Burawoy signals as an appropriate context for a renewed orientation to public sociology, may be having the opposite effect to what he desires.

Interdisciplinarity between natural and social sciences has re-energised various versions of "systems" theorising as a way to try to incorporate "the social" into research on "the natural". While much sociological thinking is critical of systems theorising, outside sociology a systems approach is widely seen as offering an essential framework for studying social and natural processes in an interconnected way – for example in the moves towards a more system-based form of theorising to research climate change evident in "life science" and "ecosystem" approaches and in the new paradigm of "Earth System Science", launched by NASA to be a holistic metadiscipline embracing all processes in nature and society and characterised by a stress on "complexity", "thresholds" and "tipping elements". Whether a systems approach represents or misrepresents "nature" (for example, over-emphasising stability and self-correction rather than addressing change and chaos) may be a question best left to the natural scientists themselves (but see Forsyth, 2003); but social scientists need to ask whether system theorising can fully represent the social. Is there a danger that it may – despite its intentions – reduce "society" to a "natural kind"? In order to fit the social into the ecological or material in a systemic way, do we risk underplaying agency, power and cultural meaning as constitutive of human experience – or to borrow from Burawoy, risk taking "the standpoint" of the system, rather than that of the social?

For social constructionists – perhaps for all sociologists raised on Weber – it is not appropriate to interpret

social behaviour in terms of cause-effect relations; the actions of social actors are driven not by "causes" but by "reasons" – intentions, interpretations, perceptions, etc. It is human intentionality which constructs "systems" in the process of interpreting the socio-natural world, and such systems are arbitrary (or "cultural") and have problematic boundaries. On the other hand, a social constructionist stance makes the task of co-researching a co-constituted nature and society impossible, and as we saw earlier, gives only a discursive reality to natural processes. Can sociology develop "realist" approaches to nature-society interrelations, as increasingly demanded within interdisciplinary programs, while remaining highly sensitive to the often reductionist tendencies of realist thinking and to the dangers of using terms like "natural" and "social" as if they refer to discrete givens?

Concluding remarks

Interdisciplinarity and transdisciplinarity are both problematic for sociology, in different ways. Transdisciplinarity is a legitimate, if contested, epistemological stance in sociology with its own criteria for valid production of social knowledge; interdisciplinarity raises severe problems for sociology's self-understanding and for its theoretical and epistemological frames of reference. Embarking on interdisciplinarity seems a much more difficult course of action than its promoters recognise, and may bring as many losses to rural sociology as gains, while the urgings we hear to take this course may stem as much from political concerns about governance and economic concerns about the survival of capitalism as from foundational concerns within sociology about production of knowledge of and for "civil" society.

However, the boundaries of civil society itself are changing – being stretched to accommodate all sorts of new "natural" or non-human actors – and sociology needs to be able to continue the sorts of reflections on its ontologies and its epistemological, reality-creating, knowledge production methods which have characterised the discipline since its foundation, to find new ways of responding to this. The best way to do this, I suggest, is to draw in creative and fresh ways on the intellectual content of the discipline itself.

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