Description, Creativity, and Experimentation: On the Multiplicity of Usefulness in/of Ethnographic Practice

Casper Bruun Jensen

Paper prepared for the panel "What is the point of description," convened by Marilyn Strathern for the "Description and creativity: Approaches to collaboration and value from anthropology, art, science, and technology" conference, King's College, Cambridge, U.K., July 3-5, 2005.

Introduction

The panel asks the question 'what is the point of description' in relation to the broader question posed by the conference – how can the capacities of ethnographic practice be put to use in new interdisciplinary collaborations and with what benefits and costs – both for those collaborations and for ethnographers. My research is part of an interdisciplinary research project, which has as a mandate both to carry out various forms of social science research and to use it to inform policy makers and managers about the consequences of technological choices. In this project the pressures to go beyond description and towards the useful are perhaps especially palpable. Yet, I think the contemporary pressures of prescriptive interdisciplinarity are linked to some rather general anxieties in the social sciences. These might be referred to as respectively "the problem of stepping into" explored practices and the "problem of staying on the outside". I want to suggest that these fears need to be de-dramatised in order to facilitate an exploration of the creativity of ethnographic description.[1]

In my present studies in Canadian health care the useful is variably understood and enacted in different settings, such as management practices and hospital wards. Both the discourse of stepping into and staying outside have been important resources to researchers in accomplishing 'being useful' in these settings. They have helped to provide legitimacy in interactions with diverse involved actors, by enabling researchers to be discursively situated as troubleshooters and helpers in technological projects, on the

---

[1] The term de-dramatisation is due to Vikkelsø, 2005.

one hand, and as disinterested observers of those same projects, on the other. The shifting discourses and modes of self-representation are required because different practices within health care work with different versions of the useful; versions which often do not neatly align. Interactions with different parts of the field thus required a constant effort to sort attachments and negotiate expectations and this has been facilitated by shifting between the repertoires of stepping inside practice and remaining detached on the outside. I want to first render this achievement of usefulness by the researcher amenable to description in (more or less) ethnographic terms, as a first step in de-dramatising the scenarios of contamination and irrelevance that often attend considerations, respectively, of immersion in and distancing from practice.

Thinking about the point of description and its creativity also encourages an attempt to re-dramatise the capacities of ethnography. I deal with this issue by considering what description might look like if separated from the classical ideal of truthful representation, and approached rather as a performative matter of partial connection and struggles to sort attachments with diverse practices.[2] Just as it is possible to speak of the multiplicity of usefulness in different practices, thereby both criticizing and broadening interdisciplinary understandings of utility, a performative approach makes it possible to speak about the multiplicity of ethnographic description, both in terms of what it presently is, and what it could become when put to work in new environments. This suggestion potentially alters the relation between description, its creative aspects, and the ways to which it may be put to use. What emerges is a view of the creativity but also the risks of description as residing in the links, which are built as ethnographers (partially) describe practices and thereby (partially) make available to different audiences ways of imagining future attachments and detachments between the practices of health care, management, technologists, and social researchers.

Stepping Into, Staying Outside, and the Multiplicity of Usefulness
Worries about how to establish proper connections with subjects, and of finding adequate means of representing them have been recurrent in recent anthropology and qualitative

---

[2] The term partial connection, of course, is from Strathern (1991).

research (Clifford and Geertz, 1986; Jensen and Lauritsen, 2005). They can be related to the anxieties of respectively stepping into or staying outside practices. On the one hand stepping into practice evokes the traditional fear of going native, and the attendant worry of ruining objectivity, both by transforming the object of study and by oneself becoming unduly affected (e.g. Fabian, 2000). However, in the current climate of research, which increasingly views prescription and intervention as especially worthwhile aims, this fear is often downplayed. On the other hand, staying detached from practices used to facilitate claims to traditional scientific virtues such as neutrality and adequate representation. Yet, in a research policy environment, increasingly invested in putting social sciences to practical use, the aim to 'merely' further disciplinary knowledge easily come to seem as lacking ambition or, indeed, as pointless. While "stepping into" thus retains a fear of contamination, "staying outside" currently tends to evoke a fear of irrelevance.

Both fears can be seen as related to a dualistic conception of utility, which Barbara Herrnstein Smith describes in the 'Critiques of Utility':

> On the one hand there is the discourse of economic theory: money, commerce, technology, industry, production and consumption, workers and consumers; on the other hand, there is the discourse of aesthetic axiology: culture, art, genius, creation and appreciation, artists and connoisseurs (Smith, 1988: 127).

The 'prescriptive interdisciplinarity' referenced by the call for papers is located squarely within the former idiom. In research settings adhering to this ideal, social scientists are often encouraged to produce differences in studied practices; specifically in such ways as will enable change in politically rational, economically efficient, or technologically progressive directions. This, for example, is the mandate of the research project ACTION for Health, which I am presently representing. Funded by Canada's *Initiative for the New Economy* it has as a major project goal to

> present a more realistic perspective of the challenges associated with increased use of information technologies in the health sector. It highlights the role that pre-purchase and pre-implementation research can play in helping to realize stated policy goals associated with use of technology in the health sector. It will bring emergent ethical and legal issues to the attention of policy makers, assist our partners in determining whether or not the goals they are pursuing with the aid of

information technology are being met, and will offer suggestions about improving technology-related outcomes in the health sector (Action for Health, 2005)

The project is situated well within the parameters of so-called mode 2 science (Nowotny, Scott, and Gibbons, 2001), which has as its 'first attribute [] the fact that contemporary research is increasingly carried out in the context of application' (Nowotny, 2005). However, in spite of increasing prevalence, this mode of knowledge construction is also resisted. Indeed, the title of this event – *Description and Creativity* – suggests one version of this resistance; playing, as it does, on the connotations of the second idiom outlined by Smith – that of 'culture, art, genius, and appreciation,' and, among other things, encouraging elicitation of the hidden artfulness of ethnographic practice. There seems thus to exist two opposed discourses, one promoting the useful and applied, the other repudiating this view as shallowly instrumental. According to Smith, different systems of accounting correspond to each of these discourses:

> In the first [], events are explained in terms of calculation, preferences, costs, benefits, profits, prices, and utility. In the second, events are explained – or, rather, (and this distinction/opposition is as crucial as any of the others), "justified" – in terms of inspiration, discrimination, taste (good taste, bad taste, no taste), the test of time, intrinsic value, and transcendent value (Smith, 1988: 127).

The most prominent feature of this discursive organization is dualism. Its basic premise is that it is necessary to determine whether one's concerns are really with price *or* value, whether one cares about artistic creativity *or* technological skill, or is interested in knowledge for its own sake *or* its practical application. But, Smith asks, must we and– indeed-- can we make such clear-cut determinations? Smith argues that the distinction is conceptually dubious. She shows how even George Bataille, who famously argued against utilitarianism in the name of 'nonproductive expenditure' and 'absolute loss' gave

> while denying its possibility – a cost-benefit analysis of the expenditure at issue. That is, it as if, in his very description of these activities, he cannot avoid pointing out what is gained by the loss or what other values is, in his own words "produced" by the material expenditure and mortal loss involved (136).

As the case of Bataille illustrates it seems difficult to escape the alternative between the practically useful and the uselessly artful. Closer to home, politicians, university administrations and research councils continually work within and sustain this dualism. This situation, however, only adds more poignancy to Smith's first question – whether we *must* make use of this simple distinction – and to its implied follow-up question, if we must not, then what might we do instead. The question is especially pertinent in the case of the social sciences, which operate in an ambiguous space between the presumed utility of natural science and intrinsic worth of the humanities.[3]

Smith shows how Bataille's anti-utilitarianism is premised not on the lack of all utilitarian concerns, but rather on a very unusual configuration of utility, premised on the benefits of absolute loss. The analysis leads her to suggest that we are, in practice, never dealing with dualism but always rather with kinds of evaluation, which

> could [] be seen as parallel and complementary, the categories and considerations with which they deal and the operations they perform being only *relatively* and *locally distinguishable*. Viewed merely as calculative processes, in other words, the two kinds are not absolutely or essentially distinguishable from each other (Smith, 1988: 133).

The consequence of this view is not that the useful, the creative and so forth are in each stance absolutely relative, totally subjective, or undecidable – in short that no determination is possible. Rather, the point is that a field of exploration and construction is opened up if it is realized that there will always be 'many answers and no obviously or fundamentally compelling' reasons for defining the useful one way or another.

This reconceptualization does not in itself give any specific purchase on the capacities of ethnographic practice, nor does it specify the relations between description and creativity. It does suggest, however, that the usefulness of research in the humanities and social sciences – including that of ethnographic description – might be re-imagined if separated from the dualistic conception of utility. In the remainder of this text I attempt to work with this idea along two lines of inquiry. First, I consider how 'stepping into' and 'staying outside' function has functioned as discursive repertoires for interdisciplinary

---

[3] Notoriously making the social sciences invisible in C. P. Snow's famous discussion of *The Two Cultures* (1993). See Smith (2004) for discussion.

research within the ACTION for Health project; repertoires, which have facilitated researchers in connecting with various practices at different times and places. I briefly indicate how this strategy of shifting discourses itself has both costs and benefits. Taking off in this discussion I consider which meaning might be given to description and creativity if both terms were freed from their attachment to classical understandings of utility.

Stepping into and staying outside as discursive repertoires

> What emerges is a concern with the machinery of a concept, or rather the processual manner in which a concept enables a number of elements to be ordered in time and space. From this it follows that a concept is explored not through its logical relations or formal standing, but as a kind of machine for making elements cohere as an event (Brown 1997: 65)

In Brown's formulation the researcher may be seen as part of various 'machines', each trying to build connections with different practices so as to enable its specific event. I want to briefly describe research within the machine of which I am presently a part -- ACTION for Health -- a Canadian based international and interdisciplinary collaboration. Here I will focus on a small part of this large project; an exploration of the introduction of a new nursing call system into a hospital ward of a Canadian hospital.

A few years ago, this hospital moved into new buildings (see Balka and Kahnamoui, 2004 for further detail). As part of the move a new nursing call system was introduced. Late in 2004, our project was contacted by a person from the IT-department. A pilot project was going to take place on one ward, in which the nurse calling system would be hooked up with wireless phones, to be carried by nurses and other care providers. We were invited to join as observers and troubleshooters.

On the ward each patient room had several connections to the nurse call system. For example, a patient would be able to press a button to call a nurse, while another alerted that help was needed to go to the bathroom. Each type of call gave rise to a distinct ring tone. The alarm also turned on a colored light above the entry to the room. A telephone console with a display was located at the nurse base. On the display one could read from which room a call had been made, which kind of call had been made, and

check how long the alarm had been going. All of these audio-visual clues were introduced to reduce response time on the ward. We were also told that the wireless phones were supposed to 'radically transform' communication between nurses and patients, and between groups of staff.

Each nurse would be equipped with a wireless telephone at the beginning of the shift. The phones would be assigned to rooms by use of the touch screen on the telephone console. Calls from these rooms would directly reach the correct nurse, who would consequently be able to respond immediately.

During the pilot project I participated in numerous ways in supporting the introduction of the new system on the ward, while also studying this process. I did minor troubleshooting, and helped nurses sign on the system. When nurses received mysterious 'phantom calls' from rooms to which their phones had not been assigned, I supported their complaints in discussion with the vendor. And when we realized that the bed alarm, which had been ringing since the introduction of the nursing call system, had no meaningful function, we helped argue for its removal. In interactions on the ward we repeatedly emphasized that our role was simply to alleviate technical and organizational problems. Making use of this repertoire of presence helped us to maintain credibility and build trust.

At the same time purporting to have stepped into practice was also useful in engagements with the IT department and management. In these locations it was used to construct a setting in which we were present to observe what nobody else saw, thereby enabling us to make explicit invisible dimensions of health care. This supported the general goal of Action for Health to 'present a more realistic perspective of the challenges associated with increased use of information technologies in the health sector' (Action for Health, 2005). The repertoire suggested that we had special access to knowledge, which was also useful from a managerial perspective. To demonstrate usefulness we told how we had worked to ensure that phones were assigned correctly and that organizational policies and procedures were developed. We also emphasized how monitoring the pilot helped to identify technical problems to be solved by the vendor; for example the faulty configuration, which led to the phantom calls. At different times and

locations, the repertoire of stepping into practice thus effected different kinds of connection with diverse parts of the hospital organization.

In contrast the discourse of maintaining distance by staying on the outside was hardly ever used on the ward. However, it was used often when we engaged management. Although it was crucial to demonstrate close connection with the pilot project, it seemed equally important to show a capacity for disconnection and general overview. We were repeatedly requested to carry out a formal evaluation of the implementation process. It was imagined by the IT department that it would focus on demonstrating how response times had decreased with the introduction of the new system and make good on their claim that radical improvements in communication would be achieved. It was made clear that the evaluation would tie in with the goal of building a business case, supporting further 'roll out' of the wireless system. In these engagements with management we were under pressure to make use of the repertoire of staying outside practice and reduce the complexity of what had been observed on the inside. But while we saw the system as having various kinds of beneficial effects, our observations were equivocal with respect to the reduction in response times, and the system was never used to communicate with patients as had been envisioned. To facilitate interactions on the management side we were thus encouraged to leave behind several of our most important observations.

As these examples indicate, the repertoires of stepping into and staying outside both functioned as strategic resources, which enabled us to attach and detach from the rather different machines of life on the ward, on the one hand, and IT and health management settings on the other. Momentarily disconnecting from both of these, however, makes this to-ing and fro-ing –with its fluctuating discourses and roles – seem, for lack of a better word, rather schizophrenic. To get some distance and perspective on this situation, I make use of a rather unlikely comparison from the history of technology.

Historian Geoffrey Bowker has discussed how, from the late 1920s, the French company Schlumberger began earning money by brokering scientific information. They produced electrical logs of oil bearing layers of the subsoil and sold this information to companies drilling for oil. Schlumberger successfully managed this enterprise although the logs could not at the time properly distinguish oil from water and thus offered no

predictive accuracy. Bowker is interested in accounting for this bizarre success, which lasted for many years until the firm was finally capable of making accurate measurements. He argues that: 'By their very presence on the oil fields, they were able to pick up local, particular information which they could repackage through electrical logs and interpret as global, scientific information' (Bowker, 1995: 242).

At the hospital, management seemed indifferent to our lessons on subtle organizational and communicational transformations introduced with the wireless project. Their concerns instead revolved around the definition of preferably quantitative metrics – such as response times before and after implementation -- according to which the pilot project could be unambiguously evaluated in a positive light. Our role as knowledge translators – required to make ethnographic description amenable to the 'the management of society by numbers' (Porter, 1997: 99) seems strangely reminiscent of Schlumberger's repackaging of information.

Schlumberger were keenly aware that their electrical logs were decontextualised devices, offering only weak guidance on how to locate oil. Although presenting to its customers scientific diagrams, Schlumberger relied in their own practices on local reports on geography, observations of the behavior of rival companies, and measurements of temperature and magnetism. Perhaps problems arise for the applied researcher when Schlumberger's lesson is forgotten and replaced with a belief in the superior usefulness and practicality of the simple, and the necessity to appear 'scientific'. In the case of ethnographical studies of work practice such belief is often indicated by a shift away from ethnographic description and towards policy recommendations, best practices, and guidelines, and, notably, a suggestion that the latter can be derived from the former without significant loss.

These considerations point to the potential importance for social researchers caught up in applied environments of imagining other ways of linking with managerial practices so as to learn how to engage in subtler, or maybe altogether different, ways of sharing knowledge. But researchers' scope for doing so is delimited by their reliance on the dualistic belief in the useful and useless. If schizophrenia is induced by taking this dualism too seriously, perhaps it could be alleviated through a work of dedramatisation.

Dedramatising and Redramatising

In a certain sense this has already been performed in the discussion above. The prosaic description of shifting discourses required to build links with different practices so as to facilitate further co-operation, looks as different from dramatic stories of disconnection and the attainment of objective knowledge as from their counterparts (no less dramatic) of full immersion in practice.

Just as the dichotomy between the attached and the detached breaks down in practice so does the dichotomy between the useful and the useless, because usefulness is manifestly relative to practical requirements and interests of actors in different parts of the field. This makes the notion of absolutely useless research or totally unproductive interaction incomprehensible, because such general worthlessness would quickly break down all attachments propping up the research activities. But obviously uses are often at significant variance, and what is perceived as important in one part of the field seems of little relevance in another. Social research thus finds itself in a landscape of plural uses; what Isabelle Stengers has called an 'ecology of practices.'

But recognition of plurality does not provide a solution. On the contrary it may constitute a problem, if taken to imply that practices while multiple, are well-defined and static. In fact, this seems to be the implied understanding with which researchers at the hospital have been working. This organized interactions around the assumption that it was necessary to cater to its interests and soothe its worries. Likewise, it helped to shape the idea that management per definition could only be interested in the aspects of social science, which, through knowledge translation, lent themselves to quantitative evaluation and the building of business cases. But might other forms of engagement not be imagined?

Yet, ethnographic description facilitated the articulation of these practices as internally heterogeneous; containing multiple sets of interests, and having no singular position on the relevant and the useful. For example, some staff forgot or chose not to turn on their phones for weeks, while others enjoyed tinkering with new technical possibility and quickly began paging doctors directly, for instance. Some staff put down their phones when dealing with patients, and forgot where they left them. Others breached policy on the ward and let patients use the phone to talk to their families; even

arguing that this was one of the main benefits of the project. Observation further indicated that these practices were in fact not easily separable. While I have referred to the ward and management as stable entities they were significantly overlapping and fluctuating. For example, the ward comprises not only staff but also a patient services manager and co-ordinator. Not only are these people local managers, but in many ways they worked more closely with the vendor than did the IT department that promoted the wireless system in the first place. The fluidity of the situation complicates the scenario of rationalized organizational change to which interdisciplinary research is often supposed to contribute.

Long ago sociologist Georg Simmel attacked a facile belief in the rational by arguing that: 'It is in no way certain, but rather can only be valid at a cursory glance, that we attain our purposes best if we conceive them clearly' (Simmel, 1978: 229). He moved on to advocate the rather difficult idea of 'unconscious purpose', but I think that a rather different inflection can be given to his idea. Rather than turning the problem inwards, towards motives hidden in the psyche, it could be turned outwards. The first implication would then be that any actor – individual or institutional -- is relatively unable to control the implementation of their well-intentioned ideas and rational plans. This is also an insight from science and technology studies, referred to by such well-known slogans as 'unintended consequences,' or the distinction between *Plans and Situated Actions* (Suchman 1987).

With this insight the success of the wireless project might be detached from a clear preconception of what this achievement should look like. Possibly technical projects might be better off if allowed to become articulated with the concerns of multiple actors, including the end-users on the ward. This is exemplified even in the small case of the wireless pilot project, the results of which, for better and worse, were by no means expected by IT department, management, staff on the ward, or researchers. This encourages recognition of the dynamism and evolution of uses and purposes in practice.

It is to support such a dynamic stance against the reification of practices -- the researchers' included -- that Steve Brown talks of transformative interactions between various 'machines' as facilitating the event –the construction of new interests and new conceptions of the useful and important. It raises questions relating to the forms of

relationship that might be established between researchers and institutional practices, and to how this might transform discourses on the utility of social research.

I do not think these questions entail, or even encourage, any straightforward practical solution. In fact, one may well use them in opposition to the kind of social inquiry that is obliged to immediately pay off in terms preset by the machinery of health policy and management by numbers. As John Dewey said in 1927 in *The Public and Its Problems:*

> There is a social pathology which works powerfully against effective inquiry into social institutions and conditions. It manifests itself in a thousand ways; in querulousness, in impotent drifting, in uneasy snatching at distractions, in idealization of the long established, in a facile optimism assumed as a cloak, in riotous glorification of things "as they are," in intimidation of all dissenters – ways which depress and dissipate thought all the more effectually because they operate with subtle and unconscious pervasiveness (Dewey, 1927: 170-1).

Yet, precisely because of all these obstacles and challenges it is that much more important to insist on the transformative possibilities of ethnographic practice as social inquiry. This I take to be a move towards the redramatization of the capacities of social inquiry. Dewey himself never ceased to work against this 'social pathology'. As he explains in the preface to *Experience and Nature*:

> An empirical method which remains true to nature does not "save"; it is not an insurance device, nor a mechanical antiseptic. But it inspires the mind with courage and vitality to create new ideals and values in the face of the perplexities of a new world (Dewey, 1925: xii-xiii)

At present we may take issue with his belief in an unblemished empirical method with which to access nature, and perhaps even with the notions of courage and vitality as still sounding unduly heroic. His refusal to withdraw in the face of challenge and his insistent hope of thereby engendering a more vibrant public remains exemplary. In the final section I want to explore what an updated version of this pragmatism might look like, and how it might facilitate the construction of new 'object[s] of attention and interest' (Dewey, 1927: 24) for the researcher and other actors.

The Creativities of Description

> Possibly [] "correct" characterization of metaphor is as much a chimera as the
> correct glossing of one. It would seem, however, that what one can do,
> analytically, with metaphor is more important than what metaphor "does"'
> (Wagner, 1986: 6).

Thus social anthropologist Roy Wagner comments on the limitations of traditional understandings of metaphor in the introduction to his study of *Symbols that Stand for Themselves*. Rather than attempting to define the essential qualities of metaphor, Wagner analyses they are put to work, with transformational effect, in a number of widely ranging historical settings. He suggests that 'metaphor, and, by extension, a trope generally, equates one conventional point of reference with another, or substitutes one for another, and obliges the interpreter to draw his or her conclusions as to the consequences' (Wagner, 1986: 6). This observation provides a vantage point from which to consider the creativities of description. It dovetails with Smith's critique of the dualistic conception of utility in its refusal to assign to metaphor the role of a mere ornament attached to objective description, and its insistence on viewing it instead as generative of new social imaginations and modes of action. Wagner is emphatic about the performative dimension of the process, arguing that:

> if we reflect on the fact that mediation actually creates the analogies and codings,
> by the simple fact of negotiating them, it emerges that "negotiating" human
> cultural conception and action is the same as creating, or inventing, it (Wagner,
> 1986: 16-7).

Although the formulation is congenial to Dewey's pragmatic analyses, it also comprises a significant addition to his plea for a revivified social inquiry, because it makes explicit that such inquiry is never simply a matter of broad-minded identification of social issues, but itself, too, an experimental resource for the prolongation and continual reinvention of the social. Perhaps no-one has elaborated this point as eloquently as Gilles Deleuze, who also refers to his philosophy as pragmatic. Deleuze, in his turn, make a clear distinction between experimental social inquiry and communication, forcefully arguing that:

> We've got to hijack speech. Creating has always been something different from communicating. The key thing may be to create vacuoles of noncommunication, circuit breakers, so we can elude control (Deleuze, 1995: 175).

Deleuze definitely would have been no fan of mode 2 science, inter- or transdisciplinary collaborations, and mandates to communicate research results as policy recommendations through 'knowledge translation'. Yet, the control Deleuze wishes to elude does not reside in grand hierarchies of dominance, but in the capillaries of social practices. His resistance to control therefore has nothing to do with staying detached, because only engagement and contamination might carry the possibility of effecting creative processes of transformation, rather than merely participating in the exchange of static perspectives. Consequently, the point of breaking circuits is not to interrupt all social interaction. It is rather to break the repetitive flow of metaphors and analogies, used, for example, to envisage technical possibility, efficient re-organization, and useful research, so as to instead create space for the production of other discourses on social and technical relations, and the construction of new objects of attention and interest, which are not pre-empted by existing 'communications'. I think these are all dimensions of the creativities afforded by ethnographic description deployed as a tool with which to 'bend[] and transform[] language so as to create [] singular ideas for which there exists neither the words nor the story'(Rajchman, 2000: 118). This gives social researchers no special right or obligation to prescribe the future of health care. Yet, they may usefully participate in its re-invention by offering their conceptions and descriptions to other practices and actors interested in drawing conclusions as to its consequences.[4]

In this situation the creativity of ethnographic description is not to be found in the specification of practical solutions to identified problems. Rather, it is found in the manner in which ethnography's singular capacity for describing relations can be brought to bear on practices, and generate new questions and problems there, while accepting that this entails the risk of losing control of the answers those questions will receive in future practice.

---

[4] This formulation of Roy Wagner seems related to Gilles Deleuze's insistence on the 'indignity of speaking for others'.

Bibliography

Action for Health. (2005) 'What we are trying to understand'. Available at http://198.96.3.162/ev_en.php?ID=3096_201&ID2=DO_TOPIC&PHPSESSID=5bdc5ce78e501c06a5cb486b658a5f96, accessed 28-06-05.

Balka, E. and Kahnamoui, N. (2004) 'Technology trouble? Talk to us: findings from an ethnographic field study', **PDC**: 224-234.

Bataille, G. (1985) **Visions of excess: selected writings, 1927-1939.** Edited and with an introduction by Allan Stoekl; translated by Allan Stoekl, with Carl R. Lovitt and Donal M. Lesle, Jr. Minneapolis: University of Minnesota Press.

Bowker, G.C. (1995) 'Information Mythology: The World of/as Information' in Bud-Frierman, L. (ed.), **Information acumen: The understanding and use of knowledge in modern business**. London: International Thomson Publishing, pp. 231-47.

Brown, S.D. (1997) 'In the wake of disaster: Stress, hysteria and the event', in Hetherington, K. (ed.), **Ideas of difference.** Oxford: Blackwell Publishwers, pp. 64-84.

Clifford, J and Marcus, E. (1986) **Writing culture: the poetics and politics of ethnography.** Berkeley: University of California Press.

Deleuze, G (1995) **Negotiations.** Columbia University Press.

Dewey, J. (1925) **Experience and nature**.Chicago and London: Open Court.

Dewey, J. (1927) **The public and its problems.** New York: Holt.

Fabian, J. (2000) **Out of our minds: reason and madness in the exploration of Central Africa.** Berkeley: University of California Press.

Jensen, C. B. (2005) 'Sorting attachments: On intervention and usefulness in STS and health policy', Paper presented at the **Practices of assessment and intervention in action-oriented STS workshop.** Amsterdam, The Netherlands, April 25-26, 2005.

Jensen, C.B. and Lauritsen, P. (2005) 'Qualitative research as partial connection: bypassing the power-knowledge nexus', **Qualitative research**, 5, 1: 59-77.

Nowotny, H. (2001) **Re-thinking Science: Knowledge and the public in an age of uncertainty.** Cambridge: Polity Press.

Nowotny, N. (2005) 'The potential of transdisciplinarity'. Available at http://www.interdisciplines.org/interdisciplinarity/papers/5/language/en.

Rajchman, J.. (2000) **The Deleuze connections**. Cambridge, Mass. :MIT Press.

Porter, T.M. (1997) 'The management of society by numbers', in Krige, J. and Pestre, D. (eds.), **Science in the twentieth-century**. Amsterdam: OPA, pp. 97-110.

Simmel, G. (1978) **The philosophy of money**. Translated by Tom Bottomore and David Frisby. London and Boston: Routledge and Kegan Paul.

Smith, B. H. (1988) **Contingencies of value: alternative perspectives for critical theory.** Cambridge, Mass.: Harvard University Press.

Smith, B. H. (2004) 'Figuring and reconfiguring the sciences and the humanities.' Presidential forum on 'The Future of the Humanities', **MLA**, December 2004.

Snow, C. P. (1003) **The two cultures**. Cambridge: Cambridge University Press.

Strathern, M. (1991) **Partial connections**. Lanham, MD: Rowman and Littlefield Publishers, Inc.

Suchman, L. (1987) **Plans and situated actions:The problem of human/machine communication**. Cambridge: Cambridge University Press.

Vikkelsø, S. (2005) 'Description, resistance, and intervention', Paper presented at the **Practices of assessment and intervention in action-oriented STS** workshop. Amsterdam, The Netherlands, April 25-26, 2005.

Wagner, R. (1986) **Symbols that stand for themselves.** Chicago: University of Chicago Press.