Driving in Forests and Mountains: A Pure and Applied Ethnography

Rod Watson

Since 1997 I have spent periods working for the Technology and Development Program of the United States Forest Service, and have been based at a Centre in Montana - a detached centre dealing with technical aspects and human factors in land management in what are often vast and remote rural areas.

I was asked by this Centre's resident sociologist, Professor Jon J. Driessen, (also of the Sociology Department in the University of Montana) - a former student of Edward Rose - to join him in an ongoing project on mountain and forest driving. Professor Driessen already had a lengthy experience of the Forest Service and had been making experientially-based training films for Service personnel when I arrived. He had already initiated this approach, having made training films for the Forest Service on teamwork in remote areas, entitled (inter alia) 'Making a Crew'. 'The "Mountain Driving" Project', for which I joined him had just begun. Over several decades, Driessen had already pioneered very many of the methods I describe herein, and my contribution was to extend and elaborate this applied methodology and to formulate its theoretical basis.

The problem to be addressed was the very high accident rate in the driving of Forest Service vehicles along winding, precipitous, unpaved and very long forest and mountain tracks. In particular, young and temporary Forest Service personnel (e.g. students working for the Service during their summer or winter vacations) were very frequently having accidents of all kinds - travelling along forest tracks, or having to turn the vehicle around, or perhaps having to reverse it or having to manoeuvre it in some way or other in narrow, uneven and irregular track circumstances and in adverse weather or visibility conditions. Older drivers had far fewer accidents and fewer problems in conducting basic manoeuvres. The focus of our analysis became risk-evaluating and risk-management by employees - a skill-based study.

Initial investigations - field observations, conversations and interviews - quickly revealed the centrality of the issue of skills and in particular the asymmetrical possession of skills. Driessen had studied for his Ph.D. with Edward Rose at Colorado University, Boulder. Rose had been a participant in the early development of Ethnomethodology, in the company of Garfinkel, Sacks and other founders, and had founded his own school of thought, variously known as `The ethno-inquiries' or 'ethnonomy', which focused on the linguistic constitution of social order.1 Though distinct from ethnomethodology and conversation analysis, the 'ethno-inquiries' and 'ethnonomy' bore many of what Wittgensteinians might term 'family resemblances' with those approaches - and, indeed, Rose maintained a dialogue over very many years with Harold Garfinkel, Harvey Sacks, David Sudnow and other founding ethnomethodologists and Conversation Analysts. The Ethnomethodologist Egon Bittner worked on Rose's 'Lorimer Street' project on homeless

males - a project that resulted in a report that has recently been re-published[2] in this journal. An exhaustive record of the elective affinities between ethno-methodology, conversation analysis and the ethno-inquiries /ethnonomy, as well as of the last-named approach in itself, is published in bibliographic form by Andrew Carlin in Ethnographic Studies.

Driessen and I had decided to exploit the significant consonance between the ethno-inquiries and ethnomethodology/ conversation analysis, where he predominantly espoused the former and I the latter. I was brought in to contribute an ethnographic under-standing of ethnomethodology and conversation analysis to the project. Both he and I decided that a major intersection of the two approaches occurred in the domain of skills - an unjustly neglected domain in classical sociology. We decided that a second coincidence of interest and consonance of perspective involved a non-cognitivistic, non-mentalistic approach to skills - as opposed, for instance, to the 'mental information processing models' and as interaction with the external environment through various sensory modalities where the sensations thus gained were 'mentally processed'. This latter approach, initiated by cognitive scientists (and, in particular, cognitive psychologists), was rejected in favour of the ethno-inquiries' /ethnomethodology's joint insistence upon the culturally-methodic, 'linguistically-embedded' and thus 'publicly available' or 'transparent' nature of sense-making, considered as a practice - as in itself comprising social action and not as an inner cognitive 'process', nor (as, e.g., symbolic interactionists often claim) a 'preparation' for action.

We had considered various training films and other training modes such as simulation and gaming - which I and other ethnomethodologists and conversation analysts in the Manchester Ethnography Group had studied[3] - and had decided to re-specify the assumptions and practice of these approaches. All these approaches seemed to us, on the basis of our prior experience, to involve, for viewers or participants in such training modes, various elements that they might perceive as 'artificial', 'unreal', 'out-of-context', 'irrelevant', 'inert', 'un-serious' or even 'risible', 'a joke'. In other words, these other modes seemed to us to reduce or demote any 'training message' in a hierarchy of 'authenticity', 'credibility', 'persuasive-ness', authority', etc. A paradigm case of this is the classic army training film, with an instructor simply reading out of a rule-book plus, perhaps, soldiers 'going through the motions', in a rather wooden, idealized way in conducting some activity, safety procedure or manoeuvre.

Our question was: how can we maximize the authenticity, seriousness and thus persuasiveness of the training film? Driessen had already indicated a wish to progress beyond his own earlier training films, but we both felt that his early films were very much 'on the right lines'. Driessen had always filmed actual situations of, e.g., teamwork in Forest Service activity, and this seemed to us to be a highly useful start for further evolution of the technique. Whilst we remained convinced that actual, person-to-person craft apprenticeships would have been even better, this option was not available owing, of course, to high turnover of temporary driving staff, the reduction of the service labour force and similar reasons. A training film at least provided the chance of incorporating some facsimile of the pristine apprenticeship situation.

We decided that, following the

ethno-inquiries and ethnomethodology, we should develop a methodology that preserved the 'phenomenological integrity' (or 'intact-ness') of the phenomenon of mountain driving. That is, we should not set up in a 'methodologically-ironic' mode, as do so many training films, i.e. they set up a competitive, relativizing or down-grading attitude to ordinary members' own culturally-based conceptions and practical reasoning *in situ*. There seemed to us to be no reason to relativize, say, senior Forest Service personnel's experiences: this seemed to us to be counter-productive and to be a 'recipe' for the alienation of the viewers or recipients from these training films.

We decided, then, to preserve the natural language categories and natural interactional organization deployed in real-world contexts by Forest Service personnel. This, for us, meant that we should not attempt, simulation-wise, to reconstruct allegedly 'typical' driving situations in a studio or in laboratory conditions, but instead go into and film the actual, *in vivo*, worksites in the forests and mountains (this, of course, included filming the driving to and from the worksite). This, then, became a filmic study of lived-and-experienced real-world worksite practices. We employed the two-person – Jim Kautz and Mark Wiggins - professional film and video crew of the Forest Service plus a Script and Editorial Associate, Jennifer Haubenreiser (now of Montana state University at Boseman) who also had extensive experience as a worker and researcher in the Forest Service.

So far as mountain driving was concerned, we filmed experienced drivers in their vehicles negotiating the hazards of unmetalled forest tracks and roads. The film crew were so positioned as to be able to record the movement of hands and feet of the driver, plus recording what was happening through the windscreen - including potential accidents: we filmed deer jumping in front of the vehicle and the reaction of the driver, etc. In some instances, I sat by the driver asking him or her questions about particular manoeuvres, particular hand or foot movements on the pedals, particular visual and visualization techniques, etc. I had had experience of truck driving and this informed my questioning.

These recordings were followed up with what we called 'occasioned' or 'grounded' interviews with the drivers concerning these particular episodes of driving and also concerning forest and mountain driving in general - including their practices and observations concerning accidents, risk-evaluation, risk-management/risk-reduction. These interviews typically involved a review of something that had occurred in previous, normal courses of driving activity - as immediately previous as possible. Other, 'overview' - type interviews of more experienced personnel's overall experiences of driving, etc., were also conducted, again guided by our field observations. Part of the reason for this type of interview was to learn and to employ as a training resource the worksite language - including the occupational argot - of experienced personnel. This involved culturally-based terms such as 'washboards' - a term that referred to a particular kind of transverse profile of a forest track or road. The fact that such terms existed and were recurrently employed in the occupational culture of experienced Forest Service workers indicated to us that the physical configurations comprising a "wash-board" were, clearly, perceptual categories of an especially salient kind, and that the terms comprised *loci* for a whole range of special driving techniques that were locally-deployed in that highly particular situation. Such

a situation was, in the occupational culture and experience of the personnel, a potentially hazardous one that could "throw" the vehicle off track.

The specific theoretical resources we brought to the project derived largely from the 'commentator machine' analogy as originated by Harvey Sacks and as having been subjected to the critical appreciation and extension byEdward Rose, (Rose, 1993, *op.cit.* and 1992: For a more recent exegesis of the 'commentator machine' and its analytic significance, see Schegloff, 1999, especially pp.20-21[4]). The analogy refers to an imagined machine which consists of two synchronized parts, a 'saying part' and a 'doing part': the former part says aloud, in some natural language or other, (i.e. describes in ongoing fashion) what the latter part is doing. Sacks considered the machine from various observational standpoints, e.g. that of an observer proceeding within the natural attitude where s/he understands what the machine is doing by reference to the machine's 'saying part's' linguistic descriptions; however, another observer, a stranger who does not know the language, might learn what is being said by assuming that it is a description of what is being done and thus judging what is being said by making inferences from what is observably being done. Sacks formulates other observational positions, too, but these are less pertinent to our current discussion. In all, the 'commentator machine' analogy excellently formulates the implications of the ethnomethodological concept of 'reflexivity', where description and action/setting each specify and elaborate the other. (The analogy is, perhaps, somewhat less apt in presenting 'saying things' as, in themselves, 'doing things', which is the ethnomethodological position.)

The two observers' standpoints described above also serve to describe different aspects of the position (and associated perspective) of the observer/filmer in the Forest Service vehicle (and, derivatively, the observer of the resultant training video), where, firstly, the observer can match up what is said by the commentating driver and other parties with what is being done, and secondly, where there is a 'local problem' with the saying part (e.g. some 'shop talk' or occupational argot is produced), the observer/filmer can 'fill in' what is meant: and, of course, the converse of this can be effected, where what is done is retrievably through what is being said. This created, for filmic purposes, something akin to what Garfinkel and Sacks refer to as a 'self-explicating colloquy'[5].

This theoretical conceptualization of our project dovetailed with our 'craft apprenticeship model' of the training film. Driessen had had several decades of experience of working in and for the U.S. Forest Service in a craft as well as a research capacity, and Watson had had the opportunity over many years when growing up of watching master builders teach apprentices by getting them to emulate their practices *in situ*, rather than, e.g., simply talking about those practices in a technical college classroom or some other out-of-context, out-of-practice setting, where standards external and alien to the actual work setting could all too easily prevail over those that were (for participants in the worksite) integral to it.

Together, we concluded that the problem of accidents in the Forest Service was one of cultural transmission, e.g., in the transmission of practical craft skills in driving, etc. The increasing formalization and bureaucratization of the Forest Service had, it seemed to us, reduced the effective transmission of these craft skills in driving. We felt that a training film

would work best on the 'craft apprenticeship model'. The asymmetries of the standpoint described above (not knowing the 'saying' part but knowing the 'doing' on a particular occasion, and *vice versa*) were typically local in nature and could, we felt, be best redressed *via* an apprenticeship model of skills transmission so far as driving was concerned - it is, of course, an open question as to whether other skills in the Service still have a 'craft' aspect and are transmissible in this way.

Certainly, the 'natural attitude'-based standpoint was an inestimable overall resource both for the analysts/film-makers and viewers of the videos alike. The sine qua non of this approach was the explication of what the skills to be transmitted actually were: of course, an integral feature of any skill is it's transmissibility: Wittgenstein's arguments on the impossibility of a private language are observably relevant, here. In order to do the 'applied' work that Driessen had pioneered over many years, i.e. assemble and edit the video, we had first to do a great deal of 'pure'ethnomethodological conversation analytic and ethno-inquiry analysis. This involved the reviewing and analysis, in a team context, the nature of driving, the problems or risks encountered, how these risks were evaluated in situ by Service personnel, how accidents happened or were forestalled, and so on. All of this was done by reference to how Forest Service officials themselves conceived of driving, problems and accidents, and how they managed each of these. It was their categories that counted, their definitions that were focalized, their practical-actions-in-context that were preserved and addressed. The preservation of 'natural units' of action (naturally-occurring, naturally-organized, naturally-bounded and naturally-situated), the strictly local (including premonitory) sequence of activities involved in drivers' negotiation of what were often 'blind bends' on precipitous forest or mountain tracks. 'The natural unit of cornering' for example, included *inter alia*, the locally-occasioned visual techniques of experienced drivers in judging braking in advance: distances relative to vehicle weight, weight and distribution of paylaod and track surface etc. It also included the work culture-based imaginative/projective techniques drivers used in judging the amount of space that might, e.g. be required to avoid collision with a 'virtual' logging truck, often fully loaded and proceeding at high speed round the corner in the opposite, downhill, direction. (In this sense, the 'visualization techniques' that form part of the 'expert knowledge' professional sports coaches have their origin in quite ordinary informal and routine worksite techniques of an equivalent kind). These imagined projections were grounded in personnel's actual recollections of encountering such situations. Our task was to contribute to the burgeoning corpus of ethno-methodological and related 'worksite studies' by showing how such techniques formed part of drivers' practices at the work-station in the company of workmates – even through most (if not all) of these techniques were not described in the Forest Services driving manuals. Given the centrality of these techniques for Service drivers and passengers, we might – to emply Harold Garfinkel's phrase – say that these manuals "lose the phenomenon". They tell you all except that which you really need to know when actually driving or riding in a Service vehicle.

These 'natural units' of action formed a basis for inclusion and exclusion in the training video and, of

course, their natural boundaries (part of their natural organization), furnished guidelines for editing the film, with Forest Service officials' own comments - in occasioned interviews, demonstrations, occasioned stories, and other circumstances - being intercut with the real-world action. In this sense, the range of practical techniques was analogous to the techniques of craft skill transmission that one found in artisanal settings and whose dissolution had been brought about by the increasing bureaucratization and formalization of the Forest Service. Indeed, Driessen could recall when such skills were still transmitted in a 'craft apprenticeship' context and when I was working with the service we found some documents, such as an early Mission Statement, that clearly espoused a 'craft' or 'artisanal' view of the Service's functioning several decades ago.

These considerations had constantly informed Driessen's innovative applied work with film. Analytically, one might say that we were finding the making of the film to be a kind of 'craft apprenticeship' incarnation of what Pollner has called 'explicative transactions'[6]. By this phrase he refers to the culturally-methodic communicative interactions through which persons without prior experience learn to constitute the sense, meaning and consequentiality of their own and others' conduct and - through this constitutive work - provide for the acquisition of setting-appropriate understanding and competent conduct on the part of the previously-inexperienced.

It is to be noted that the 'applied' side of this Forest Service project was necessarily located in a 'pure' sociological project based on ethnomethodology, conversation analysis and the ethno-inquiries. The researchers conducted ethnographic analysis of driving techniques, episodes and interactions - an analysis of risk-identification and risk-management in these rural management settings. This analysis, based on thousands of metres of video-footage, on the interviews, stories, demonstrations, etc., was conducted without reference to the 'applied' concerns that informed the making of the training films. The observations thus derived - grounded in the 'emic' categories and practical relevances of the Forest Service personnel themselves - resulted in an ethnography that formed the basis of our applied (training video) concerns. The relevances, understandings and activities of personnel served as the basis of the films, i.e. provided the criteria of inclusion, such that 'phenomenological integrity' of the episodes included, was preserved. In this sense, the organizing categories of our applied work were those that were 'ethnographically emergent' from the 'pure'- analysis.

One ethnographic finding that did emerge was that driving was not best conceived in terms of a single cognizing actor - an *einzelindividuum* - namely the driver, in charge of a vehicle passing over a given terrain. It became clear that what counted as 'driving' was, in fact, generically an interactional and communicative matter. Often, passengers travelling in a so-called 'six-pack' Service vehicle (again, a reference to the 'shop talk' of this occupation) travelling along some dirt track would often notice a potential hazard and bring it to the attention of the driver who would often adjust his/her conduct accordingly. 'Noticings' or 'warnings' were thus conversationally framed and their relevance was interactionally negotiated. Vehicles' trips to and from forest or mountain worksites were often multi-occupancy, with work crews being ferried to and from their work location - often a lengthy, time-

consuming and arduous journey. The 'driver' would thus have 'passengers' – but the membership category 'passenger' should not be taken as denoting 'passivity' or 'no influence'. Passengers would, at the end of a tiring work day, often - though (significantly for our training concerns) not always - co-operate amongst themselves to keep the driver awake and alert during what was often a 50-kilometre drive in the dusk over hazardous forest and mountain terrain. In this respect, so-called 'mental phenomena' such as 'alertness' and 'concentration' were, in fact, frequently a negotiated order (and thus a social order). These phenomena were ascribable, publicly-available and, for practical driving purposes, transparent, i.e. rendered as such in and through the interaction. In this and other respects, we found that driving was not best conceived in terms of an isolated, context-free individual cognizer autonomously making and processing inner psychological sense in the course of his driving along a mountain track. Instead, the 'recognition', 'definition' and management of driving hazards was, eminently, a publicly-available, 'transparent' social order, i.e. an interactional product.

In this sense, instead of the decontextualized meanings proposed by cognitive psychology and cognitive science, we have a notion of the inter-subjective character of sense-assembly. Our film-based ethnography revealed endless numbers of instances of the ongoing, unfolding, *in situ*, *in vivo* nature of this intersubjectivity-in-action. We also wished to oppose this analytic insistence on the unyieldingly intersubjective nature of worksite practices and the work settings produced through these practices to those worksite studies that - often for applied purposes - seek to relax their analytic conception of intersubjectivity and end up with highly 'behaviouralized' characterizations of worksite practice. They often also end up with the reinstatement of orthodox-sociological dualisms and conceptual oppositions that usher in elements of an ironic analysis. To have replicated this reinstatement would, we fell, have been a retrograde step, since ethnomethodology (for instance) had gone so far in refusing and transcending such dualisms and oppositions.[7]

Our view of such studies is that they are 'intersubjectively-problematic' - their alignment to members' culturally-based conceptions and methods of practical reasoning shifts in unstated ways and is, in any case, greatly vitiated. This, in turn, leads to the yoking together of logically disjunctive methodologies. A case in point, among many possible others, is a recent paper by Dirk vom Lehn and Christian Heath entitled 'Constituting Boundaries: The Momentary Interweaving of Interaction and Environment'.[8] Here, we have an *a priori* theory-driven opposition between 'interaction' and 'environment' - an opposition that is far from evident in interactants' own orientations and one which, in fact, derives far more from a classical behaviouristic approach than from that of ethnomethodology or any consonant one. The authors link Goffman, Luhmann and others in a most disjunctive way and this synthetic approach facilitates reinstatement of the oppositions and dualisms in terms of which orthodox sociology is typically cast.

Having, through purely theoretical invention, rent 'interaction' and 'environment' asunder, the authors saddle parties to the worksite with the responsibility of putting it together again - surely a conflation of the analyst's and member's perspective, a conflation against which (for instance

Schütz' philosophy clearly stands. It is unclear whether, irrespective of particular occasions, parties to the worksite actually orientate to such an over-weening distinction or whether, as one might suspect, the distinction is, for them, artifactual or at least irrelevant to their practical concerns. The video-based data corpus of such studies might seduce one into thinking that they are, de facto, more sensitive to intersubjectively-based interaction than are projects based on other forms of data. In fact, unless the conceptual approach that informs this video-based analysis adopts a coherent alignment towards members' *in situ*, *in vivo*, intersubjectively-based practices, video-data only operates as part of the theory, corroboratively reproducing any incoherences the theory itself espouses. Video-data can, then, be used to illustrate spurious arguments and false problems: such data forms are not necessarily superior to others and may indeed deceive through their apparently persuasive power. The challenge with video-data - a challenge that our U.S. Forest Service project has tried to take up - is to show how members' practices work to produce what is for those members a phenomenal field whose characterization has no need of an independent, theory-driven descriptive standard that is external to the worksite involved. Thus driving is, for Service vehicle occupants, encountered in terms of a temprally-unfolding flow of relevant phenomenal detail.

There were also parallels in our approach with the later Wittgenstein's arguments on the transparency of mind, on 'private language'and, in many respects, on his arguments on rules and practices. We found that the rules that one found in the rule-book on forest driving did not provide for their own application. Instead, the phenomenon of identifiably and publicly bringing conduct under the auspices of a given rule was found, in 'practices' (including sanctions), and these practices were interactionally deployed, deeply embedded in the talk between Service personnel in the vehicle. The training video sought to render explicit and to underscore this phenomenon and to extend its practical application to problems of risk-management, again often using Service personnel's own 'shop talk' in order to index personnel's own categories, relevances and shared experiences as they happened.

Analysis was conducted on the basis of Service personnel's "wording of their world" (Rose), which we took as involving 'commentator machine' issues both synchronic (commentaries, etc., as part of the *in vivo*, *in situ* constitution and performative advancement of actions and settings) and diachronic, (commentaries as *post hoc* retrospective reconstructions). The analysis involved the scrutinizing of the sequential organization of activities - the analysis of the serial ordering of what were, in terms of the occupational culture, recognizable actions, often into units of action - and the categorial organization of action. These were, however, not treated as bifurcated modes of organization - sequential organization was treated as categorially-informed and categorially-realizing Categorial organization was treated as incarnate in sequential organization Thus, in the sensible production of activities/ interactions, categorial and sequential orders were treated as, necessarily and essentially, reflexively-constituted - each elaborated the sense of the other and was in turn elaborated by the other.[9]

One brief illustration must suffice. I have observed that mountain/forest driving is best seen as a collaborative

activity, e.g. conversational action sequences such as 'noticing' or 'announcement' sequences were often initiated by passengers in Forest Service vehicles rather than by the driver. That is, the passenger issued the first 'move', the first utterance/conversational action in the sequence. Correlatively, this phenomenon can be seen as a categorial one, i.e. involving the categorial distribution 'driver'-passenger(s)' as well as the serial order of 'moves' or utterances ('announcement'-'response'). The membership categories[10] were found to organize differential participation rights (and obligations) in the interactional organization of the talk in the vehicle. For instance, incumbents of the category 'passenger' were often reluctant to initiate a noticing sequence (or noticing-based announcement or warning sequence), thus perhaps pre-empting the category-bound prerogative of the incumbent 'driver' over such matters. If a passenger initiated such a sequence, this perceivedly risked being taken by the driver, and even by fellow-passengers, as 'inferentially rich', e.g. potentiating the inference that the driver is being 'inattentive', inexperienced and even less than fully competent. In the experience of our research subjects, this often reportedly led to 'incidents' and even 'accidents'. Thus, 'incidents' and 'accidents' were collaboratively-induced events, just as driving *per se* is a categorially-collaborative activity. The fact that these phenomena were collaborative in nature does not, of course, mean that collaboration was conducted on an equal footing, and, here, the differential category-incumbencies cast the communicative organization in the Forest Service vehicle on an asymmetrical footing. In the extreme case, all passengers remained silent, but this too is a social context of driving and may be construed by e.g. drivers in terms of what Sacks has called 'noticeable absences'. Even when those categorized as 'passengers' did initiate a noticing or warning sequence, the utterance would typically be hedged around with guardedness, downgrading mitigation and other properties or particles designed to exhibit the passenger's orientation to his own category-incumbency as 'passenger' and to his/her interlocutor as 'driver', with all the attendant rights, prerogatives and obligations that are predicated upon that category and distributed on the basis of categories and the (in this case, duplicatively-organised) device in terms of which they were organised. This is one of many ways in which 'category' and 'sequence' were inextricably intertwined in the communicative interaction between 'driver' and 'passenger(s)'. Driving is a division of labour. Risk analysis thus is mistaken, insofar as it focalizes a single cognizer. Rather, it must attend to interactional and communicative phenomena understood in context or as close to the context as is feasible. In this sense, our analysis was founded on the wish to wrest risk analysis away from cognitive scientists' and decision-theorists' models, thus challenging their virtual monopoly in this area.[11]

Finally, our approach was also used in another, consultancy-based, piece of applied sociology in very different circumstances within the Forest Service. As is often the case in detached centres of research, technology and development, there was considerable internecine conflict within the local 'headquarters'. The same experientially-based research method was used to trace out and define these conflicts located, for members, in 'professional' versus 'administrative' concerns, in 'pure' scientific research versus commercially-profitable 'applied' research, on research based on 'technology' as opposed to that based

on 'human factors', and on stratification and management issues. The intersubjective history of the organization – typically cast in the above terms - was often brought to bear by members in making sense of, and accounting for, the conflict situation. Here we have the nature of conflict as oriented-to by worksite participants themselves rather than being stipulated *a priori* by the analyst in terms of some theory. Again, a pure ethnography yielded 'applied' considerations that were, indeed, tabled at the Department of Agriculture of the U.S. Federal Government in Washington, D.C.

This project was conducted by J.J. Driessen, R.L. Gold and myself. Gold was a symbolic interactionist and ethnographer in the school of thought of Everett C. Hughes at the University of Chicago, and had done many pure and applied ethnographies of community change, rural development, etc., particularly in relation to ranching and mining.[10] This added an extra element, a symbolic interactionist dimension, to our research, where the *lingua franca* (so frequently a problem in cross-perspectival approaches in sociology) was located in common – but definitely 'negotiated'! - ethnographic and observational concerns that were, experientially-based and therefore linguistic and communicative in character. In essence, this study was cast in similar terms to the 'mountain driving' project, i.e. based on subjects' own definitional work.

The project resulted in a manuscript that espoused both 'pure' and 'applied' considerations, and is available from Dr. D.R. Watson at the Sociology Department, Roscoe Building, University of Manchester, Manchester M13 9PL, England.

NOTES

For an overview of Rose's 'Ethno-Inquiries'/'Ethnonomy', see W. Sharrock and R. Watson: 'Conversation avec Edward Rose à propos de sa Conversation avec Harvey Sacks: Quelques Observations Analytiques sur les Ethno-Recherches'. Cahiers de Recherche Ethnométhodologique (pub. Laboratoire de Recherche Ethnométhodologique, Université de Paris VIII, St.-Denis) no.1, juin 1993, pp.41-54. This paper is a rejoinder to Rose's own statement of his position with reference to that of Harvey Sacks which appears in the same issue of this journal, pp.5-40, under the title 'Conversation avec Harvey Sacks: Analyse avec Modifications et Commentaires', - not 'Corrections' (*sic*): this is a misprint of the English title. Rose's initial presentation of his treatment of the 'commentator machine' was presented at the Conference on Methodological and Conversation-Analytic Research, University of Amsterdam, 1990, and was written up in Rose's book The Werald, in Boulder & Greeley: The Waiting Room Press, 1992, pp.189-98. Sacks' own foundational article on sociological description also appears in that issue, pp.7-23, under the title 'La Description en Sociologie'. It was originally published under the title 'Sociological Description' in the Berkeley Journal of Sociology, (1963), vol.8, pp.1-16.

The pre-eminent bibliographer and intellectual biographer of Edward Rose is Andrew Carlin, Department of Library and Information Studies, University College Dublin, Dublin, Ireland. A profound approach to Rose's work is to be found in R.S. Slack: Varieties of Sociological Reflexivity. Unpublished Ph.D. thesis in Sociology, (1996), Faculty of Economics and Social Studies, University of Manchester, England, M13 9PL, Chapter 4.

2. E. Rose: The Unattached Society: An Account of the Life on Larimer Street among Homeless Men, with A. Gorman, F. Leuthold and I.J. Singer, assisted by G. Barnett, E. Bittner, and J.C. O'Leary, and with a 'Prologue' by Rodney Watson. Originally published as Report no.24 of the Bureau of Sociological Research, Institute of Behavioral Science, University of Colorado, Boulder, Colorado, U.S.A., September 1965, republished as a special inaugural issue of Ethnographic Studies, the Journal of the Manchester Ethnographic Group, issue 1, Spring 1997, (copies available from Dr. S. Hester, Department of Sociology, University of Wales at Bangor, Bangor, Wales, Great Britain).

3. See, for example, W.W. Sharrock and D.R. Watson: '"Power" and "Realism" in Simulation and Gaming: Some Pedagogic and Analytic Observations', in D. Crookall *et.al.* (eds.): Simulation-Gaming in the Late 1980s. Oxford:

Pergamon Press, 1987, pp.35-42; see also W.W. Sharrock and D.R. Watson: `Some Social-Interactional Aspects of a Business Game', pp.177086 in that volume. See also that same volume: D. R. Watson and D. Crookall: 'Language, Computers and Simulation: An Introduction', pp.51-6; D. W. Francis: 'The Competent Player: Some Observations on Game Learning', pp.201-6, and R. J. Anderson: 'The Reality problem, in Games and Simulations', pp.43-50.

4. E.A. Schegloff: `On Sacks on Weber on Ancient Judaism: Introductory Notes and Interpretive Resources': Theory, Culture and Society (1999) vol.16 no.1, February, pp.1-39. Sacks' paper 'Max Weber's Ancient Judaism' appears in the same issue and also has a bearing on his analogy of the 'commentator machine'.

5. On the notion of a 'self-explicating colloquy', see H. Garfinkel and H. Sacks (1970) 'On Formal Structures of practical Actions', in J. C. McKinney and E. A. Tiryakian (eds.): Theoretical Sociology: Perspectives and Developments. New York: Appleton Century-Crofts pp.337-66, esp. pp 350 ff. The approach in this paper is quite consonant with Sacks' earlier concept of the 'commentator machine', not least in its focalization of members' mastery of the natural language as inextricably intertwined with their practical reasoning in action.

6. M. Pollner: `Explicative Transactions: Making and Managing Meaning in Traffic Court', in G. Psathas (ed.): Everyday Language: Studies in Ethnomethodology. New York: Irvington Publishers, Inc., (Halsted-Wiley), 1979, pp.227-57.

7. For a discussion of ethnomethodology's transcendence of these conceptual dualisms, oppositions and antinomies, see e.g. W. Sharrock and R. Watson: 'Autonomy among Social Theories: The Incarnation of Social Structures' in N. G. Fielding (ed) Actions and Structure. London: Sage Publications 1988.

8. D. vom Lehn and Christian Heath: `Constituting Boundaries: The Momentary Interweaving of Interaction and Environment'. Congress of the Swiss Sociological Association, entitled `Interpretive Sociology', University of Fribourg, Switzerland, 1999.

9. See R. Watson: `Some Reflections Concerning "Category" and "Sequence", in The Analysis of Conversation', in S. Hester and P. Eglin (eds.): Culture in Action: Studies in Membership Categorization Analysis. Washington D.C.: University Press of America, 1997.

10. On membership categories and their organization (e.g. their co-selection), see H. Sacks: `On the Analysability of Stories by Children', in J.J. Gumperz and D. Hymes (eds.): Directions in Sociolinguistics. New York: Holt, Rinehart and Winston, 1972, reprinted in R. Turner (ed.): Ethnomethodology. Harmondsworth: Penguin 1974. See also H. Sacks: `On the Usability of Conversational Data for Doing Sociology', in D. Sudnow (ed.): Studies in Social Interaction. New York: The Free Press, 1972: also Hester and Eglin, *op.cit.*, (*passim*).

11. Raymond L. Gold: Ranching, Mining and the Human Impact of Human Resource Development. New Brunswick, N.J.: Transaction Books, 1985.Interactional Aspects of a Business Game', pp.177-86 in that volume. See also that same volume: D.R. Watson and D. Crookall: `Language, Computers and Simulation: An Introduction', pp.51-6; D.W. Francis: `The Competent Player: Some Observations on Game Learning', pp.201-6, and R.J. Anderson: `The Reality Problem, in Games and Simulations', pp.43-50.