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Special issue

ACTOR NETWORK THEORY

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Reworking Sociology: Bruno Latour's Feeling for Genre

Terry Austrin and John Farnsworth

Abstract:

This article explores tensions in the study of innovation, the practice of fieldwork and the narratives these produce, particularly as represented in the work of Latour. It argues that Latour's ethnographic studies of science parody a variety of sociological and literary genres, particularly detective fiction, and that he uses this literary device as a way of pinpointing unexpected links between fictional and sociological modes of investigation. In Latour's hands parody illuminates important issues of fieldwork practice and becomes an innovatory method that problematises conventional sociological narratives and practice.

Innovation studies are like detective stories. Bruno Latour (1996, p.147).

The sociologist is not situated; or if he is concrete precautions will suffice to desituate him. It may be that he tries to integrate himself into the group, but this integration is temporary; he knows that he will disengage himself, that he will record his observations objectively. In short he resembles those detectives whom the movies often present to us as models, who run the confidence of a gang so as to be better able to trap it. Even if the sociologist and the detective participate in collective action, it is evident that they put their act between parentheses, that they make these gestures for the benefit of a "higher" interest.

Jean-Paul Sartre (1968, p. 70)

Sartre, in this rare remark on sociology, is writing of sociology from the perspective of literature. Latour, in contrast, draws on literature to inform the practice of sociology and the study of science, yet both find a productive meeting-point in the fictional world of the detective. This world is a metaphor which is productive for sociologists because not only does detective work illuminate much about the way innovation and investigation actually takes place, and the networks each mobilises and assembles in the process, but also because it points to the unavoidably fabricated nature of the

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accounts that finally emerge – their provisional, representational, sometimes fictive characteristics.

Latour works in this way in order to show how new knowledge comes into being: how fieldwork and fabrication, so to speak, run hand-in-hand in the process of creating and circulating new knowledge. In particular, he focuses on the conventions of genre as the vehicle that can reveal this because, to adopt Becker's (1986) observation, telling about society is performed in different ways through different textual forms (and genres). In sociology, these genres vary from statistical reports to comparative historical accounts and ethnographic documents. Latour, however, goes further by playing with, parodying and ironising different textual forms that, conventionally, exist "outside" of sociology – invoking, in the process, a strategy which already has a long history in literary theory (Ruthven, 1979). In doing so, he illuminates the productive hybrids that emerge both from the seemingly monstrous mating of heterogeneous genres (for instance, the "new" genre of scientifiction that he invents) and from the hybrid networks of humans and technologies that are complicit in the creation of new (scientific) knowledge.

Such an approach is pre-eminently a reflexive one, but it is central to Latour's methodology. In what follows, we discuss how Latour, in particular, works through some of its implications for fieldwork and for interpretation; but also how, in writing in different genres and making them explicit as he does, he is employing and demonstrating exactly the use of *verbal* technologies called genres to reorder existing knowledge in the field of sociology. In other words, his own writing is a reflexive demonstration of the process he is studying, one which is accomplished, in this case, through the monstrous mating of literary forms and sociology.

But where writers within genres are said to write the same stories and thereby reproduce the same genres, Latour writes different stories, here about the practice of science, across different genres; at the same time he also mixes and parodies genres. A good, early example, is his charmingly ironic sociological fable, "The three little dinosaurs" (1980). This combination of parody, fable and allegory begins unexpectedly: "Once upon a time, there were three little

dinosaurs" and proceeds to provide a delightfully pointed constructionist analysis of what scientists consider a dinosaur is supposed to be. Nevertheless, though the stories may differ, the method of research - actor network analysis - is always the same. The method involves moving from signs to things and back again and doesn't vary whether he is writing (under a pseudonym) a fictionalised account of the humble door closer, or constructing a "conventional" ethnography, with Woolgar, about laboratory life. In this latter case the concern is, for example, with accounts of how science is constructed. These accounts involve the microprocessing of facts in the pursuit of understanding both how innovation is secured and how scientists, when referring to brilliant ideas in their later justifications of this process, erase people, things and events. In *Aramis* (of which more later), the issue is one of understanding how humans and non-humans mix and, at the same time, following chains of translation in order to understand how they *fail* to innovate in an area of new technology.

Such a double approach – that of detective fiction and ethnography - allows Latour to explore dual worlds, each in all their complexity: the world of literature and narratives as well as that of sociology and investigation. It also enables him to bring them into a potent co-relation by counterpointing their seemingly antithetical practices. This, in turn, provokes a stream of parallels and paradoxes which, as we shall see, offers a highly productive field for Latour's own brand of innovative sociology. It provides a way, too, for him to comment, implicitly, on their interpenetration. This he does primarily through the device of parody. As Dentith argues, a parody can act as a metafiction – a way that such an artifact can hold up "a mirror to its own fictional practices" (2000, p.14). In this case, it involves drawing attention to the unavoidable fictionalising of the scientist's (and social scientist's) investigatory and innovative strategies. Apart from Mulkay (1985), who argues explicitly for parody and the widening of textual forms used in social research, Ashmore (1989), and Ashmore, Mulkay and Pinch (1989), this is a rare practice in sociology but, as here, it opens up possibilities of interplay between social fields, analytical method and literary form.

Laboratory Life

First published in 1979, and republished with a postscript in 1986, *Laboratory life*, written by Latour, together with Woolgar, introduces Latour the quasi-anthropologist who studies the tribes called scientists engaged in the craft of science. In this way, the ethnography of the quasi-anthropologist parodies the conventions of ethnography. The genre of the fieldwork report long used by anthropologists is taken over and adapted for presentation of the work done in laboratories. It is the first study of natural scientists in their natural habitat and the authors provide a conventional account of how they carried out their own field/laboratory work.

Latour completed 21 months of participant observation during which he was employed as a part-time technician. His research was known to the scientists and he was able to make extensive field notes and construct a field diary, as well as make use of documents, drafts of articles in preparation, letters, memoranda and various data sheets. He also used interviews and involved himself in informal discussion. His own reflections as observer, particularly of his work as a technician in the laboratory, provided a further source of data. His concern was with "the way in which the daily activities of working scientists lead to the construction of facts" (1986, p. 40). His method was one of in situ observation. This is classic fieldwork in the bounded setting typical of ethnographic fieldworkers. As Latour and Woolgar put it:

> Sharing the daily life of scientists for two years provided possibilities far beyond those afforded by interviews, archival studies or literature searches. We are thus able to draw upon observations of daily encounters, working discussions, gestures and a variety of unguarded behaviour. (1986, p.153)

Undertaking fieldwork this way has other consequences. For example, it shifts away from the traditional site of ethnography, the exotic foreign setting, to the single isolated laboratory. Yet, as they attest, "the esoteric culture of the scientific laboratory" is no less taxing than "entering and living" in any strange culture (1986, p.275) and gathers to it the added problems of maintaining an analytic

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distance within a domain that shares many familiar scientific assumptions to their own. Nonetheless, they do rework the genre, the justifications for fieldwork, and the idea of the fieldworker.

Adherence to the conventions of the genre is maintained by portraying the laboratory as seen through the eyes of a stranger. The stranger is Latour himself - a total newcomer whose mastery of the English language is very poor (1986, p. 273). However, in order to emphasise the fictional nature of their account-generating process, Latour is given the fictional name of "the observer". In this parody of the ethnographer's practices, the observer, like the detective, initially encounters a mysterious and apparently unconnected sequence of events. At the same time, the way in which he attempts to frame these phenomena provides an Ariadne's thread that allows the reader to pass through a "labyrinth of seeming chaos and confusion" (1986, p.44). Using this fictional character, Latour and Woolgar are at pains to show how close fieldwork undertaken by the observer can, despite the difficulties encountered, reveal the way a "process of construction" takes place in scientific work.

The difficulties for the observer come in recognising that the scientific process of production necessarily involves devices "whereby all traces of production are extremely difficult to detect" (1986, p.176). This means that close observation through "prolonged immersion" in the laboratory is necessary to unravel the seemingly arcane mysteries – the black box – of scientific innovation. As the authors put it, "by being close to the localised scientific practices the observer has a preferential situation from which to understand how scientists themselves produce order" (1986, p.39). However, this close observation was not a matter of accessing the truth of science but rather accessing the ways in which the "descriptions and reports of observations are variously presented (and received) as "good enough," "inadequate," "distorted," "real," "accurate," and so on." (1986, p.282).

In this account, laboratory activity is described as "the organisation of persuasion through literary activity" (1986, p.88). The irony of the observer's report of this literary activity is that the scientists in the laboratory are represented as constituting a tribe – but one whose daily manipulation and production of objects is in

danger of being misunderstood, "if accorded the high status with which its outputs are sometimes greeted by the outside world" (1986, p.29). And herein lies the value of parody. Latour was not looking for the truth but rather the way in which fabrications that pass are put together. He was concerned with the essential elements of the process whereby an ordered account is fabricated from disorder and chaos. In this way, he is alert, and can alert his reader, to the pitfalls of reading what appear to be simple "facts." As Dentith points out, one aspect of parody is that it can be "especially strong in drawing attention to the negotiations that are involved in *reading* a parody text, as the reader's expectations are disrupted and adjustments are required" (Dentith, 2000, p.15). This can be signalled, as here, by the narrator acting as the artless metafictional interpreter of the events we are reading about – a strategy, as it happens, at least as old as Chaucer (Rose 1993, p.91).

Contrast this with the detective as presented by Steven Marcus:

> What he soon discovers is that the "reality" that anyone involved will swear to is in fact itself a construction, a fabrication, a fiction, a faked and alternate reality - and that it has been gotten together before he ever arrived on the scene. And the [detective] Op's work therefore is to deconstruct, decompose, deplot and defictionalise that "reality" and to construct or reconstruct out of it a true fiction, i.e. an account of what "really" happened ...his characteristic response to his sense that he is dealing with a series of deceptions or fictions is ... "to stir things up" ... What one both begins and ends with then, is a story, a narrative, a coherent yet questionable account of the world. (1983, pp. 201-202)

The problem with the tribe of scientists was not that they were fixing and faking their reality, but that they were complicit in this fixing. This was their way of accounting for what they did. The observer, however, treats this as a process of telling the tales that "obeyed" the laws of their own "genres" (1986, p.171).

The problem for Latour was to account for how this happened and it revolved around a particular difficulty for ethnographers:

> A major difficulty for the observer is that he usually arrives on the scene too late: he can only record the retrospective anecdotes of how

this or that scientist had an idea. This difficulty can be partially overcome by in situ observation both of the construction of a new statement *and* of the subsequent emergence of anecdotes about its formation. (1986, p.172)

The same difficulty attends the detective who, arriving by definition after the event (or crime), also has to establish not just who committed it, but exactly how. Like ethnographers, this involves a meticulous "microprocessing of the facts" – a sifting through the jumble of clues that may enable a reconstruction of the original sequence of events.

In *Laboratory life*, Latour and Woolgar emphasise the importance of capturing the local and contingent circumstances rather than the rationalisations after the event. Their point is to discover analogical paths rather than the logical connections that replace them in scientists' accounting practices. Similarly it is to locate the complex local and contingent circumstances which temporarily make possible weak links and show how these contingencies are erased in accounting practices that emphasise "flashes of intuition" (1986, p.174). In their version the "stabilisation" of scientists' accounts effaces exactly how the process of innovation or discovery actually took place. This, they argue, involves getting rid of "all determinants of place and time and of all reference to its producers and the production process" (1986, pp. 175-176). Such erasure invokes the very mysteries of creative innovation which Latour and Woolgar are intent on demystifying.

Likewise, and this is important for our case, they were not concerned to produce an ordered account themselves. As they put it in the 1986 postscript, they wanted to "avoid giving the kind of smoothed narrative characteristic of traditional constructions of the "way things are"" (1986, p. 276) – a feature which becomes central in Latour's presentation of *Aramis*.

This first account of science as a laboratory life involves a bringing "home" of anthropology. It is therefore tied to, but also parodies, the tradition of ethnographic fieldwork. By contrast, Latour's (1988) book on Pasteur involves working with historical records. This is a different enterprise and results in a mixed genre. The first half of the book conforms to the "literary genre of sociology or social

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history" and the second half "to that of philosophy" (1988, p.7). Consequently, it still complies largely with academic conventions governing the use of genre. By the time *Aramis* is published in 1996, the parody has extended to the realms of popular culture – to the popular genre of detective fiction. Before turning to this, however, there is *Science in action* (1987), which involves Latour again explaining his "simple method" for the ethnographer: just "being there."

Rules of Method, Rules of Detection

The "simple method" involves fieldwork: being there at the times and at the places where things are talked about, planned, disputed. Its so-called simplicity, following actors in time and across settings, is also the method of detectives. Here, Latour and detectives are involved in following people to understand how things, people, situations have been erased. This is fieldwork as intelligence: fieldwork to discover what has been erased. As Latour puts it, in describing the general movement of research, the issue at stake is the study of the controversies which are at the core of studies of science:

> when the controversy heats up a bit we look at *where* the disputing people go and *what* sort of new elements they fetch, recruit or seduce in order to convince their colleagues; then we see how the people being convinced stop discussing with one another; situations, localisations, even people start being slowly erased (1987, p.15)

It is worth extending this brief statement for it is the core of how fieldworkers (including detectives) operate. Latour is interested in action, the disorderly mix that makes up science, and it is therefore disputes or, as he puts it, science in action, that attract his attention. He lays this out in his "rules of method". Actors within disputes should be seen as mobile bricoleurs. They fetch, recruit or seduce human and non-human resources to simultaneously construct their networks and their cases. Latour's fieldworker must therefore *follow* (and follow is perhaps the term most frequently used by Latour) these actors through their labyrinths or networks to understand what

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they otherwise erase from the subsequent accounts of their actions. To follow them is to discover the situations, localisations and people that contribute to the case that subsequently appears to have been made and sealed as a black box. For Latour, this method illuminates how things are assembled and disassembled.

With this method, the fieldworker is not led away from local sites but *closer* to them. In his contribution to the volume *Actor network theory and after* (Law and Hassard, 1999), Latour reemphasises this position. "For us ANT was simply another way of being faithful to the insights of ethnomethodology, actors know what they do and we have to learn from them not only what they do, but how and why they do it" (1999, p.19). Here lies the reason for fieldwork. It was always "a very crude method to learn from the actors without imposing on them an a priori definition of their world building capacities" (1999, p.20). But sociologists, detectives or any field worker can work no other way. It is a way of working which emphasises how, *by tirelessly following* circulations and networks, we can get more than by defining entities, essences or provinces. In that sense, as Latour emphasises, his is an anti-essentialist project. Like ethnomethodology, it is simply a way for social scientists to access sites. It is a *method* and not a theory, a way *to travel* from one field site to the next.

Aramis

All these observations on method are incorporated into the account of *Aramis* (1996). More significantly, and more ambitiously, they are incorporated into a detective story with love and betrayal at its centre. Like the Sherlock Holmes stories, Latour begins with a map of the territory under discussion, in this case Paris, and a timetable of events. The narrative of a young engineer then tracks Holmes / Norbert (his mentoring sociology professor) and his arguments as to how they should follow actors, sticking to them, drifting with them as they drift, in order to locate the chains of association that link the events within the space of the map.

Aramis, or the love of technology reveals the failure of the French to build Aramis, an automated personal transport system which was

devised, and died, in Paris in the late 1980s. The system represented a potentially major advance in rapid urban passenger transit, combining the efficiency of the subway with the flexibility of the car. But its innovative, computerised coupling system proved both complex and expensive and, with an eventual failure of political will, the project withered to a standstill in 1987.

The story is told from the perspective of several different parties, including a final passionate lament from Aramis, the technology, on behalf of all technology for the continuing commitment of those who create it. At the same time, the book shows how the sociological investigation to uncover the story was carried out. Like a detective novel in the American hard-boiled tradition, this account of a single case is a story of love and hate, passions and betrayal, and the "murder" of this forlornly unrealised new technology. It is an account both of the compromise, drift and uncertainty over decisions taken by engineers, and of the process of investigating and understanding this tangled process by the sociologist and his assistant. It is an ethnography, but it is also a detective story told as a romance. The play on genre and the burlesque indulgence in parody are a striking feature throughout.

Latour dubs the book a "scientifiction" - a study of science and an exercise in fiction – which parodies the classic 19th century detective story as represented by Sherlock Holmes and Hercule Poirot. The corpse in Latour's book is Aramis, the failed project. Norbert, the Holmesian sociology professor, partnered by his naïve, young Watson-like engineering student, is assigned the task of determining the cause of death. As Norbert points out, what they are really dealing with is not so much a corpse and its murderers (as in a fictional account) but with real world actions involving "dismemberers of assemblages of human and non-humans" (1996, p.74). This blend of humans and technologies carries, unsurprisingly, echoes of Mary Shelley's *Frankenstein*, and indeed her story features in the text. But, unlike the fictional detective novel, in the genre of scientifiction "the fatal cause will not be found at the beginning of the project any more than it will be found at its very end" (1996, p.50). However, like the classical detective story, Latour's analysis is dependent upon a semiotic reading of signs to locate connections.

In Latour's case, this reading of signs is not accompanied by forensic scientific procedures that are central to the police procedural detective story, but it does involve an immersion in the case typical of the hard-boiled tradition. Utilising this mode of knowledge would seem to combine semiotics and the fieldworker's canniness (Stowe, 1983).

The story unfolds through the juxtaposition of a medley of different genres. These range from charts, interview excerpts, photographs and bureaucratic dossiers to sociological commentary and novelistic narrative:

> "Isn't it always that way?" I asked.
> "You've got to be kidding! The last study I read was on inertial guidance systems for intercontinental missiles.[1] Those things are not treated like the Messiah.". (Latour, 1996, p.17)

Scientifiction, the hybrid genre of the novel and sociological commentary that Latour "invents" and adopts for the purposes of telling the Aramis story, allows him to "become close enough to reality so that scientific worlds could become once again what they had been: possible worlds in conflict that move and shape one another" (1996, p.ix). Significantly, it provides equal agency to all the actants – the actors and things - involved. His relational, refined sociology requires a different type of genre to give weight and voice to the variable and shifting assemblies of actors and researchers. It requires a shift away from fixed frames of reference to a relativistic sociology with fluctuating referents that allow for all viewpoints to be deployed, equally. Just as detective fiction writers transformed the genre of the classical detective story, in which the detective worked out everything by reading signs rather than entering the worlds of the suspects, Latour seeks to do the same for sociology. The different subject matter requires a reworking of the traditional genre. Just as the genre of detective fiction shifted in order both to write in the vernacular (Worpole, 1983) and to give weight and voice

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1. D. McKenzie, *Inventing accuracy: A historical sociology of nuclear missile guidance systems* (Cambridge, Mass.: MIT Press, 1990).[reference in the original]

to a shifting range of actors and their accounts, so must sociology. Just as detective fiction parodies its own genre conventions and hybridises its storytelling, so must sociology.

Readers of Latour's book also learn that in doing fieldwork it is important to get hold of the original documents and to assume "that people are right, even if you have to stretch the point a bit" (1996, p.36). And, that sociological fieldworkers have to travel. This particular piece of advice comes in the form of an in-joke. Just as readers of McBain's detective novels are let in on pointed jokes amongst his police officers, readers of Latour are also let in on in-jokes regarding the differences between sociologists and anthropologists. So, in contrast to ethnologists who generally stay in one village and draw nice, neat maps, "we sociologists have to drag ourselves around everywhere" (1996, p.46). And, unlike conventional ethnography, "Our terrains aren't territories. They have weird borders. They're networks, rhizomes" (1996, p.46). The joke is extended by reference to Levi Strauss and his fieldwork in the jungles of the Amazon rather than the jungle of the Paris metro. Had he only understood this urban jungle, the joke goes, he would have understood that engineers are tinkerers and bricoleurs and the contrast that he draws between mythical Amazonian tinkerers and modern engineers breaks down. The latter think like "savages" (1996, pp. 109-110). Similarly, Latour jokes about his own work. The young engineer describes Norbert as being carried away by the way he thanks automatic ticket machines, converses with electric staplers and talks to automatic door openers – all of them actants Latour has celebrated in his own work. Norbert also interviews a speed bump, a so-called "sleeping policeman," on the pretext that this peace officer was more faithful, more serious, more intrinsically moral than his own nephew, "though the latter was a precinct captain" (1996, p.211). Readers of Latour's other works will get the references.

The jokes have their relevance. They define the fieldworkers and their practices. They allow Norbert, "with tears in his eyes" (1996, p.144), to show the young engineer that things in his view are not as they are found in sociology – formed from the state of human beings. Nor do they take the form of those representations in technologism

that assert the opposite maxim, "give me the state of things and I'll tell you what people can do" (1996, p.213). A "thing" for Norbert offers "a continuous passage, a commerce, an interchange, between what humans inscribe in and what it prescribes to humans. It translates one into the other". It is neither subject nor object but a quasi object / quasi subject (1996, p.213). Humans and non-humans take on form by redistributing the competences and performances of the multitude of actors that they hold on to and that hold on to them (1996, p.225). As in Serres and Latour (1995), things are media. This is one of the insights at the heart of ANT; paradoxically, its seriousness is often best signalled through jokes.

The issue at stake for the two fieldworkers is one of innovation: in this case, a failure to realise a new innovation. How, then, does innovation take place or fail? As Norbert explains it, chains of translation transform global problems, such as urban transportation, into local problems through intermediaries, and innovation always comes from a blending or redistribution of properties between humans and things that had previously been dispersed. In this translation model, the initial idea of innovation, of Aramis, barely counts. There is no intrinsic idea (of Aramis) only a negotiable set of claims. Rather than the product of brilliant minds, innovations, like Aramis, are generally ill conceived, unreal in principle and have no power. If they are to move they will do so only if they provoke the interests of one group or another. And this is what Norbert and the young engineer follow in an extensive interviewing programme that takes them all over Paris.

As in the detective novel, suspense arises from the fact that these actors translate the wants and needs of different worlds, but in doing so, they also betray because ambiguity is part of the process of translation (1996, p.48). Like detective fiction, ANT is always concerned with the drama of (variable) identities. And, like detective fiction, it also knows that in the course of investigation it is generally the case that "behind the actors, others appear; behind one set of intentions there are others; between the (variable) goals and the (variable) desires, intermediate goals and implications proliferate, and they all demand to be taken into account" (1996, p.100). Unlike the classical detective novel, it is the young engineer, the Watson

figure, who, transformed by the process of investigation, "solves" the puzzle. At the point that the young engineer is required to write up a report on their findings without Norbert's presence, he notes that:

> With the help – precarious as it had been – of my mentor's sociology no longer available I clung to the methods of detective novels. Like Hercule Poirot when he's stuck, I had written out a list of the most significant interpretations. They didn't converge at all. (1996, p.277)

He discovered that Norbert was right: not a single element on his list was stable but, through investigation of his list, he also discovers "the hidden staircase." In the tradition of the classical detective story he exclaims, like Hercule Poirot, "Good Lord, but of course! That's it!" They, the engineers, had never made Aramis a research project, subject to negotiation and uncertainty. They "didn't love it" (1996, p.282). Instead, they abandoned Aramis so as not to compromise it. The pertinent question under review by the fieldworkers was not whether it was a matter of technology or society, but "what was the best sociotechnological compromise" (1986, p.101). They discover that no attempts at compromise were made – the point at which love and commitment became essential to its survival. There was not enough negotiation and this fragile, highly innovative project collapsed.

The scientifiction ends in the form of an epilogue with the major players assembled around a large oval table in a room on the Quai des Grands-Augustins. The epilogue, typical of the classical detective story, ironises both the genre of the detective story and the practices of sociologists. It maintains that the presence of these people in this place at this time cannot be equated with the last chapter of a detective story because Aramis may well be "dead" but there was no murder, no perpetrator and no guilty party, just a collective drift of good intentions (1996, p.290). Therefore, there is no point in deciding who finally killed Aramis. The readers already know this. We were told on page ten it was a collective assassination or, rather, an abandonment of a business that went on for seventeen years. What, then, is to take place in this epilogue?

As Norbert, the outsider and investigator, comments:

> We are gathered this evening around Aramis, an object that did not take place but that was not without object. The proof is that we all loved it, I myself am an outsider in this world of guided transportation, and I too have been susceptible to the contagion. I don't mind telling you that I really loved it. I shed real tears as I followed the ups and downs of this being that asked to exist, to whom you offered existence. (1996, p.291)

On this occasion Norbert is revealed as a fieldworker, a hybrid sociologist-detective, who loves technology and respects those engineers who build it. What he locates in the field is love, perhaps not enough love, but certainly not guilt; ways of being wrong, ways of making mistakes, but not criminals. In a sense Latour's sociology could be viewed as a sociology of the mistakes or errors that inevitably accompany the process of innovation and invention.

In *Aramis*, Latour "plays" with different genres - the detective / science fiction / romance - to present his different mode of storying. This playing depends on his audience understanding this form of treatment and it provides us with a sociology that breaks from the stable categories of the well-established genre he refers to as sociological commentary. This is the point at which postmodern novelists rework the traditional genres of the discipline – Robbe-Grillet with *Erasers* (1966) is a paradigm case – creating, as Perry (1994, p.105) argues of Potter's *Singing detective*, a critically important solution that reconciles a popular cultural form with the aesthetic demands of high culture. Latour actually experiments with similar genres in order to make his very different sociological case. Like Eco in *The name of the rose*, he relies on the classical detective story as foil and uses its form of "game" to make his points. It is a strategy used to different ends, but with equally subversive effect, by feminist crime writers, as Rowland (1999) argues with authors ranging from Agatha Christie to Ruth Rendell.

As Kermode (1983) argued of the detective story, it is a "hermeneutic game," and this is the form that Latour adopts. His detective story is concerned with the elucidation of a series of *events and objects*. For Kermode, the "hermeneutically relevant" information in the narrative operates to spawn further cultural and symbolic information. This is key for Kermode: "the (detective) genre is

evidently one in which hermeneutic information predominates; but to provide it in a narrative is to activate other systems of reading and interpretation" (1983, p.184). In Latour's case this other information takes a different form: as part of the dispute he carries on with classical sociology and with technologism. Put another way, his parody operates, in effect, constantly to destabilise sociology's conventional forms of representation. In doing so, it problematises sociology's claims to detached scientific objectivity by its gesture towards an ambiguous, reflexive engagement with its subject matter. As a consequence, following Durkheim, it constantly asks the reader to reconsider the constructed status of the "social facts" that appear on the written page.

The adoption of the new genre of scientifiction points to Latour's twin obsessions: the depiction of possible worlds in the making - worlds which include artefacts - and the inadequacies of conventional formats used by classical sociology to handle them. Classical sociology then is, in Becker's (1986) formulation, a form of misrepresentation in so far as it excludes objects, and Latour is engaged in a search for a more "adequate" means of representation. Latour should be understood, therefore, not only as an innovator in matters of relational sociological analysis but also as an innovator in matters of genre. According to his account, the genre of scientifiction provides just such a relational sociological text in which:

> there is no metalanguage, no master discourse, where you wouldn't know which is the strongest, sociological theory or the documents or the interviews or the literature or the fiction, where all these genres or regimes would be at the same level, each one interpreting the others without anybody being able to judge to say which is judging what. (1996, p.298)

This is the point of his sociology. As he argues, sociologists never know enough to judge actors; nor, indeed, is it their job. It is the actors who teach the sociologists their sociology (1996, p.168). This is why ethnography is his chosen method of research. But to accept this maxim doesn't mean it is necessary, as traditional ethnography would have it, to travel to foreign countries to achieve the necessary

"distance" for research purposes. Nor even, as Chicago sociologists understood it, to work with a notion of exoticism. Instead, Latour emphasises something else from anthropology that is extremely important. This is the notion of uncertainty which is also so critical to detective fiction. The new genre is the vehicle that allows the sociologist to explore and represent this new sociology. It provides for, or allows for, giving voices to things, non-humans and humans.

In a sense, Aramis does not live and die in vain, for its story can be used to help others "understand research" (1996, p.298) and to denounce the pretensions of classical sociology. Classical sociology claims to know more than the actors it researches: it judges and "sees right through them to the social structure or the destiny of which they are the patients" (1996, p.199). This sociology presumes to comment on what others say because it has *meta*language whereas the actors only have language. For classical sociology, actors become only informants and sociology exists above the fray at the same time as it also offers lessons, denounces, and rectifies. As Latour puts it in his strongest attack, "for classical sociology the world is an asylum of fools and traitors, of pretenders and guilty consciences, and half-educated types. In this asylum the sociologist is the director, the only one who has the right to go outside" (1996, p.200). By contrast his relativist sociology has no fixed reference frames and consequently no metalanguage. It does not know, or presume to know, what society is made of; instead, it seeks out informants who may (1996, p.200). *Aramis*, like a good detective novel, shows how this works in practice, and how acts of fiction can serve purposes of truth-telling.

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Of Clouds and Crustaceans: Using Actor Network Theory

Steve Matthewman

Abstract

This paper critically examines the usefulness of actor network theory (ANT). The assessment takes place through a case study: the "science" of weather-modification. It is argued that while ANT is in need of certain amendments it is not without utility. ANT provides a useful framework for analysing scientific controversy. However, Fujimura's concept of "do-able" science is recommended as a counterpoint to ANT's agnosticism and voluntarism.

Introduction: Why ANT?

I turned to ANT to help answer one of the central questions of my doctoral thesis: how do you explain planned weather-modification's shifting scientific status? For despite the sameness of practice – the same ideas, techniques, tools, substances, sometimes even the same people trying to stimulate rainfall – weather-modification oscillated wildly between pseudo-science, orthodox science and bad science. Clearly, the science itself could not explain these changes. What was needed was something that could illuminate the "constructedness" of science, something that dealt with the *content* as well as the *context* of scientific work. Traditionally, sociology of science has taken only one of these two trajectories. It has either been "internalist" or "externalist." In the former model science shapes society, science is an autonomous practice capable of imposing its models on the social world. In the latter model society shapes science, scientific practice is reducible to sets of social interests. Yet the problem with this "age-old polemic" is that "the same respect for the boundaries of scientific activity is manifested by both schools of thought.... The macroanalysts and the microanalysts share one prejudice: *that science stops or begins at the laboratory walls*" (Latour, 1983, pp.142, 168). But scientists "have to find resources, organize teaching programmes, write manuals, create or control scientific journals if they want to

succeed in their ... activities." While this work "takes place outside the laboratory it largely determines the nature of science" (Callon, 1986, p. 226). In the case of weather-modification a combination of ideologies, social relations, politics and economics combined to make it credible. Scientific weather-modification could not flourish without significant intervention from legislation, without government monies and bureaucratic patronage. Institutional changes were driven by a volatile mix: professional interests of commercial weather-modifiers, farmers' concerns, political representatives' concern for their constituents' welfare, and military imperatives. So in order to answer the question I had set myself I had to move between a scientific history of weather-modification and a history of scientific weather-modification: enter ANT.

ANT's Emergence

Steve Fuller, though a hostile critic, does an admirable job of contextualising the content of ANT. As Fuller notes, French science studies have long enjoyed state support. This was boosted in 1981 with Mitterand's presidential promotion of "technoculture." He believed science studies were central to tracking the use and reception of the IT-led innovations that would permeate the national economy. Contemporaneously, Michel Callon and Bruno Latour began collaboration on their sociology of translation (Fuller, 2000, pp. 366-7).

The sociology of translation (though somewhat Foucauldian) claimed a novel approach to the study of power, especially science and technology's role in shaping power relations. Translation refers to the processes by which one thing represents another thing so effectively that the represented is silenced. Its goals are satisfied, but the mediator may displace, change or recreate them. "He who is able to translate others' interests into his own language carries the day" (Latour, 1983, p. 144). Callon (1986, p. 230) "proposed the concept of the actor-network ... [t]o describe the network of constraints and resources that results from a series of operations of translation."

ANT emerged from case studies of successful and unsuccessful translations. Fuller (2000, p. 367) cites three particularly influential instances of French science policy failure: the public availability of the electric car, the integration of the Minitel into worldwide computer networks, and the computer operated Parisian rail system. "In each case" he writes, "the failure was traceable to an exaggerated confidence in what top-down management could accomplish without attending to the "interests" of those whose cooperation would be required for the policy's implementation. It gradually became clear that these mediators had the balance of power" (Fuller, 2000, p. 367).

(Sub-Aquatic) Actor-Networks

ANT is best illustrated by reference to Callon's (1986) paper "Some Elements of a Sociology of Translation: Domestication of the Scallops and Fishermen of St Brieuc Bay." Callon's case study is informed by three principles, and by four moments of translation. The principles are: agnosticism (neutrality between conflicting actors), generalised symmetry (the explanation of conflicting positions in the same way), and free association (the refusal to distinguish between the natural and the social). It is in this last respect that ANT is methodologically innovative. In Lars Risan's memorable phrase: "In networks of humans, machines, animals and matter in general, humans are not the only beings with agency, not the only ones to act; matter matters" (quoted in Ryder, 1999). The four moments of translation are: problematisation (know your actants, provide solutions to their problems), interessement (break new recruits from their former networks and align them to yours), enrolment (solidify the new network's identity through pressure, appeal or consent, and by allocating roles to others), and mobilisation (ensure that spokespersons represent their collectivities while avoiding betrayal).

In Callon's (1986) inquiry no one really knew how scallops reproduce. Scallop numbers had been declining at all major harvest sites (Normandy, Brest and St Brieuc Bay). Highly prized by consumers with a price tag to match, scientists began looking for ways to reverse this trend. Three researchers discovered a successful

method of scallop cultivation in Japan. Larvae are fixed to undersea units that protect them from predators. When the scallops are big enough they are "seeded" along the seabed, then left to grow for a further two to three years. The initial problem in transferring this method to France was the lack of scientific understanding about scallop biology. Fishermen were just as ignorant about the scallop's reproductive cycle. But prior commercial fishing had threatened the continuation of the scallop industry. The fishermen of St Brieuc Bay feared that their livelihood would collapse. In the early 1970s a group of scientific researchers and fishermen's representatives organized to study (and increase) scallop numbers. As Latour (1987, p. 202) later put it:

> French gastronomes are fond of scallops, especially at Christmas. Fishermen like scallops too, especially corralled ones, that allow them to earn a living similar to that of a university professor (six months' work and good pay). Starfish like scallops with equal greed, which is not to the liking of others. Three little scientists sent to the St Brieuc Bay to create some knowledge about scallops love scallops, do not like starfish and have mixed feelings about fishermen.

The researchers visited the Far East. They saw Japanese methods of scallop cultivation. But would the French scallop species (*Pecten maximus*) successfully anchor to collectors? This question was framed with a network of relationships in mind: the successful resolution of this problem would involve themselves as an obligatory passage point. The researchers' questions involved three other actors: fishermen, the scientists, and scallops. Fishermen have an interest in maintaining scallop stocks. Scientific colleagues are largely ignorant about scallops, yet they have an interest in advancing knowledge. Scallops have only been seen in their adult form when dredged from the sea. They have an "interest" in reproducing. However, it is not known whether the scallops will attach to artificial shelters in commercially significant amounts (Callon, 1986, pp. 204-5).

Figure 1: "Problematisation: The scallops, the fishermen, and the scientific colleagues are fettered: they cannot attain what they want by themselves." Source: Callon (1986, p. 206)
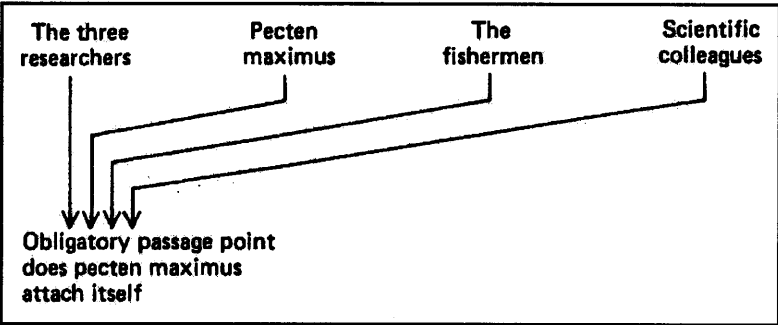
Figure 2: "The devices of "interessement" or how the allies are locked into place." Source: Callon (1986, p. 207)
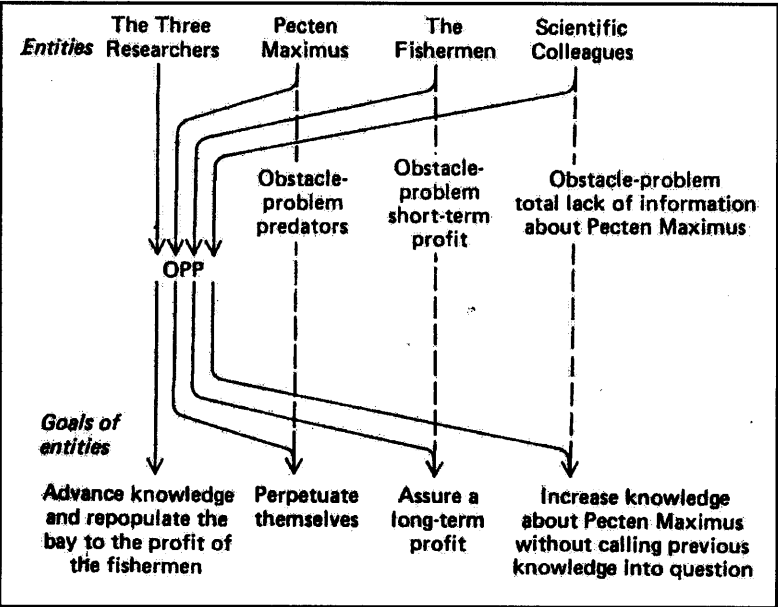
"At this point in our story," Callon (1986, p. 207) notes, "the entities identified and the relationships envisaged have not yet been tested. The scene is set for a series of trials of strength whose outcome will determine the solidity of our researchers problematisation." Some actors may not share the researchers' goals. Social links between allies must be strengthened. Their conflicting interests and agenda must be made to converge. The researchers increase the frequency of meetings to impress upon the fishermen the causes of scallop extinction. They "draw up and comment upon curves which "indisputably" show the severe decline of the stock of scallops in St Brieuc Bay. They also emphatically present the "spectacular" results of the Japanese" (Callon, 1986, p. 210). Scientific associates are canvassed through conferences and publications. "Social structures comprising both social and natural entities are shaped and consolidated" (Callon, 1986, p. 211). Yet *interessement* - the action of interesting other actors - is no guarantee of enrolment. Questions must be turned into statements: scallops *will* anchor, fishermen *want* to replenish shellfish stocks. To be enrolled, scallops must congregate on the collectors just as fishermen must act to rebuild stock. Each actor must fulfil its role.

Allies must be mobilised. "Will the masses (employers, workers, scallops) follow their representatives" (Callon, 1986, p. 214)? Will the translation succeed? In theory the scallops anchor, but nets removed from the sea show collectors that are obstinately empty. Experiments fail, repeatedly. Inefficiencies in *interessement* are blamed on predators, on variations in sea temperatures and on unusual currents. Breton larvae decline to attach, "[t]he scallops become dissidents" (Callon, 1986, p. 220)! Fishermen defy their spokesman, and one Christmas Eve the scallops are "brutally dredged by fishermen who could not resist the temptation of sacking the reserve oceanographers had put aside" (Latour, 1987, p.202). Scientists begin to wonder if larvae anchorage is an obligatory passage point. Colleagues call the broad research programme into question, and there are doubts about continued funding. The venture fails.

Case Study: Weather-modification in the Twentieth Century

This bivalvular cautionary tale provides tools for understanding weather-modification's changing scientific fortunes in post-war years. "So how is it that in some cases science's predictions are fulfilled and in other cases pitifully fail?" (Latour, 1987, p. 249). ANT provides the answer: "The rule of method to apply here is rather straightforward," observes Latour (1987, p. 249), "every time you hear about a successful application of a science, look for the progressive extension of a network. Every time you hear about a failure of science, look for what part of which network has been punctured. I bet you will always find it." Let us now look for punctures in the network of scientific weather-modification.

For the purposes of my study the actor-world contains six elements: weather-modifiers, consumers, the military, the U.S. Bureau of Reclamation (the Department of the Interior), clouds and scientific colleagues. These are presented in figure 3:

Figure 3: Problematisation: Actors Cannot Attain What They Want by Themselves

| Weather modifiers | Clouds | Consumers | Scientific colleagues | Military | Bureau of Reclamation |

Obligatory passage point
Do seeded clouds rain more?
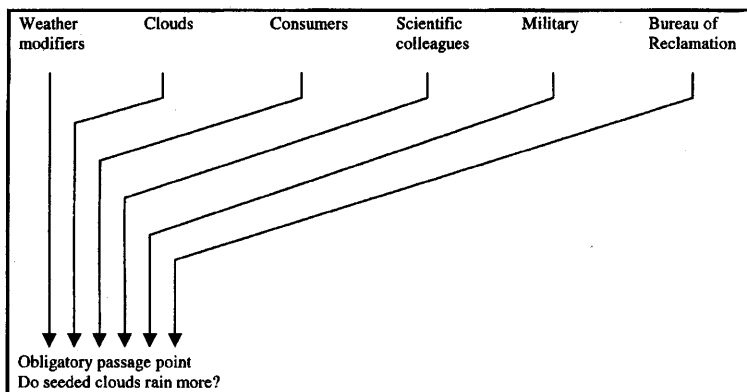
The category "weather-modifiers" includes commercial operators, their representative bodies (such as the Weather Modification Association) and scientific researchers. Consumers are individuals or groups of people who have paid for the services of weather-modifiers. The military category contains the U.S. army, navy and air force. The U.S. Bureau of Reclamation is identified separately because of its pre-eminent role in funding, directing and operating weather-modification experiments. The principal clouds involved in the weather-modification story are cumulonimbus. Finally, "scientific colleagues" includes atmospheric scientists (cloud physicists, meteorologists), statisticians, or their representative bodies. Since we are only focussing on key players our actor-world is not exhaustive. The role of the media, other funding agencies (such as the Department of Agriculture), seeding technologies and seeding agents are ignored.

Weather-Modifiers

Let us now examine each actor in turn. Our story, represented above in figure 4, starts with the weather-modifiers, and more specifically with Vincent Schaefer. Modern rainmaking is based on the insistence that plausible precipitation mechanisms exist that can be demonstrated, modelled or replicated *scientifically*. Rainmaking experiments assume that (Mason, 1975, pp. 97-8, 124):

1. Ice crystals need to be present in supercooled clouds if they are to precipitate snow or rain; or large droplets of water are needed to start the collision-coalescence process creating "warm rains" in layer clouds wholly composed of liquids.
2. When these precipitation embryos are naturally lacking clouds fail to precipitate, or do so inadequately.
3. Seeding clouds with artificial nuclei such as silver iodide in cold clouds (or any other glaciogenic material whose crystal structure resembles ice particles to create ice crystals) can eliminate these shortfalls. In the case of warm clouds, rain can be stimulated by introducing large hygroscopic nuclei such as salt or water droplets whose particles act as raindrop embryos, allowing particles to grow by condensation.

Figure 4: The Devices of *Interessement* or How the Allies are Locked Into Place

Weather modifiers	Clouds	Consumers	Scientific colleagues	Military	Bureau of Reclamation
	Obstacle Problem Overseeding, Unfavourable Meteorological Conditions	Obstacle Problem More Viable Means of Water Provision	Obstacle Problem Lack of Information about Clouds	Obstacle Problem Practicality and Necessary State Approval	Obstacle Problem Immediate Needs of Water Provision as Defined by State and Constituency
OPP					
Advance Knowledge, Make Money	No Goals	Long-Term Profitability	Increase Knowledge About Cloud Physics and Atmospheric Circulation Without Calling Previous Knowledge Into Question	Reduce Weather Risks for Military Operations and Use of Weather Control as a Weapon	Coordination of a National Weather-Modification Programme and Long Term Water Security

The science of weather-modification begins with Schaefer because his icebox experiment was a trick that worked, and anyone could copy it. When dry ice is dusted into a cold box the supercooled cloud turns into ice crystals. Similarly, there is no doubt that when Schaefer dropped 1.5 kilograms of dry ice pellets into a supercooled lenticular stratocumulus cloud over western Massachusetts on 13 November 1946 it had an effect. Within the space of five minutes the cloud

turned into snowflakes that fell approximately six hundred metres before subliming away. What Schaefer provided, then, was a *paradigm*. He offered a new way of seeing, and a set of "model problems and solutions to a community of practitioners" (Kuhn quoted in Masterman, 1970, p. 61). His model was a combination of theory, method and instrumentation. Modifying the weather is not the issue *per se*; the issue is the ability to modify the weather in statistically, economically and socially significant ways.

If weather-modification was to be a successful scientific undertaking it would have to assuage the reservations of the meteorological community. But Schaefer's cloud-seeding experiments had started a new industry, and given new impetus to the question of cloud control. Weather-modification was becoming the business of meteorologists whether they liked it or not. Even so, other sticking points remained. Schaefer had experimented upon stratus clouds. Since stratus clouds are stable they seldom change. Repeated observations of changes to their composition following seeding could therefore be connected to human intervention.

> However, for the purpose of increasing precipitation, this cloud type is not sufficiently productive. The most important rain bringers are cumulus clouds, which are "capricious" and unpredictable ... Their individual natural development cannot be anticipated with certainty, and because they do not react in the same way to seeding, the efficacy of a modification technique cannot be easily assessed. (Breuer, 1980, p. 18)

If we cast aside questions of proof for the moment, we are still left with the following questions: should we seed the clouds, and who should we allow to seed them? Later debates opened up fissures along familiar lines dividing pure from applied science. At this juncture the issue of weather-modification opens itself to two radically different readings. Was this a science in search of a technology (theory-based researchers asking "is it true?" and "if so, should we apply it?"), or a technology in search of a science (practical people asking "does it work?" and "how do we prove it?')? Meteorology had always had its "thinkers" and its "doers." On the one side stood theorists such as mathematical modellers; and on

the other stood experimenters, such as technicians and pilots. The first group was motivated by questions about comprehension, the second group by questions about application. Both sides did battle under fluttering banners. Professional scientists had a weather-modification section within the American Meteorological Society; private seeders belonged to the Weather Modification Association.

By the mid-1970s optimism for weather-modification was beginning to evaporate. It seemed as if the most impressive thing about the weather-modification projects had been their titles: Stormfury, Blackbody, Skyfire, Hailswath. The Colorado River Basin Project reaped no results after five years of operations (Dennis, 1980, p. 175), the National Hail Research Experiment had nothing to show after three years (Atlas cited in Dennis, 1980, p. 210), the Florida Area Cumulus Experiment had no significant evidence to offer (Dennis, 1980, pp. 196-7), and the South Dakota Weather Modification Project succumbed to public opposition. Others failed to materialise. The Sierra Cooperative Pilot Programme could not be undertaken because of funding cuts, the Colorado River Enhanced Snowpack Test was never initiated and Hailswath II was set aside. Cloud physicists and federal scientists left the field. Meteorologists strengthened in their resolve against rainmaking. In 1974 Sir Basil Mason attacked those who attacked clouds for profit:

> It is no secret that such operations are being promoted, under such euphemisms as "weather engineering" and "weather management" projects, on the premises that the basic assumptions and techniques are already proven and that the remaining problems are largely of an engineering or logistical nature. But no smokescreen of management or decision-making jargon can hide the fact that the protagonists of this approach are continuing to use the same inadequate concepts and techniques that have failed to provide convincing answers during the past twenty years. (quoted in Breuer, 1980, pp. 17-8)

Throughout this period the faith of commercial weather-(com)modifiers wavered little. Their commitment was maintained by a steady flow of customers.

Consumers

"It was reasoned ... that if small quantities of snow could be made to fall from a thin cloud, large quantities of snow could be made to fall from a thick one. On the basis of this *assumption* the modern era of commercial rainmaking began" [italics in original], (Battan, 1969, p. 104). The main clients were farmers and utility companies. By the early 1950s some ten per cent of America's land mass was commercially seeded, at a cost of between two and five million U.S. dollars per annum (Lambright, 1972, p. 2). It was estimated that as much as a quarter of the country was seeded.

The flow of customers for weather-modification continued for an obvious reason: lack of water. "In the West, lack of water is the central fact of existence, and a whole culture and set of values has grown up around it" (Reisner, 1986, p. 12). The "water problem" has worsened over time. This is particularly apparent in the midwestern and high plains region, where seventeen states contain over sixty per cent of the nation's total potentially arable acreage. For all their agricultural importance they only have a quarter of the nation's water supply, because clouds rain in the "wrong" places. The situation is gravest in the states of Arizona, North and South Dakota, New Mexico and Nevada. In these states, naturally occurring precipitation is less than an inch a year.

The Military

In the modern era the major funders of scientific research have been the military and the health professions (Latour, 1987, p. 172). More often than not the former has prevailed. As Latour (1987, p. 171) reports, "technoscience is a military affair." Meteorologists have courted martial influence and have been pressed into military service. The armed forces require accurate weather forecasts for basic exercises, while in wartime weather's role has been decisive. In return for crucial weather information, military patrons have provided meteorologists with generous financial, technological and institutional support.

By the end of the nineteenth century, American weather research had been consolidated "under the sponsorship of naval and military

administration" (Berland, 1994, p. 104). In our own century meteorology has continued to be "especially subject to market forces and military-industrial influence" (Ross, 1991, p. 228). The clearest consequence of this can be seen in research agenda. During "the first half of the twentieth century most meteorological advances related to military applications" (Brush, Landsberg and Collins, 1985, p. 286).

After World War Two the military were less content simply to analyse the weather. They now wanted to control it. Many factors account for the rise of weather-modification science: drought, political pressure, and private profit. But it was military intervention, more than anything else, which secured its scientific status. "Weather-modification got its start under military auspices" Lambright (1972, p. 5) stated; and in Vietnam it found its first major application. The new opportunities that cloud-seeding technologies offered the military were seized upon by the Americans in Southeast Asia. Operations began with President Johnson's approval in 1966 and lasted until 1972, at an official cost of $3 600 000 per annum (Breuer, 1980, p. 72). The Pentagon-funded weather-modification campaign went under various names: Operation POP EYE, Project Intermediary Compatriot, Operation Rolling Thunder. Cloud-seeding was used with the intention to hamper troop movements, to divert hurricanes, and to create floods which would eliminate bridges and incur human casualties. Thus weather-modification occupies an important place in the history of geophysics and the military as the first recorded instance of meteorological warfare.

However, the long-term prospects and consequences of weather as a weapon (the covert "dirty war" masked as atmospheric anomalies) led to a Superpower truce on the subject. "On 18 May 1977 Secretary of State [Cyrus] Vance signed the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques on behalf of the United States" (Juda, 1978, p. 975). This treaty, and the general "Vietnam backlash" caused the military to "los[e] their role in the field" of weather-modification (Chagnon Jr. and Lambright, 1987, p. 6). From this time onwards, weather-modifiers found a weak ally in the military. Unable to pursue military applications for weather-modification, the

Department of Defense withdrew its funding, quickening the subject's scientific demise.

After 1965 the US Bureau of Reclamation emerged as the major funder for weather-modification research and application. The change in lead agency also brought a change in focus, from predominantly experimental to predominantly operational projects. We now turn our attention away from the initiator of weather-modification research to the institution that replaced it.

Water Flows Uphill to Money: The Bureau of Reclamation

The earliest literary accounts of the intermontane West "chipped away eclectically, with little success, at the towering popular abstraction of "the Great American Desert"" (Davis, 1993, p. 60). Writers struggled to comprehend this new land, looking eastwards for parallels. They saw Arabia in Nevada, they saw Turkestan in Utah. "[B]ut in reality, Victorian minds were travelling through an essentially extraterrestrial terrain, far outside their cultural experience" (Davis, 1993, p. 60). By the late 1860s all of this had changed: "After the Civil War the Great American Desert was abolished. It has hardly been mentioned in polite Western society since, and *never* by the Chambers of Commerce" (Webb, 1957, p. 27). Merchants, land speculators and railroad companies denounced America's desert as a cartographic fiction. Regional power brokers denied that the West was arid. Deserts were a barrier to development, and awful marks on the map impeded Manifest Destiny.

Powell's (1877) *Report on the Lands of the Arid Region* "laid out the political implications of the Western surveys with exacting honesty" (Davis, 1993, p. 61):

His message, which Wallace Stegner has called "revolutionary" (and others "socialistic"), was that the intermontane region's only salvation was Cooperativism based on the communal management and conservation of scarce pasture and water resources. Capitalism pure and simple, Powell implied, would destroy the West. The ironic legacy of Powell's *Report* was the eventual formation of a federal Reclamation Agency that became the haindmaiden of a Western

power-structure commanded by the utility companies and corporate agriculture.

For as soon as the Bureau of Reclamation "bec[a]me their prime benefactor, members of Congress from these same states would argue at length over whose state was the *more* arid and hostile" [italics in original], (Reisner, 1986, p. 51). Aridity was the new path to development, and networks of interested parties formed to profit from it.

The return of drought to the American Southwest in the mid-1960s placed additional pressures on the Bureau. Its remit was to see that the west was watered, but its methods were not meeting with popular approval. Realising their precarious position, and keen to overcome "an encrusted water resources mission" (Lambright, 1972, p. 5) staff in the Bureau were not slow to recognise cloud-seeding's potential. Successful cloud-seeding was consonant with that never-ending quest for bureaucratic expansion: the U.S. Weather Bureau and the National Science Foundation were unwilling to operate as the lead agency in weather-modification, and Senators from South Dakota and Nevada were keen to involve Reclamation in that capacity. This was a real opportunity to strengthen Reclamation's hand against competing federal agencies.

Soon the Bureau of Reclamation was the biggest single weather-modification contractor, and it seeded over almost every western state. This opened up the possibility of access to territories beyond its traditional stamping ground in the west, and the potential to grasp the command of a national development programme. This timing could not have been more exquisite: not only because of drought, but also because of the sound of marching feet from the east. By the 1960s the Bureau had been "boxed out of much of its historical domain" (Reisner, 1986, p. 336) by the U.S. Army's Corps of Engineers. Both groups enjoyed secretive relationships with large irrigation farmers. But whereas the Bureau was tied to the acreage limitations of the Reclamation Act, the Corps could build dams for flood control, and provide unlimited supplies of water suitable for irrigation. "Across the entire West, the Corps ... was trying to seduce away the Bureau's irrigation constituency; it was toadying up to big corporate farmers who wanted to monopolize whole rivers for themselves; it was even prepared to defy the President of the United

States," observed Reisner (1986, p. 178). "As a result, the business of water development was to become a game of chess between two ferociously competitive bureaucracies." In the short term at least, weather-modification could give Reclamation access to new bureaucratic domains.

Clouds

Scientists are interested in rainmaking as clouds are inefficient. They are unpredictable, shedding rain in the wrong place, at the wrong time or in the wrong amount. "The atmosphere just isn't very good at making rain," explained Stanley Changnon (quoted in Allen, 1989, p. D1), "[t]hat big river in the sky just keeps flowing overhead." Only a fraction of the 200 billion tons of atmospheric water above America daily falls to earth (Richards, 1977, p. 5). In consequence America's air space has six times more moisture in it than its rivers (cited in MacQueen, 1991, p. 2). The attraction of weather-modification is entirely understandable, particularly when periodic droughts, demographic pressures, increasing pollution levels and growing agricultural and industrial demands are also factored into the equation.

Commercial and scientific programmes are necessary to increase storm efficiency. The task is to "make rain clouds grow bigger, last longer and produce more rain" (Allen, 1989, p. D1). But the conversion of clouds into a saleable commodity or an object of inquiry requires their cooperation. Here the enterprise runs into difficulties. Although scientists speak on behalf of clouds their authority is severely tested. Clouds resist rationalisation, refusing to be objectified or standardised. All clouds vary in their spectral and nuclei characteristics, as they do in the distribution of drop size, the amount of liquid water and ice present, their composition, internal circulation and electrical parameters (Malone, 1966, pp. 6, 123). Georg Breuer (1980, p. 23) tells us why further problems arise. Clouds are processes not things, as such they change dramatically over time:

> A cloud is not a closed system. There is a steady "metabolism" with the surrounding atmosphere. In particular, cumulus clouds draw

in from below large masses of relatively moist air which they require for their maintenance. They also entrain relatively dry air through their sides which can lead to a "dilution" and eventual dissolution of the cloud.

How do you then conclusively demonstrate increases in rainfall? Clouds rain when seeded: is this causation or correlation? Five decades worth of experiments have brought us no closer to an answer. We still cannot track cause and effect through a cloud. Thus in order to say whether silver iodide or nature has given us the rain we are left with statistical inferences as "proof." James E. McDonald (1969, p. 40) condensed the problem into a single phrase: "The Bugaboo of Evaluation." Even Vincent Schaefer (1963, p. 523) was forced to admit that "[b]ecause of its vast complexity, there is probably no scientific subject more difficult to understand than the behavior of the atmosphere."

Weather-modifiers experienced mounting attacks from the meteorological mainstream on the grounds that it did not work. Paradoxically, they also faced stern public opposition on the grounds that it worked too well. Weather-modifiers were accused of causing drought instead of creating rain, of ruining harvests rather than encouraging cultivated wealth. Community groups objected to this most social science on aesthetic, cultural, economic, environmental, legal and theological grounds (Matthewman, 1999, pp. 181-266).

Amending ANT: From Callon to Cold War and Drought

Callon's framework is a useful one for analysing how science gets (un)done. ANT is purpose built to deal with the active process of science, with the making and breaking of strategic alliances. Its refusal to distinguish between micro and macro, internal and external, is fruitful, as is its refusal to distinguish between humans and non-humans (since the role of clouds and droughts loom large in the history of weather-modification). Yet our explanation still seems incomplete. As noted, weather-modification had been done before. Why is it that it became verified as science at one particular moment? What makes something unscientific in the early 1930s, more scientific in the late 1940s and fully scientific in the mid-1960s,

only to look less scientific thereafter? It seems that scientists cannot take all of the credit for these changes. While they translated the interests of others to those of their own, actor-networks were influenced as much by indirect historic and atmospheric conditions at the time as by the direct creation of scientific enrolment. The weather-modification story is intimately connected to the Cold War and the recurrence of widespread drought.

The Cold War stimulated vast amounts of scientific research. Weather-modification was one major beneficiary. The American federal government believed that the Russians might be on the verge of successful weather-control. This fear fuelled their involvement. When the National Academy of Sciences produced *Weather And Climate Modification: Problems And Prospects* (1966), it devoted much attention to what the Godless Russian Communists were conniving to do. They discovered that the Soviets were putting significant money and effort into weather-modification. They were also producing more academic papers. The NAS trumpeted that the Soviets must have stolen a march on the USA. So, "[s]purred on by the traditional American desire for innovation and change, by the belief that no time should be lost in putting new inventions and discoveries into practical use, and by the fear that the Russians might get there first," wrote W.R. Derrick Sewell (1970, p. 94), "huge armies of scientists and engineers are now at work trying to unlock the secrets of nature, and to devise means of remaking nature in the image of man."

Having considered the historical atmosphere we must also pay heed to the physical atmosphere. Drought is the *raison d'être* for rainmaking. Aridity has often created the conditions for scientific prosperity. For the devastation that droughts bring can be profound. It is no accident that Schaefer's breakthrough was taken up in so many quarters as it came on the back of prolonged and widespread drought. Such a pattern has repeated itself since many times. For instance, the American state decided to re-enter the field of rainmaking in 1996 in southern Texas. It is no coincidence that the National Center for Atmospheric Research began its experiments just in a region experiencing its worst drought in a century. The cruel irony is that when weather-modification is most wanted it is least effective, since there are no clouds to seed.

Conclusion: ANT and "Do-able" Science

Although we have placed scientific work in its broader historical and physical contexts, we still need to widen its social horizons. Michel Callon, John Law and Arie Rip (1986, p. :3) begin *Mapping the Dynamics of Science and Technology* "with a statement of the obvious" - science and technology are powerful things which generate interest in various sectors of society, including "groups of concerned citizens and the general public which may be both excited by and feel powerless in the face of scientific advance." Yet Callon's (1986) paper takes no account of these groups. He only studies actors wanting to *do* science. Even then, he neglects the question of *resources* that are central to the maintenance of these networks. Any scientific activity requires a certain amount of materials, devices and skills if it is to be sustained. These *structural* determinants are strangely omitted (see also Latour, 1987, p. 142 for his wilful refusal to consider class, gender, the role of big business and the wider machinations of capitalism). While Callon *et al* are right to note that social interests do not simply shape scientific activity, they can still initiate or end it. For instance, following public opposition Pennsylvania outlawed all experiments, branding weather-modification as "the crime of the century" (Dennis, 1980, p.ix). In Quebec a terrorist organisation, *Fils du Soleil* (Sons of the Sun), was formed to rid the region of artificial rainmaking. René Lévesque, the Minister of Natural Resources, was threatened with assassination if the rain did not stop. Weather-modifiers in the San Luis Valley had their radar equipment detonated, and the negative reactions of Lowvelders to scientists meddling with "their" weather stopped cloud-seeding projects throughout that part of South Africa. And so we turn to look at another area of neglect - the people who oppose science being done. Fujimura's (1987) concept of "do-able" science acknowledges these points, acting as a brake on Callon's unbridled voluntarism.

Fujimura studied scientists working on cancer research. The scientists proposed, and ultimately conducted, work on an antibody for a tumour-causing gene. From this study she concluded that "[a] problem is "do-able" when scientists can align tasks to three levels of work organisation - experiment, laboratory, and social world" (Fujimura, 1987, p.257). The experiment refers to a set of tasks

situated within the laboratory. The laboratory is the site of experiments and related tasks. The laboratory in turn is situated within the social world. The social world contains the wider scientific community (in my case, the worlds of meterology, cloud physics, statistics), funders (Bureau of Reclamation, farmers, utility companies), and other players (the general public).

Figure 5: "Aligning Levels of Work Organisation to Construct Do-able Problems." Source: Fujimura (1987, p.259)
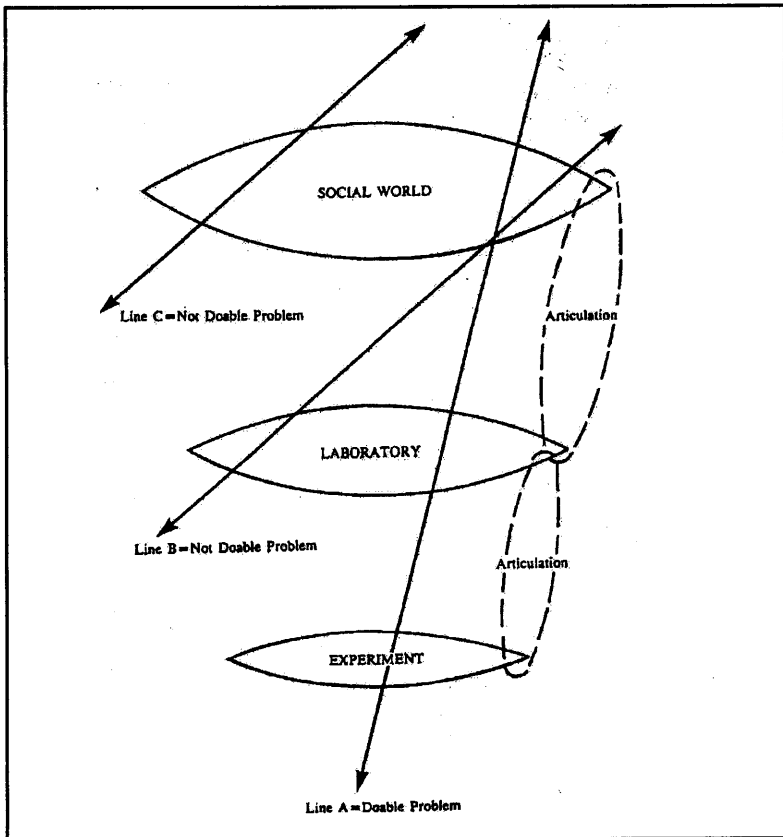
The alignment of tasks on all three levels is "complex and dynamic," varying "by local and temporal conditions, by institutional and

organisational location, and by discipline or profession" (Fujimura, 1987, p. 282). In this regard it is akin to the mobilisation and enrolment of allies in actor-network theory: "[t]here are no necessary links between such heterogenous entities [as chemical tools, laboratory apparatus, scientists enlisted as literature references]," say Callon, Law and Rip (quoted in Fujimura, 1987, p. 264), "[t]he construction of scientific facts and technical artefacts involves the creation of and consolidation of such links into an array that is strong and durable." However, Fujimura's framework has the advantage of including society at large in the consolidation of links, rather than the narrow stratum that conducts scientific experiments.

Using Callon's schema, weather-modification's fall from grace can *only* be blamed on clouds. There is a solid client base and a bureaucracy willing to direct operations. The military maintained their interest in projects for three decades. There is hostility to weather-modification from sections of the scientific community, but that would erode if experiments proved worthwhile (and profitable in money and/or prestige). Everything rests on clouds; if they join the march then the scientific community will follow. But clouds are dissidents, inasmuch as they do not pass through the obligatory passage point that scientists want them to. The enterprise is ruined. In Fujimura's study there are discrepancies between *in vivo* and *in vitro* experiments. In mine there are discrepancies between laboratory and heavens. In both instances "[n]ature is recalcitrant; it does not always do what it is "supposed" to do" (Fujimura 1987, p. 271).

This article has used ANT to trace the making and breaking of scientific weather-modification. To account for its construction and destruction our investigations had to leave the laboratory, for as Callon (1986, p. :226) says, "if the analysis of scientific controversies often seems to be confined to laboratories or scientific specialties, this is simply due to the fact that sociologists stop following their protagonists when they leave the scientific arena." Science neither starts nor stops at the laboratory. Yet Callon does not venture far enough: he underestimates the role of social interests, and effectively ignores the wider social world. This is a major oversight since social interests can activate or terminate a science. Consider the following passage:

> Professional meteorologists denied that it produced rainfall ... but there were many believers. The public was receptive, the press generally kindly disposed or at least not abusive. That bona fide professors from major institutions were involved and that army ... [equipment was] used gave a cloak of respectability and seemingly the approval of both government and academia. (Spence, 1980, p. 115)

The extract could stand for the period since World War Two or the experiments of the late nineteenth century, but it stands for neither. Spence was talking about the cloud-seeding attempts of Luke Francis Warren, Wilder D. Bancroft and E. Leon Chaffee in the 1920s and 1930s. Even if individuals change competing sets of interests remain relatively stable over time. Again, I depart company with ANT. In Callon's (1986) opinion whenever natural scientists are in dispute they negotiate what the physical world is like and what social relationships will be like to transform social reality as well. These two processes are wedded together. Clearly my case study follows the conventional sociology that Callon is so scathing of: Nature is uncertain while Society is not. For the military want weapons, farmers want crops, politicians want votes, scientists want proof, commercial operators want profits and governing bodies want power. All these goals can be achieved if cloud-seeding produces more water.

My final criticism of ANT concerns its agnosticism. Like Fujimura (quoted in Starr, 1991, pp. 28-9) "I am still sociologically interested in understanding why and how some human perspectives win over others in the construction of technologies and truths, why and how some human actors will go along with the will of other actors, and why and how some human actors resist being enrolled." It is instructive to see the point at which weather-modification technology connects with the social structure: right at the top. The practice has proceeded largely as a private activity at the behest of corporate farming concerns. In each case, significant social constituencies have been disenfranchised from the decision-making process. Opponents of weather-modification typically exercise no direct control over the weather-changing technology. Many exercise little control over their own future, as the capitalisation of the

countryside left them in increasingly precarious positions. To summarise, human domination over nature has met with mixed results: atmospheric processes remain untamed, scientific proofs are hard to come by, and social consensus on good weather is equally difficult to achieve. Rather than remaining resolutely neutral, I argue that current practices of weather-modification aimed at rainfall enhancement waste time and money, postpone pressing decisions regarding water allocation and conservation, and annoy a lot of people in the process.

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September 11: Constructing Political Interests

John Holm and Gavin Kendall

Abstract

This paper analyses the way in which the USA developed alliances in the aftermath of the September 11, 2001 attacks on New York City and Washington DC. Actor-Network Theory (ANT) is used as a way of trying to understand how these alliances are put together. The emphasis is on two elements of ANT: first, we stress how vital the role played by non-human actors (especially planes and buildings) is in the development of politics; second, we stress that interests are dynamically constructed in networks, and that actors do not come into networks with pre-existing interests that they simply "play out." Further, we explore Michel Callon's notion of "entanglement" to explain how the USA's construction of its political interests requires a certain amount of disentangling of old relationships.

Introduction: from science to politics

In this paper, we show how Actor-Network Theory (ANT), which has primarily been used as a methodology for the analysis of science and scientific facts, can be extended into the political realm. And at the beginning of our millennium, what more important political events are there than the so-called "terrorist" attacks on the USA of September 11, 2001, and the USA's response (as we write, this response is currently known as "Operation Enduring Freedom")? Of course, science is one thing, and politics quite another. Can we understand politics using a methodology developed for science? Our paper sets out to see how far this approach is useful, and whether ANT is a good methodology to help us understand politics.

Let us begin by reminding ourselves how ANT approaches science. Bruno Latour's work is a good place to start. Latour (1999) has described science as a "circulatory system" of scientific facts: for Latour, it is impossible to designate a pure core of science that can be located inside a "social context." Rather, all scientific facts are amalgams of five types of activities, which comprise the

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following: the *mobilisation of the world* – the instruments and equipment of science, or "all the means by which nonhumans are progressively loaded into discourse" (p. 99); *autonomisation* – the way in which a discipline "forms its own criteria of evaluation and relevance" (p. 102); *alliances* – links between the worlds of science, politics, culture, economics, etc; *public representation* – "relations with… reporters, pundits, and the man and woman in the street" (p. 105); *links and knots* – the "pumping heart" (p. 106) of science, what might be thought of as the conceptual core. Latour attempts to do away with a context/content division in the analysis of science, maintaining that these five types of activities are mutually interdependent. The "conceptual core" is not the "real" science, but is rather what knots together all the activities, and which is stronger (pumps faster) the more closely it integrates with and ties together the other four.

What is clear from Latour's work is that you cannot understand one activity (or loop) without understanding the other four. Latour advocates an approach to science within which politics, economics, alliances, machines, non-humans and all the rest *strengthen* scientific truth rather than act as diversions from it. Now, while Latour's perspective starts from his interest in scientific facts, it seems to us that a slight shift of orientation would give us a similar five-faceted analysis of *political* events: everything the scientist needs to confirm a scientific fact, the politician, *mutatis mutandis*, needs to confirm a political understanding. In this paper we analyse the "political" events of the September 11 2001 attacks on the USA, but like Latour, we refuse to see politics as a sphere separable from scientific facts, public representation (PR in a double sense!), alliances with a range of other disciplines and actors, criteria for relevance and importance, and specialised instruments which load nonhumans into discourse. So what are the activities, apart from the political, that we need to consider in relation to the "political core" of September 11? Latour's list is, we think, extremely suggestive, but in this short and modest paper, our aim is show how the heart of politics pumps more quickly when other activities are knotted up with it. In what follows, we concentrate on two issues: first, we outline how some vital non-human actors needed to be enrolled – to be loaded into discourse;

second, we talk more generally about the construction of alliances by the USA, and how this construction is evidence of a dynamic process of the building of interests. We select these two focuses because we think they represent the most important contribution ANT can make to socio-political analysis: to take "things" seriously, and to realise that political interests are not pre-given, but are emergent.

Taking "Things" Seriously

Non-human actors had a profound effect on how political events unfolded after September 11. As is well known, on September 11, two planes were intentionally flown into the twin towers of the World Trade Center (WTC). Did the (human) actors who undertook these actions know the consequences of what they did? More specifically, did these human actors know what their non-human counterparts would do? For simplicity's sake, we have reduced the possible consequences of the actions of human actors to three possibilities, though there are likely many more. The options are that the twin towers would a) topple immediately, b) continue standing damaged, or c) collapse after a period of time. Obviously now we all know they collapsed after a period of time - but could the human actors have known this beforehand? It is unlikely.

One indication that no one knew what the buildings would do comes from examining the emergency procedures enacted after the impact of the planes. These procedures encouraged people to remain in the buildings; moreover, firefighters and other emergency personnel were allowed to enter the building (Wong and Fritsch, 2001). If the building's actual response were predictable it seems unlikely that such tragic decisions would have been made – instead, the focus would have been on the evacuation of the building. The unpredictability of the building's response is even evident in those analyses, imbued with the benefit of hindsight, that suggest that the building's eventual collapse was inevitable. Gordon Masterton, for example, chairman of the structural and buildings board at the Institution of Civil Engineers was surprisingly certain as to the inevitability of events (Henderson, 2001). This expert, however, was

less certain about what might have happened if this were another building (for example, the Empire State Building). Indeed, even though Masterton was able to explain why the buildings imploded, his later comment – "we have to be grateful for that" (Henderson, 2001) - suggests that this was not inevitable. With the benefit of hindsight, the response of the buildings was explicable, but prior to the event their response was unpredictable: unpredictable to the engineers who worked on the buildings, and certainly unpredictable to the actors who flew the planes into the buildings. The most we can presume, then, is that the actors who flew the planes into the building knew their own *intentions* but not the *consequences* of these acts.

Having established that the terrorists knew what they were doing but not the consequences of those acts, let us now consider the role of the WTC buildings themselves as actors in these events. Earlier we noted that there were at least three options open to these buildings once they had been struck by the planes. The option that would have resulted in the most fatalities would have been if the buildings had toppled immediately. The consequence of this is, of course, unknown, but let us presume that all the 20,000 people estimated to be in the buildings at the time would have been killed (Ellison et al., 2001). Further, as the buildings fell, other buildings within the footprint would have been struck, causing an even higher death toll. This response would have certainly resulted in the most fatalities; however, an immediate collapse would have meant that little television footage would have existed. The (temporary) survival of the WTC allowed detailed television coverage, which amplified the drama of these events.

The collapse of the buildings an hour or so after the impact of the planes was perhaps the most dramatic outcome possible. The images of the second plane crashing into the WTC and of the buildings' collapse were seen around the world, over and over again. The death toll was significantly less than the 20,000 initially feared, but still a number exceeding other "terrorist" events by a factor of 20 - for example the Lockerbie disaster killed 270 people (Emergency and Disaster Management Inc., n.d.).

Finally, the least dramatic outcome would have been if the twin towers had continued to stand. The death toll would have been in

the hundreds: those on the planes and those in the WTC in the impact zones. The television coverage would not have included the dramatic and horrific images of the twin towers collapsing. New Yorkers would still have a city skyline dominated by twin towers.

Why bother with this analysis of what the buildings could have done? The way the buildings responded to the plane crashes moulded subsequent events. We can make this argument by comparing similar terrorist attacks and the responses they drew. The Lockerbie disaster, for example, was similar in that a plane was brought down by anti-USA terrorists, with the loss of all on board. The USA's response was to bring those responsible to justice through the international courts. Even al-Qaeda's previous actions - the 1993 bombing of the WTC and the recent USA Embassy bombings in Kenya and Tanzania - received limited responses from the USA (Bird, 2001). The USA launched a few missiles at al-Qaeda training camps but generally did little, resigned to its impotence (Bird, 2001). None of these similar events, then, saw a response anything like the current coalition against terrorism.

It is not enough simply to know the intentions of the actors (in this case, the terrorists). What is critical is how effectively certain actors enrol other actors into the roles prescribed for them. In other words, the intentions of the terrorists were most likely similar in many of these other attacks but the non-human actors that they enrolled did not respond in a similar way. For example, the 1993 bombing of the WTC was obviously designed to destroy the building, but it remained standing (it was not enrolled into a prescribed course of action). Of course this is only speculation, but perhaps if the WTC had remained standing on September 11, then the USA's response might have been similar to their earlier responses.

Taking "Interests" Apart

Law (1986, p. 15) has argued that the characteristics of an actor (or "actant," as it is sometimes called in ANT, taking a cue from Greimas) are established through that actor's struggle to establish its existence. There should be no presumption that an actor's

objectives preexist the network within which it finds itself. Callon (1999, p. 181) has underscored how this lack of presumption - which he makes into something of a methodological necessity - results in the *radical indeterminacy* of the actor. Nothing can be presumed of the actor - not its size, nor its psychology, nor its motivations. In addition, throughout their work, Latour, Law and Callon are determined to analyse human and non-human actors as equals without prejudice (a principle of symmetry). The significance of this move is particularly evident when we examine the events of September 11. The way the buildings responded to the actions of al-Qaeda had a substantial effect on how later events unfolded, as we have suggested above and shall develop below.

Callon develops two other analytical categories that are helpful for our purposes. First, Callon (1999), in his examination of economic markets, uses the notion of "entanglement." Second, Callon (1986), in his analysis of the scallops and fishermen of St Brieuc Bay, draws upon the idea of "interessement." Entanglement arose from a critique of the notion that within an economic market agents are supposedly independent and calculatively rational. Callon argues that both theoretically and practically these agents are necessarily interdependent and only ever able to calculate partially (Callon 1999, p. 186). They are entangled - they have previous relations and the potential for future relations that mean they are never truly the strangers that economics requires of them. For Callon, the only way an economic market can exist is if these entangled actors agree partially to disentangle themselves. The disentanglement of relations is the source of negotiated future interests. In our analysis of the events post-September 11 this notion of disentanglement is useful to understand both the USA's previous relations with Osama bin Laden and al-Qaeda – to whom the USA had provided military and financial support – as well as the USA's attitudes to those nations like Pakistan (once the subject of USA sanctions) which she now needs as allies in the "War Against Terrorism." The USA, by disentangling itself from its previous networks, (re)constructs its interests. The notion of entanglement helps us to erode the idea that the objectives of actors are stable. What an analysis of the post-September 11 events shows is that objectives change - enemies

become friends and friends enemies. Actors and their interests are defined in relation with other actors in a network, and this process is fluid, dynamic and changeable.

Interessement is, to put it too quickly, the action of interesting others. So networks will change and develop as certain actors successfully "enrol" others into their objectives. But we must not lose sight of the fact that interessement is never a one-way street: the interests of the protagonists in the "War on Terrorism" are defined through their interactions with each other. Prior to the events of September 11, it was not possible to know the interests of the current protagonists in this conflict. The interests of the USA and her allies, and of al-Qaeda and the Taliban were not available prior to these events (or network) - neither to interested onlookers, nor the actors themselves. These interests are constructed out of interpretations of events; these events do not have any fixed meaning. As Callon (1999, p. 185) notes, the interpretation of actions is only established during interaction, negotiation or discussion. The way in which the USA understood the events of September 11 emerged iteratively, and in consequence the interests of the USA similarly emerged iteratively. This is evident the choice of the WTC and the Pentagon as targets for destruction.

Ideally, we should listen to the actors who chose these targets in order to understand the rationale for target selection. However, in this case, the persons behind the events of September 11 have (as we write this) yet to state why the WTC and the Pentagon were attacked. It is worthwhile following the USA's President around to observe how his interpretation of these events changed over time.

President Bush suggested that the targets represent what al-Qaeda most despised about US culture, since the WTC can be seen as "a symbol of American prosperity" (Bush, 2001a), while the Pentagon is the symbol of US military might. Such symbolism is, of course, a factor in the choices of these targets, although we argue it is not the whole picture. These targets were also chosen because of their physical attributes - their size and location. The WTC towers stood on the outer edge of Manhattan, making them easily visible and targetable by pilots with no more than a rudimentary training in flying big commercial airliners. Similarly, there is evidence that

the plane that hit the Pentagon was initially directed at the White House (Fleischer, 2001b), but because of the White House's location within thick woodland, its diminutive size, and its close proximity to other buildings, the pilots were unable to see it and were forced to choose a different target. To suggest, therefore, that the choices of targets were purely symbolic is to miss the point that they were also pragmatic, and also determined to some extent by other characteristics of non-human actors.

Callon (1986) develops the notion of enrolment, whereby actors accept the roles proposed for them by others constructing a network of relationships. The important part of this notion is the idea that actors have a say in how they are incorporated into the plans of others. In this case the non-human actor that is the White House rejected the role proposed for it by not being visible from the air. Similarly other possible targets were probably excluded because of the difficulty of enrolling them into the network of actors al-Qaeda was trying to construct.

Developing Interests

It was the buildings' *reaction* to the intent of the terrorists - how they were put into circulation - that was a significant determinant of the reaction to the terrorists' actions. The actors in this scenario did not know what their interests would be before the initial attacks. This, again, is Callon's notion of entanglement, the idea that interpretation is an interactive and iterative process of inventing but also of disentangling relations. It is revealing to examine how the USA responded to the September 11 events.

We can view the actions of the USA, as revealed through the speeches of President Bush, as a process of actor-network building. Bush disentangles relationships that existed prior to the events of September 11, and constructs new relationships - and in the process, new interests for the USA. By examining Bush's comments over a period of just a few days, it is possible to see the work being done to disentangle previous interests and to construct a new set of interests. For actors to be arranged in a particular order - for society to exist - a rationality or knowledge must first emerge that makes that

ordering possible. What we argue is that in the events after September 11, it is possible to see a struggle between two ways of ordering - two rationalities that make the domain visible. Various actors' subsequent choice of which ordering to pursue in their own network-building activities also defines their interests. However, it is unlikely that any knowledge will be completely dominant. Rather the eventual ordering is likely to be a mix of different ways of seeing the domain in question. Law (1994) has also noted that such heterogeneous orderings can result in highly durable networks.

The two ways of ordering that we focus on here are that the events of September 11 were either a) an attack on freedom, or b) the first stage in a religious war. Each ordering corresponds to a different problematisation by each of the main actors involved – the USA and al-Qaeda.

What we trace first are the changes in how President Bush portrays the events of September 11: how did "America Under Attack" became an "Attack on Freedom"? Certainly, at the beginning of the day of the attack, it was America under attack. Bush's first comments came at 9:30 am, at a primary school in Florida, where he confirmed that there had been an "apparent terrorist attack" (Bush, 2001a). Later that day, at 5:30 pm. at a White House press briefing, further comments were made along the same lines (Fleischer, 2001a). All the comments at this stage were limited to individuals – focusing on bringing the individuals responsible for this individual crime to justice. However, by 7:15 pm the first reference that these acts went beyond a simple act of terror to constitute an assault on security and freedom is made (Ashcroft et al., 2001). Reports begin to emphasise how the attacks can be seen as an assault on the security and freedom of US citizens. At this early stage, the way the USA has problematised this situation has been USA-centric. What are the implications of this problematisation? Certainly it serves to involve countries that are friendly with the USA. Bush's later comments reinforce this. The attack is still an assault on US citizens' freedoms, but now "America and her allies" will stand up and bring justice to those responsible (Bush, 2001b). However, such a problematisation does not yet involve certain other countries (Russia and Pakistan) that the USA will need if it is to achieve its objective

of bringing the al-Qaeda network to justice. Nor does this problematisation achieve another significant task, that of cutting off the alternative way of ordering that al-Qaeda is proposing: that we are in the midst of a religious war between Muslims and the USA (Yusufzai, 2001).

The first problematisation – that this is an attack on the USA - works to support al-Qaeda's problematisation. Osama bin Laden and the al-Qaeda network have been identified as probable perpetrators of these attacks (Bush, 2001g). Al-Qaeda, or specifically bin Laden, has previously justified its actions by arguing that it is engaged in a Holy War against the American infidel (Yusufzai, 2001). Such a problematisation is in part supportable by the USA's use of strong religious imagery in their responses. For example, on 13 September in Bush's proclamation of a day of mourning (presumably for all people killed regardless of religion), justice must be done to avenge this enormous evil (Bush, 2001d), and this is justified in terms of quotations from the Bible. The next day, Bush characterises the USA's responsibility to remove this evil from the world as a task set by God (Bush, 2001e). Bush refers to this as a "crusade" – a task with historical antecedents, and a task that is accomplished by Christians waging war against Muslims.

What we are building to here is that Bush's initial problematisation carries many overtones of a religious war - pitting Christians against Muslims. This tactic makes the September 11 attack a problem that is not simply the USA's: in particular, it serves to enrol other Christian countries – especially the UK, Australia, Canada and France - into the conflict. But these moves also serve to reinforce bin Laden's problematisation of the network: Muslim against Christian. This means that the conflict is potentially between the West and the Middle East. The consequence of such conflict is unacceptable to the USA because it would destabilise a very sensitive region. A destabilised Middle East would seriously affect the production of oil and hence dampen the USA's oil-dependent economy. The USA does not need any other detrimental impacts on its fragile economy. It would also make this conflict a world war.

So what we now begin to see is a process of interessement, of the USA interesting others in a problem but also cutting alternative

problematisations off. The USA starts to recast the network as being about dealing with those who challenge the legitimacy of *any* government (Bush, 2001j). It begins this process by establishing that the initial act of terror needs a significant solution, beyond the token measures of the past (Bush, 2001f). Bush argues that the justification that bin Laden uses is not legitimate, and questions the religious authority of bin Laden to call a Jihad (Bush, 2001j); further, Bush suggests that bin Laden is not only a threat to governments but to Muslims as well (Bush, 2001j).

So we now start to see a distancing from the theme of religious war and a return more strongly to the notion of a war on terror. The USA is now seeking to bring to justice not only the criminals that committed this crime but also criminals who have committed similar crimes (Bush, 2001g). This process of recasting the problem begins quite early, with Bush characterising America as the "shining light for freedom and opportunity" (Bush, 2001b), symbolic of what all freedom-loving people believe in. Bush also starts to extend the category of who is guilty of this crime, categorising those that harbour terrorists as equally guilty (Bush, 2001b).

The next day, Bush continues the definitional extension as he states that the terrorist attacks were an act of war on all freedom-loving people and that the world needs to rally against this evil (Bush, 2001c). This is to be the underlying philosophy that guides how the USA proceeds to develop her interests from this point on. There are, however, other significant developments that shape the USA's interest.

These changes are best understood as processes of enrolment. The USA is now trying to build an international coalition against terrorism. Essentially the task is to enrol other nations against terrorism. The USA's objective is to make what is initially an act of terrorism against the USA (this is Bush's own characterisation) into something that is a problem for all the world. This serves to enrol other key actors that the USA needs to wage this war successfully. Most importantly, it serves to interest China and Russia - both of whom have a problem with Muslim separatists within their borders (Charlton, 2001). Yet this is not enough. Russia in particular has already attempted to wage war in Afghanistan, getting caught up

in a decade of fighting without any appreciable achievement of objectives. Russia is reluctant to return to this battlefield, while China is not interested in stepping into a conflict that will gain them little. So the USA has more work to do. The Russian problem is solved in a most unusual way. Uzbekistan, which borders Afghanistan to the north, was previously part of the USSR but is now nominally independent. The leadership of Uzbekistan has a growing concern regarding the growth of Muslims within its borders. In a period of ten years, the number of mosques in the capital has grown from 80 to over 1700. Uzbekistan's leaders are concerned that soon they too will have a Muslim separatist problem. Uzbekistan is required by America as a launching pad for attacks into northern Afghanistan and as a base to resupply their allies in the Northern Alliance. So when Uzbekistan decides to join the coalition against terrorism, America accepts.

Russia, however, still likes to consider itself the nominal leader of the now-dissolved USSR. Such independent action by a former vassal makes its impotence apparent. Some face could be saved if Russia too has decided to join the coalition. On the same day Uzbekistan announces its decision, Russia joins up (Charlton, 2001): its "interests" have quickly been reconfigured. As for China, there is rather more mystery as to how its interests and the USA's became aligned; its admittance to and developing reliance on the World Trade Organisation are no doubt relevant here.

The USA does work to enrol the other actors required to wage war on terrorism. Bush begins to develop what will become a recurrent theme: whoever is not with us is against us (Bush, 2001j). This means that every country in the world now has a decision to make. Realistically, though, this tactic is probably directed at one country - Pakistan. Pakistan has particularly close ties with Afghanistan, being both a neighbour and only one of three countries to recognise the Taliban as a legitimate government. Pakistan also has a nuclear weapopns capacity. The USA is very concerned to ensure Pakistan does not enter the conflict on the side of Afghanistan. So beyond the threat of what will happen if anyone is against the USA, we also see the USA promise increased aid and the removal of sanctions if Pakistan joins the coalition (Bush, 2001k).

The final problem for the USA is that some of the other actors that it requires, such as the UK, are voicing doubts about the legitimacy of waging war on a government which, while harbouring terrorists, has not actually committed acts of terror outside its own borders (Gove, 2001). The USA, therefore, develops a multiphase strategy that for the most part specifically targets terrorists, but still keeps the military option against "harbouring" governments alive. The USA begins its task of interesting the allies by freezing terrorists' assets on 24 September (Bush, 2001l), before declaring that the Taliban as guilty as al-Qaeda in these acts of terror. The UK and others are now successfully enrolled. With all these actors on board, America finally proclaims that the war on the Taliban is the same as a war on terrorism (Bush, 2001m). The coalition is constructed. The war on terror begins, now cast as the effort to ensure Enduring Freedom (Bush, 2001n; Bush, 2001o).

Conclusion

So how useful is it to extend ANT beyond science? In terms of the analysis of September 11, we feel that more "traditional" analyses, centred around politics as an autonomous zone of activity, tend to underestimate the dynamic processes of interest-formation that we have shown are at work. Interests do not pre-exist networks: they get made up along the way as actors make sense of their world and construct roles for themselves and significant others. This is not to say "old" interests do not play a part in these networks. Recent events in the War on Terror have led to "old" adversaries such as Iraq and Iran being characterised as part of the "axis of evil" (Bush, 2002). Even old interests get constructed anew – in new networks.

Political analyses also have a tendency to concentrate on the "human" world; we have argued that non-human actors – planes that can be controlled to a greater or lesser extent, buildings that may or may not survive attack, trees which make targets invisible, river and harbour systems that open up some parts of cities for attack – play a crucial role in how politics will be played out. Our analysis here suggests that the non-human actors might have played their role too well, that if the twin towers had acted differently then the

USA's response might not have been a War on Terror but some lesser response. Politics does not go from pre-determined and agreed-upon starting points to easily predictable ends: and if we wish to understand these pathways of politics, we need to locate politics within its networks, within which humans and non-humans are building interests, enrolling allies, and constructing problematisations.

Finally (and we owe this point to Mike Lloyd), it may well be the case that the "successful" enrolment of non-human actors can lead to just as many (or more) problems than a failure to enrol. Perhaps al-Qaeda enrolled the wrong actors, and their successful enrolment of the WTC led to their (apparent, at time of writing) downfall. Certainly, the USA's response to such hard-hitting attacks has been to hit back just as hard. The more traditional terrorist strategies of frequent small-scale attacks still remains, perhaps, the most successful. An interesting comparison can be made here with bio-terrorism – such as attempts to spread anthrax spores through postal systems - which has been less "successful" in terms of fatalities, but perhaps more successful in terms of creating panic. Hitting buildings is spectacular, but is spatially limited compared to bio-warfare (although it must be admitted that the perceived threat of other attacks on buildings and planes has caused plenty of fear and panic). It also seems likely, given previous US responses to al-Qaeda actions, that the anthrax strategy alone would not have provoked such serious reprisals as we have seen recently. There is, then, a strong element of indeterminacy in networks and in ANT: networks contain within them possibilities for unexpected consequences.

We hope that we have shown that ANT can be useful beyond science and the world of scientific truths. In the political example we have discussed in this paper, no doubt there is a "political core" - the pumping heart, so to speak, of this drama. Yet just as science is far more than its pumping heart, so too politics only comes to life when it is linked in with the mobilisation of the world (the loading of humans and nonhumans into discourse), with autonomisation (the criteria of relevance within politics), with alliances (politics' links with science, culture, economics, and so forth) and 'with public representation (politics' links to journalism, reporting, and the man

and woman in the street). If we are to follow the construction of political interests, we must study more than just the political core.

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79 Days of Pakaitore Marae

Margaret Denton

Abstract

In 1995 Pakaitore marae was re-established at Moutoa Gardens, renewing an association that had previously dissolved. Such associations and dissociations are beyond the scope of both New Social Movement Theory and Resource Mobilisation Theory, currently the most common sociological approaches to social movements. Such associations and dissociations are, however, central to Actor Network Theory, a perspective used here to consider the 79 days of Pakaitore marae.

Introduction

Before Europeans arrived in New Zealand, Maori iwi from the upper Wanganui River used a site at the river mouth as a village in the fishing season. The site was called Pakaitore. The first land "sale" at Wanganui in 1839 was negotiated at this site. The Treaty of Waitangi was signed there by the rangatira of local iwi in 1840. After European settlement, Maori brought produce to sell at the site, and continued to do so until the late 1900s. The sale of 80,000 acres of Wanganui land in 1848 was signed there. Maori understood the site to be excluded from the sale, as all marae were excluded. The site was, however, designated a marketplace by the Pakeha, and so legal ownership passed from the Maori iwi. In 1865 the site was renamed Moutoa Gardens, and a monument was erected there as a tribute to the "friendly" Maori from the lower river tribes, in recognition of their efforts in fighting upper river Maori who wanted to halt European expansion.

The fishing village, Pakaitore, thus came to be renamed after the battle site, Moutoa, which was an island in the Wanganui River where the lower river Maori had been victorious over the upper river Maori. The monument not only expressed Pakeha gratitude to the enemy of the people whose land it was built on, but also referred to the owners of the land, the upper river Maori, as barbaric

and fanatic. This same site has been used for Waitangi Day celebrations since the 1970s, and was the venue of "unity" days, which featured stalls and displays of various ethnic and social groups. It has also been the site of numerous protests against the Treaty of Waitangi. In 1990, the river iwi lodged a claim to the Waitangi Tribunal for control of the river and the Crown land either side, including Pakaitore.

On February 28, 1995 at 5 am about 150 Maori from iwi based further up the Wanganui River arrived at Moutoa Gardens in Wanganui to re-establish Pakaitore Marae. Their intention was to celebrate their Whanganuitanga[1] and rangatiratanga by exercising their right to use ancestral lands. They remained on the site for 79 days, leaving again at 5 am, having decided to leave as peacefully as they had come.

What insights can Actor Network Theory (ANT) offer sociologists considering these 79 days of Pakaitore marae? To begin with, ANT offers a method of sociological analysis: "What then is a sociologist? Someone who studies associations and dissociations, that is all, as the word "social" itself implies" (Callon and Latour, 1981, p. 300)

So we can consider Pakaitore Marae by asking: what associations and dissociations occur? That is what is meant by the use of the word "network."

Pakaitore Marae as a Network

The coming together of supporters on Pakaitore marae means an association of people: there is some sort of "network" operating. In ordinary usage, we would take that to mean a social network: a set of relationships between people. In this sense, the concept of "networks" is familiar to sociologists studying social movements. Ian Welsh (2001, 1.5), for example, defines social movements as a network:

> A social movement is defined here as a network linking a number of quasi-autonomous groups and individuals through beliefs, values

1. Whanganuitanga means the precepts and practices of the Whanganui iwi; rangatiratanga means dominion, authority.

or common practices that engage in communication and exchange to negotiate a collective identity and opponent.[2]

In everyday usage, "networks" do not necessarily refer to people. Networks can refer to transport, electricity, telecommunication or media networks, which refer to sets of relationships between bus terminals, computer terminals, or newsrooms rather than people. A "network" is taken to mean a collection of similar entities and the connections between them. In ANT, "networks" are taken to include not only people, but also ideal and material entities: words, concepts, rituals, walls, seeds, hamburgers, flags, computers, courts, and armies. Pakaitore marae was just such a network: aligning ideal and material elements. For the tangatawhenua and their supporters at Pakaitore marae both te tangata (people) and te whenua (land) were central to the protest action.

During the 1995 occupation, Pakaitore marae became a place for learning things Maori, for politicising the young people, and an experiment in Wanganui tribal tradition and culture as a form of political power (Brett, 1995, p. 49). Pakaitore was, for the time, a network "center": a place where people and resources passed through. It brought together a diversity of people: respected Maori elders, young Maori gang members, sympathetic Pakeha. The leaders were equally diverse. According to a Pakeha journalist who stayed on the marae, Cate Brett (1995), the most influential person within the marae was Te Manawanui Pauro, the senior kuia.[3] A more indirect leadership came from Sr Makareta, heading the media team, which provided the educational resources for the marae. Sr Makareta has a background in Catholic social justice circles. The main

2. As Welsh indicates, Alberto Melucci (1996), a leading New Social Movement theorist, describes social movements as "networks of networks." The emphasis on networks is in contrast to understandings (derived from Resource Mobilization Theory) that focuses on social movements as organisations built around issues. The idea developed by Welsh is that "networks" enable an ongoing relationship between people that outlasts any particular organisational structure. This suits the focus of New Social Movement Theory, which is more interested in cultural reproduction than political impact.

3. Kuia is a female leader; kaumatua is a male leader.

spokesman was Niko Tangaroa, a kaumatua, a Ringatu elder, with a middle-of-the-road background in union and Labour Party activity. Another spokesman, Ken Mair, was most sought after by the Pakeha media, as he already had an established media profile through his involvement in Te Ahi Kaa, a radical Maori group focusing on Maori sovereignty.

Just as people came together and passed through Pakaitore marae, so too did money and other resources. The protesters spent more than $30,000 in town during the occupation (Brett, 1995, p. 47). Gifts included food and other resources as well as money. The bringing together of people and resources was made visible, as it so often is, in meals: full sit-down meals for everyone with tablecloths and flowers over an extended period of time (Brett, 1995, p. 57).

So, what was brought together at Pakaitore marae? Certainly there were very strong associations between the people residing at the marae, and the ideal and material realities needed to sustain them. What held these associations together, though, was the practice of Whanganuitanga. The 79 days of Pakaitore marae can be considered as an intensely lived experience of Whanganuitanga. What made this practice enforceable? First and foremost, there were the arrangement of tents and buildings, of fences and gateways, that provided a setting in which Whanganuitanga could be implemented. Once it was implemented, Pakaitore marae was able to stand against the Wanganui City Council"s attempts at eviction by the sheer numbers of supporters gathered. When the numbers began to dwindle, as the nights got colder, the police assembled, and the occupiers made the decision to leave the grounds. (MacCallister, 1996)

Objects and Objectives

Highlighting the arrangement of tents and buildings, of fences and gateways as necessary to provide a setting in which Whanganuitanga could be implemented, is an unusual move in the sociology of social movements, but reflects the treatment of objects in ANT. In some ways the ANT emphasis on both ideal and material elements is similar to one popular theory of social movement activity: Resource Mobilisation Theory. Resource Mobilisation

Theory argues that the success of a social movement depends on whether or not people in the social movement are able to mobilise sufficient "resources" to their cause (Denton, 1988, p. 218). What is important to note here is that the argument was not made that people at Pakaitore marae need to locate planks of wood, or sheets of iron to be able to build a fence. The "resources" that make the fence are not merely objects to be manipulated, but a defining characteristic of the action taking place.

ANT is critical of the way that sociologists so often place people at a different "level" to other aspects of a social situation. ANT argues that sociology should not bracket off the non-human, and give it a different status to the human (Callon and Law, 1997, p.168).[4] This is exactly what Resource Mobilisation Theory does. "Resources" are seen as things that the social movement activists can control, or attempt to control, putting the activists on a different "level" to the "resources." ANT puts material entities on the same "level" as people and ideas, by not only considering the ways in which material entities align with other elements in the network, but also by considering the way in which objects can "prescribe" and "delegate" action. "Delegation" refers to the way objects effect a leverage by reducing the amount of human effort required; for example a protest movement organising a rally that has access to a photocopier will be able to put up more posters compared to one having to write all the posters by hand. "Prescription" refers to behaviour imposed on

4. Martha Kaplan and John Kelly explain this emphasis by suggesting that "(h)owever much cultures sometimes work as organised systems, and discourses strive for clarity, coherence, and consistency, power is constituted by working connections between heterogeneous agencies, interests, significances, and prospects. Many of the things that exist when power is hegemonic …occlude rather than illuminate these constitutive struggles. And in these constitutive struggles, dynamic processes neither of resistance nor hegemony, but of active construction, it is precisely the conjoining into working structures of heterogeneous elements that is effective. Heterogeneous elements make and remake larger orders. Regardless of how far a general logic emerges (and whatever its pattern) from the positions of the elements, this process of construction is a struggle to establish place, rights, uses and even necessity within the larger whole" (1999: p. 845).

humans by objects (Latour, 1988).

The fences erected around Moutoa Gardens enabled the translation of Moutoa Gardens into Pakaitore marae by *prescribing* Whanganuitanga. Those opposed were angry that they could no longer wander through the Moutoa Gardens. Supporters said that everyone was free to walk through the main gate and would be welcomed onto the marae. This is precisely what those opposed did not want to do, and felt that they should not have to do. The Moutoa Gardens were a public park, and they felt that they should not have to follow marae protocol to gain access to it. Take away the fences, and Whanganuitanga wouldn"t have been enforceable. That is the power that material objects have to prescribe social forms. The "resources" of Resource Mobilisation Theory are typically seen as passive, whereas ANT treats "resources" as active, not necessarily easily bent to our will.

If you go to the website http://aotearoa.wellington.net.nz/ whakaahua you will find some photographs of Pakaitore marae taken during the 79 days. "He Kaitiaki" (21.htm) gives a photo of the monument I mentioned in the first paragraph. "Beheaded Statue of John Balance" (22.htm) provides a visual reminder of the much publicised "beheading," actually, the replacement of the head on the John Ballance statue with a pumpkin, secured by a tent peg.

Here we have the most passive of all objects - monuments and statues - becoming active sites of contestation. Both the Ballance statute and the Moutoa monument are Pakeha memorials, meant as enduring tributes; hence the outrage when the Ballance statue was beheaded. It was, perhaps, an unfortunate choice. If the Moutoa monument had been defaced, it would have drawn the attention of the Pakeha media directly to the history of the site. To explain how the actions of John Ballance relate to the occupation is somewhat beyond the average sound bite of Pakeha media coverage. Internationally, statue beheadings are almost invariably read as vandalism in media coverage.[5] What may have been meant as a

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5. See, for example, coverage of the "The Little Mermaid" on the edge of the harbour in Copenhagen, beheaded in 1964, and again in 1998 (*cnews*, 1998). Also the Padriac O Conaire statue beheading in Galway, Ireland, in 1999 (Siggins, 1999). For a brief run down on the Meyer Circle statue

humorous way of making a very serious point about the state of Pakeha politicians" heads, became dissociated from the historical connections of Wanganui, land negotiations, Pakeha politics and power; and associated with vandalism, meaningless violence, wanton destruction, and vicious contempt by the Pakeha media.

What does it mean to say that the Ballance statue was "active" in the attempts to subvert its message to the purpose of Pakaitore marae, and then in the attempts to subvert the subversion? The Ballance statue is a statue of John Ballance. If the people of Pakaitore could have chosen which historical Pakeha figure they would most like to have beheaded, they may well have chosen someone else, but the available figure was Ballance. The fact that the figure was Ballance meant that the life of Ballance, all his thoughts and deeds could now be called upon and pressed into service by each side. Neither side has any control over what aspects of the life of Ballance the other side will choose to associate with this action. In that way the statue of Ballance was active in making a specific range of possibilities available for new associations; a statue of someone else would have brought another range of possibilities into play.

Translating Wills

We could say that the life and times of Ballance allows new political opportunities to emerge. There is a branch of Resource Mobilisation Theory that considers political opportunities, but considers these as resources available to a social movement within the political structure. The understanding is still that political opportunities operate at a different "level" to the social movement activists. Political opportunities are considered as part of macro-order political processes. ANT is critical of the distinction sociologists make between macro and micro actors. By considering macro actors to be of a different order to micro actors, we prevent the study of what

Footnote 5 continued...

and fountain vandalisms (1959,1961,1966, through to 2000) in Kansas, see Spivak and Penn (2000). For a sociological commentary on the beheadings of the "Down by the Lake with Phil and Liz' statue in Canberra, see Taussig (1999).

we most need to study when we consider social movements: how micro actors become macro actors. ANT argues that, "In order to grow we must enroll other wills by translating what they want and reifying this translation in such a way that none of them can desire anything else any longer" (Callon and Latour, 1981, p. 296).

This sounds rather like the social construction approach, which grew out of the discontent with Resource Mobilisation Theory (Denton, 1998, p. 224). Sociologists using this theoretical orientation, focus on "frame alignment," the process of aligning the beliefs and activities of individuals with the ideology and goals of the movement. As I have already commented, ANT recognises that micro actors need to align more than people and ideas to be successful: it is the enlisting of durable materials that makes a network more durable and stable. What makes even a simple relationship like a contract enforceable is recording equipment, courts, police, and armies (Callon and Latour, 1981, p. 284). I have already argued that what made Whanganuitanga mandatory were the fences around Pakaitore marae. Yet fences and gates did not, in themselves, create Pakaitore marae. What created Pakaitore marae was the exercise of Whanganuitanga. Pakaitore marae was a place for learning things Maori, for politicising the people, for translating wills "in such a way that none of them can desire anything else any longer."

The mainstream Pakeha media presented the establishment of marae protocol as one of the "different agendas" operating in the protest (Brett, 1995, pp. 49-55; Morgan, 1996, p. 7). To these Pakeha there was no automatic connection between the cultural exercises of the marae, the legal dispute over the ownership of a piece of land, and the political demands for autonomy. For participants, these different aspects came together in a series of interrelated symbols. According to the statement from the Pakaitore media team, the word "te whenua" refers both to the uterine lining that sustains life before birth, and the land that sustains life after birth. A person"s afterbirth is buried on the land of their ancestors, giving them status on that land and in the community of people who are also linked to that land. Thus te whenua links the person to both the land and the community or iwi of that land. Papatuanuku (Mother Earth) is the guardian (kaitiaki) of her people; her people are the custodians

(tangata kaitiaki) of their whenua. Those who are linked to the community/land have the right to be sustained by, and the obligation to protect the community/land ("Maoris explain ...,"1995).

The crucial associations being made by the movement therefore ally the alienation of the actual land, Pakaitore, to both the political power needed for an ability to be sustained by the land and to be able to protect the community-land. The alienation of Pakaitore marae is therefore also linked to the alienation of the practice sustaining the community-land, its cultural expression. The actual land, Pakaitore, stands for all the land it represents, all te whenua of the Whanganui iwi. Te whenua not only fuses the symbolic with the actual, but also ideal with material, and spiritual with physical. These fusions were made evident at Pakaitore marae in the evening meetings on the marae, which fused spiritual and physical, ideal and material in karakia (prayer) followed by discussion of marae discipline, finances, housekeeping and Whanganuitanga. "Te whenua" as both object and symbol grounds the Maori sense of psychological and social self. The mainstream Pakeha media tried to dissociate the reclamation of the alienated marae from both the reclamation of the alienated culture and the reclamation of the alienated identity. This could not work as long as the occupation was Pakaitore marae, as the marae was the reclaimed place that provided the grounds for thinking and doing Whanganuitanga.

These 79 days of Pakaitore marae present us with a very dense network. The strands of people, ideas, material realities are closely plaited; showing more clearly, I think than any other moment of social movement activity that I could refer to, that there is never a micro level of social reality, because there is never an interaction that is not framed within a context of wider associations, and that there is never a macro-level of social reality because there is only, ever, a local summing up (Latour, 1997).

Stability

In any network, each element in the network can itself be considered as a more or less stable network (Callon and Law, 1997). The more stable and durable the element, the more it can be considered as an entity, or a "black box." A "black box" is something that can be

assumed as common sense, something that can be taken for granted. At least, for the time being. An actor grows from micro to macro by increasing the number of relationships that can be put into "black boxes," substituting durable elements for provisional alliances. Strength depends on the ability to create alliances, associating large numbers of elements and dissociating elements allied by opposing actors. Stability depends on consolidating those alliances as dependable, ongoing relationships.

How durable was the network formed at the Pakaitore marae? Certainly, it has remained strong enough for the Moutoa Park occupation to be celebrated annually, and for Te Manawanui Pauro to sign the agreement between crown, council and iwi for the joint management of the site on February 29, 2001. Yet this was far from a foregone conclusion. The Pakaitore marae alliance was, from the beginning, opposed by the mainstream Pakeha media. Night after night, the major news coverage contrasted dark and gloomy shots of the marae, heavily built unsmiling Maori men, makeshift fences and accommodation, with tidy, bright government buildings, flags flying, respectable Pakeha articulating their concerns (with a few not quite as respectable Pakeha making it on screen if they had been seriously inconvenienced). In this way the media network attempted to align the majority of the population of New Zealand against the marae. The only concessions made to a more balanced journalism of the occupation were Cate Brett"s *North and South* report, and the publication of the translated statement from the Pakaitore media team. Six years later, under the heading "Moutoa deal gives joint rule" we have a picture of -wait for it- "occupation leader Ken Mair" with Prime Minister Helen Clark. You have to read the fine print to find out that the Maori signatories were, in fact, Te Manawanui Pauro and Julie Ranganui (Horwood, 2001). The mainstream Pakeha media presents the Moutoa Park settlement as the work of Maori agitators now aligned with a left-wing political agenda, and continues to dissociate te whenua from te tangata.

The stable positioning of the mainstream Pakeha media can be contrasted with the shift in the central government network. At the end of 1994, the then National party government introduced the policy of a NZ$1 billion "envelope" to settle all Maori claims. The hope was that this would get all Maori claims over and done with.

This was considered necessary to smooth the way for (overseas) capitalist investment. It was felt that investors might be reluctant to pay a premium price for New Zealand land when it was uncertain whether or not it could end up with a Maori claim against it. There was widespread opposition to this policy. The re-establishment of Pakaitore marae can be understood as the most spectacular of several land occupations that occurred in the wake of attempts to implement this policy (MacCallister, 1996). The only way for the ownership of Moutoa Gardens to be resolved was for the central government to negotiate. The central government of the time took the position that the occupation was a local government law and order issue, as the protestors had overstayed their legal permit to celebrate at the Moutoa Gardens. The only shift in the central government network came with the election of a coalition Labour led government. The coalition partner, the Alliance, includes Mana Motuhake, a Maori political party. The government also has Tariana Turia, who was a protester at Pakaitore in 1995, as Associate Maori Affairs Minister. These changes represent significant associations that have enabled a settlement to be negotiated. Now that an agreement has been reached, it is not likely to be reneged, even with a change in government. It has become a "black box," however leaky. In the end, it was the central government that spoke on behalf of the other actors: "It was only when the current government became involved and accepted some responsibility for resolving the dispute, that a settlement became feasible" (New Zealand Government Press Release, 2001).

The central government position thus shifted from isolation to incorporation. The local government position was ambivalent from the start. Both the supporters of Pakaitore marae and those antagonistic to their cause formed sizeable chunks of the voting population of Wanganui. Those opposed to Pakaitore marae were demanding the council call upon the police to evict the protestors, which would leave the Pakaitore supporters angry. Without the support of the central government, the only other option available to the local government was to use delaying tactics - eviction notices, court proceedings - until cold weather and fatigue set in. The Wanganui City Council, and mayor Chas Poynter in particular were cast as playing the leading role in the translation process by both

central government and the mainstream Pakeha media, yet declined to play that role by using violence against the protestors. In the end, the Wanganui City Council, and mayor Chas Poynter, became signatories to a central government sponsored resolution.

So is the Pakaitore marae story now over, the Pakaitore marae network now safely incorporated as a "black box" in the central government network? The 2001 settlement has indeed resolved the question of ownership and management of Moutoa gardens-Pakaitore marae by "reifying this translation in such a way that none of them can desire anything else any longer." The issue of the practice of Whanganuitanga so central to Pakaitore marae disappeared from the agenda.

Perhaps this was a foregone conclusion. More than a year after the occupation, one of the Pakaitore arrests was heard in the Court of Appeal. Geoffrey Fuimaono was charged with assaulting a police officer with intent to obstruct him in the execution of his duties. Fuimaono told the court that he had acted in accordance with tikanga Maori. The officer had attempted to enter Pakaitore by a back or side entrance, which was regarded as evidence of bad intentions. The court found that the charges were proved, and Fuimaono"s perception was not relevant to his intent. Tikanga Maori was not superior to statute law; the court had no power to override statute law (Court of Appeal, CA159/96). The association between central government, the police, the courts, and the legitimate means of violence was once again entrenched; the dissociation between te tangata, te whenua, and tikanga Maori once again enforced.

Conclusion

The process of following the trail of associations and dissociations to make clear the alliances between individuals, groups, innate objects, concepts and opinions that are formed does help to overcome many of the oversimplifications of previous sociological approaches to social movements. Although sociologists considering social movements from a New Social Movement Theory perspective have used the concept of "networks," the ANT approach to networks is more useful, as it considers people, discourse, technology and resources without privileging any one aspect.

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The 79 days of Pakaitore marae present us with an opportunity to trace the associations and dissociations made. The way that Pakaitore marae aligned ideal and material elements can perhaps most clearly be seen in the erection of fences that meant people had to go through the gates. Once through the gates, they were welcomed onto the marae. Thus the building of fences prescribed the ideal elements of the social setting: Whanganuitanga.

For the tangatawhenua and their supporters at Pakaitore marae both te tangata (people) and te whenua (land) were central to the protest action. The association of te tangata and te whenua did not go unopposed. The Pakeha media aligned most New Zealanders in opposition to it by presenting the Moutoa Gardens occupation as an unrelenting desecration, the association of te tangata with te whenua dismissed as "confused agendas." The Court of Appeal dismissed the association of te tangata with te whenua as "irrelevant." Yet we do end with the Pakaitore marae network incorporated into a central government sponsored resolution. Ultimately, it was the central government that was able to translate what was wanted in such a way that no-one could desire anything else any longer.

Acknowledgements

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Connecting Actor Network Theory and Policy Analysis

Shona Hill and Shilinka Smith

Abstract

Actor Network Theory (ANT) challenges positivist assumptions about pre-existing reality and binaries that privilege certain social and material objects over others. In contrast, policy analysts construct policy solutions within the limitations of an accepted reality in which policy solutions are believed to exist. In this paper we explore how a perspective that challenges assumptions about policy solutions can be useful to the policy practitioner within the constraints of a policy/political environment. We use the extension of the Property (Relationships) Amendment Act 2001 to same sex couples as a case study, looking at the insights ANT can add to this policy debate.

Introduction

Can Actor Network Theory (ANT) add value to public policy analysis within the constraints of the political +policy environment? To consider this question, we examine the policy analysis supporting the passing of the Property (Relationships) Amendment Act 2001 as a case study. We address the question of whether a version of ANT that harmonises with the currently policy making environment could have made a difference to this piece of policy analysis. If the answer to this question is "yes" then we have demonstrated that ANT can be adapted to conform with the constraints of the political/policy environment *and* add value to policy analysis. For people affected by changes in Government policy this may be a good thing. For academics who understand the full potential of ANT to re-conceptualise marriage networks, property relationships and the role of the state in relationships, the constrained version of ANT offered here may seem relatively impotent, or at least not that "new." Straddling two distinct social worlds - academia and policy making - which have different expectations and criteria for judging success, is bound to be problematic. Consequently we run the risk of

satisfying neither group, nor anyone else. Facing this risk, however, has two advantages.

First, the successful transference of ANT to the policy environment will enhance society's ideal interests by giving new insights that may improve policy outcomes. Second, successful use of ANT in the policy environment will cater to many students' material interests by demonstrating the relevance of sociology to the employment world outside of academia. Accordingly, to satisfy these interests, we begin with a brief outline of the basic framework in which policy is analysed and developed. This will state the particular set of constraints that ANT must negotiate in order to successfully translate into the policy world. Application of ANT to the case study (the decision to include defacto and same sex couples into the amendments to the Matrimonial Property Act 1976 and rename it the Property (Relationships) Act 1976) will follow. This case study was chosen because it is an example of the inclusion of non-mainstream groups in attempts at mainstream policy solutions. According to Cheyne, O'Brien, and Belgrave (1997, p.101), a framework for analysing minority inclusion is desperately needed. ANT may be that framework because it analyses in a non-privileging manner. Finally, we will finish with an assessment of the usefulness of this constrained version of ANT.

The policy analysis environment

Can the policy analyst "sell" the policy solution to the Minister? Can the Minister "sell" it to Cabinet? For a policy solution to be implemented this is the final important test. Focusing on the desire to get policy solutions approved by "selling" them to Ministers, policy analysts make a series of assumptions and constrained choices about what policy options to suggest and how to package policy solutions for sale to Ministers (Edwards, 2001, p. xxvii). Lindblom and Cohen argue, for example, that time constraints prevent policy analysts from considering every assumption or even investigating every alternative policy solution (Lindblom and Cohen, 1979, p. 4). Edwards adds that policy analysts work within the constraints of political imperatives (Edwards, 2001, p. 4). This means policy

analysts assume they can only effect incremental change to the existing structures and relationships. According to Chia (1996, p. 8), underpinning this acceptance of current structures is the belief that the world is primarily a given pre-existent entity, already constituted and subsequently apprehended by the policy analyst. Because the assumption of pre-existence lies unchallenged at the heart of mainstream policy analysis, other objective facts about the condition of the world are also unchallenged. In particular the objectivity of "facts" is never questioned. As a consequence, during policy analysis, new ways of approaching questions are not often explored and the processes of social organisation are not examined (Percy-Smith, 2000, p. 7).

Actor Network Theory

In contrast to this view of a pre-existent world, ANT questions the stability of pre-conceived concepts, focusing attention on the processes of social organisation. In doing so, ANT simultaneously concentrates on the networks between actors as well as actors themselves (hence, actor-networks). This reveals the instability of the social world, and destabilises pre-conceived notions. To successfully introduce a perspective that has the potential to destabilise the given world that the policy analyst is trying to maintain will require an incrementalist approach (Lindblom and Cohen, 1979). That is, ANT needs to be distilled from its deconstructive potential into concepts and research questions that harmonise with existing policy analysis techniques. This distillation reduces the potential of ANT, but even in this constrained form, we argue ANT can be useful to policy analysts. To demonstrate this, we begin by asking the ANT research question: how do actants generate durable effects? This question is used to unpack "punctualisations" and to study the ramifications of re-ordering network effects.

The constrained ANT

ANT's basic argument is that society, organisation, agents, and machines are all relational effects generated in precarious patterned

networks. This suggests that as life is a process of struggle between complex network effects, it is the process of ordering that one studies rather than an independent definitive entity known as the social order (Chia, 1996, p.162). The process of social ordering is a process of heterogeneous engineering (Callon, Law, and Rip, 1986, p. 31). This engineering appropriates order out of disorder within everyday life. Everyday life consists of multiple relational networks of humans and non-humans (both can be considered "actants"), interactions amongst which create effects that may have on-going ramifications. The question is, how do some interactions generate durable effects, such as order and organisation, while other kinds of interactions become invisible or disappear altogether? (Chia, 1996, p. 162).

To examine this research question, an ANT approach uses the idea that actants, in the performance of stabilising durable effects, use the processes of translation and punctualisation. That is, in ordering processes complex network effects are simplified into an appearance of unity. Punctualisations are the "remembered" or visible simplifications re-enacted in relevant contexts. Below, we consider how punctualisations shape our understandings of the world and can blinker policy analysis. We demonstrate the value added to the understanding of social interaction when punctualisations are unpacked.

The marriage punctualisation

To make visible what was forgotten in the Amendment to the Matrimonial Property Act, for better or worse we begin by looking at marriage as interaction in the context of the research question: How does the organisation of marriage generate durable effects? A Hobbesian definition of marriage could claim it was a war of all against all. A contemporary version defines marriage as a legally recognised relationship between an adult male and an adult female. It carries certain rights and obligations within a household independent of all others (Marshall, 1998, p. 388-9). To explain this visually, a marriage punctualisation can be seen as a simplified genealogy diagram:

Nigel *m.* Emma

```
        ┌──────────┬──────────┬──────────┬──────────┐
      Paul       Rachel      Alex      Marama      Helga
```
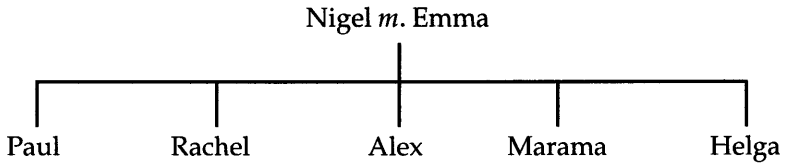
This depiction is what people usually think of as reproduction within a nuclear family. Of course, it is not all there is to marriage: people have converted and simplified multiple competing relational network effects into a punctualisation of this kind. An ANT analysis urges the unpacking of punctualisations, and this might add value to policy analysis because it makes visible the betwixt and between relationships in which marriage rights and obligations are interacted, stabilised and made durable. For example, within marriage networks it is assumed that partners, as husband and wife will stay together and as mother and father raise their children until adulthood. Other durable effects within mainstream marriage units may include relational elements such as:

- Both partners being automatically included in social invitations;
- Houses built with the main bedroom designed for a couple;
- Partners responsible for each other's health and funeral arrangements; and
- Overseas holidays often being cheaper for two.

This can be seen more clearly by adding some of these elements to the marriage punctualisation diagram.

Nigel *m.* Emma

```
        ┌──────────┬──────────┬──────────┬──────────┐
    Children    Shared      His       Shared    Domestic  Holidays
                Finances   Career      Home      Duties    Together
```
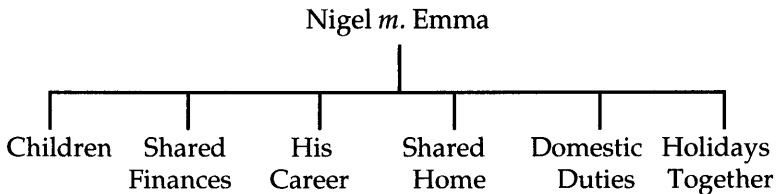
The ramification of simplifying these networks into punctualisations is that the ordering of marriage is seen as a seemingly powerful and

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stable arrangement (Latour, 1986, p. 264). That is, through the process of heterogeneous engineering a marriage appears to be a durable organisation. However, in practice, any struggle between competing networks may result in the organisation of marriage destabilising at any time. For example, a couple may feel their marriage is like a runaway train - an accident waiting to happen. Rather than waiting for a reverberating crash or a Hobbesian condition of misery, the partners may dissolve the marriage and become separate interactions with both related and separate network effects. This re-ordering of processes reproduces and creates additional networks, all struggling to stabilise and generate durable effects (Law, 1992, p. 384).

Re-ordering: The divorce punctualisation

The Ministry of Justice identified the existing Matrimonial Property Act (1976) as having disadvantages for certain sections of the population. This disadvantage became the focus of a piece of policy advice submitted to Government.

According to the Ministry of Justice, a ramification of the Matrimonial Property Act's equal division of property was that it disadvantaged dependent partners (Ministry of Justice, 2000c). The Ministry of Justice used a rationalist policy approach to argue that a marriage union often resulted in one dependent partner being obligated to maintain the home and raise the children, while the other was obligated to financially support the family. The ramification of this network effect meant that if a marriage relationship re-ordered, the dependent partner (usually female) was often disadvantaged financially. This was because the networks she experienced on a day to day basis were not publicly or economically valued. This process of inequality was deemed a destabilising force (unfair distribution) in the durability of marriage as a process of organising. The solution to this policy problem was to alter the Matrimonial Property Act 1976 to "provide more flexible mechanisms to deal with the issue of economic disparity" (Ministry of Justice, 2000a). The purpose of these amendments was to alter some of the network effects that were disadvantaging the non-

working partner (Ministry of Justice, 2000a). This led to a Ministry of Justice policy solution (culminating in a cabinet minute) to amend the Matrimonial Property Act.

Improving network efficiency and the comparison of entities

When the Labour Party came to power in late 1999, the time was right to consider whether the amendments to the Matrimonial Property Act should be extended to include defacto couples, rather than made into a separate piece of legislation. (Ministry of Justice, 2000a). In order to compare married couples, defacto relationships, and same sex couples, the Ministry of Justice focused on the entities involved in a marriage. Relationships were deemed to consist of two people, living in the same house and needing to organise the same kinds of situations (for example, child rearing and domestic duties). Consequently, given this entity-based comparison, it would seem rational to extend the Matrimonial Property Act to all couples to ensure equitable distribution of the law across all entities/ relationship types. It was indeed decided to extend the Matrimonial Property Act to defacto couples, including same sex couples. These amendments to the Matrimonial Property Act became the "Property Relationships Amendment Act 2001" (hereafter, the Act).

Despite the initial comparison of entities, when the policy analysts came to define a "defacto" or "marriage-like" relationship they moved from comparing entities, to describing the networks in which married couples participate. The reasoning appears to be that if non-married couples engage in the same networks as married couples for a long enough period, or had children, they were then engaging in "marriage-like" relationships and should be covered by the Act. However, the Ministry of Justice engaged in selective thinking: they only identified networks that they believed were experienced in mainstream heterosexual marriages. The networks that were identified included: appearing in public as a couple; going-on holidays together; sexual relations; interdependent finances; emotional support; raising children; living in the same house; and domestic responsibilities (Ministry of Justice, 2000d). [i]

As a consequence, to be covered by the Act couples had to

participate in at least some of the networks (left to the judge's discretion) that the Ministry of Justice believed married couples participated in. According to the Ministry of Justice, the problem had been defined and solved with a policy solution implemented. In contrast, had an ANT approached been used to unpack the punctualisations involved and consider the relationships between actants, then value could have been added to this policy analysis. Below, we demonstrate this by considering how "same sex couples' are caught up in the network of policy decisions in a way that does not escape the presumptions about "married couples."

Unpacking punctualisations

To be able to unpack the endless network ramifications that make up same sex couples in the space available, we will concentrate on lesbian couples. We do not focus on lesbians that reproduce organising patterns that are identical to heterosexual couples, rather the focus is on those lesbians that live "differently." As part of feminist consciousness-raising and other issues associated with being deemed a "deviant minority," not all lesbian relationships have followed the traditional pattern of dependence. As Johnson explains "we [lesbians] know and live a subversive truth, that women create happiness and satisfaction for each other independent of men. Our society regards this as an outrage... This fact challenges a fundamental doctrine of our society, that women exist to serve men. Lesbian existence is thus sacrilege" (Johnson, 1990, p.37). This subversive nature created an opportunity for lesbians to experiment with alternative relationship networks. It is the networks that fall outside the mainstream that ANT can analyse in a non-privileging manner to add new insights into the effects of policy solutions.

So, how do lesbian relationships generate durable effects? To successfully unpack how lesbian couples generate durable effects requires an appropriate amount of research. Because the heterosexual family has dominated social science data, limited space has been devoted to lesbian couples. Consequently, due to limited data, instead of tracing how lesbians make their relationships durable, we will consider how a composite lesbian couple may

interact with the new Act. This composite couple[2] can be represented in the following diagram:

A Composite Lesbian Couple
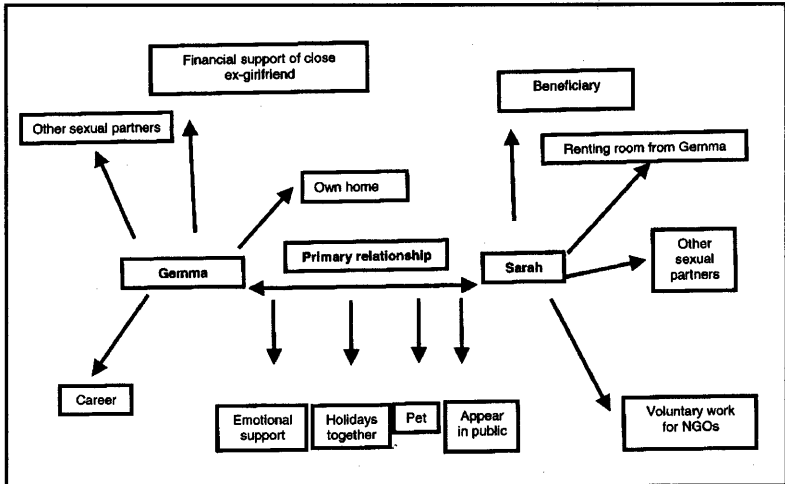
ANT can add-value to the Act's policy analysis by focusing on relational materiality. This is to emphasise that any entity is always a part of multiple actor-networks, and it is by configuring things in particular ways different objects are constituted. Having unpacked the object "lesbian couple" the question is, will the Act constitute them as different from heterosexual married couples?

2. This composite is made up from a variety of sources, including New Zealand research by Byrne (1997) and McCaulay (1996), and the British National Gay and Lesbian Survey (1992). The chosen networks for this composite study, while not being atypical of lesbian relationships are not necessarily the most common organising patterns for lesbian couples. There was not enough research to substantiate commonalities in the lesbian communities in New Zealand. The particular organising patterns of the composite relationship have been chosen because these are the networks that challenge the patriarchal networks assumed to exist in all relationships under the new Act.

People-Object Networks

The acquisition of a family home is the material sign of a marriage. It is an expected part of marriage. Therefore, living together is one network criteria for establishing a "marriage-like" relationship under the Act. Gemma and Sarah live in the same house. However they do not live together in the sense of jointly owning the house (as equal legal owners, or in the spirit of considering themselves as equal occupiers). In this case, Gemma owns the property and Sarah pays her rent. This organising pattern undermines the Act's definition of a "marriage-like" relationship, because the couple creates no material culture to specifically support their union. It also undermines the presumption that married couples will have interdependent households, as defined by Marshall (1998, pp. 388-9). Other situations that also have the effect of challenging the understanding of marriage property are situations of communal living and separate living. Those couples living in communes share too much for the Act - they are not independent enough - and those that live separately share too little - they are too independent.

Financial Networks

In this unpacked punctualisation, Gemma and Sarah have interdependent finances. This arrangement, according to the Act, is considered to be a "marriage-like" network. Yet Gemma is also still supporting a close ex-girlfriend. According to Nardi (1992, p.114), 45% of lesbians surveyed in the 1980s considered an ex-girlfriend to be their best friend. Under these circumstances Gemma is engaging in multiple networks that could be defined as "marriage-like."

Networks of Employment

One of Gemma's networks is to pursue a career, which will be financially rewarded in the employment sector. Sarah undertakes unpaid voluntary work. Should they separate, Sarah's networks are unlikely to be financially valued in the employment sector and she may be economically disadvantaged by the separation. The Act allows for a judge to determine whether this disparity resulted from

the organisation of the relationship, hence requiring Sarah to be compensated.

Hidden networks - closeted couples

One criterion in the Act for a marriage-like relationship to exist is whether or not the persons concerned appear in public as a couple. Closeted couples practice the Enlightenment ideology of keeping their private lives private. Yet this practice challenges the ideological split of private and public. The Act may penalise them for not having enrolled in the public institutions of "coupledom." Romantic connections that are keep private may not fit the legal model of "marriage-like," despite personal understandings of the couple. Equally, closeted couples are forced to reveal the nature of their relationship if they wish to contract out of the Act, involving at least two lawyers in their supposedly private affairs.

Unintended consequences of policy solutions

It can be seen that some of Gemma and Sarah's relations are consistent with the Ministry of Justice's notion of a heterosexual marriage. On the other hand, some are not. The purpose of this composite couple is not to say whether or not this relationship, or any other, should be covered by the Act. Instead this composite couple is being used to examine the effects of the Act on the networks people choose to participate in. It also reveals how people will need to organise their relationships if they want to use the law to make them durable. The Act appears to give individuals a choice. However, whatever individuals choose the inclusive nature of the Act means that all relationships will be affected by the Act's criteria.

One type of effect is on those couples that wish to be covered by the Act. They need to conform to the Act's definition of marriage-like, whatever their personal preferences. For example, based on legal advice Nina Kaiser, and Nora Klimist, an American couple, have combined their financial, legal and medical lives in order to have their status as a couple recognised (Sherman, 1992, p. 115). The effect is that this type of Act ensures that lesbians wanting the

status of their relationships recognised need to make their partnerships durable in the same way as heterosexual married couples, as defined by the Ministry of Justice (Instone, 2000, p. 17). The second type of effect is on those that do not want to be covered by the Act. They need to contract out, or deliberately disengage from networks deemed to be marriage-like. Combined, these two types of effects mean that the Act is not based on the needs of diverse lesbians and how they choose to organise their lives, but on the needs of the dominant heterosexual norms – as defined by the Ministry of Justice. In this way the Act has durable effects. It reproduces the stable organising patterns of dependent marriages.

Implications for Policy

There are important implications here for policy making. Lesbians are not the only ones who may need to redefine the networks they participate in after the Act comes into effect. Other affected groups may include: gay men, defacto couples who only participate in some of the networks defined as marriage-like, long term flatting situations between close friends, and even married couples. For example, (depending on the circumstances of the union) if a married man supports a mistress, the mistress may be entitled to half of their relationship property. Hence, every policy solution will have unintended consequences.

What we are arguing here is that regardless of how fluid the world is, and how unpredictable the consequences of policy solutions, had an ANT approach been used to unpack the Ministry of Justice's punctualisation of a same sex couple, the particular consequences identified here could have been foreseen. Had analysis been done on how same sex couples make their relationships durable or how they will interact with the Act, these consequences and others could have been predicted. In light of these consequences, policy decisions could have been made about what impact the Act *should* have on non-mainstream networks, rather than leaving the decisions to a Judge's discretion and case law.

These implications demonstrate that a constrained version of ANT can add value by acting as a signpost, to remind policy analysts

to consider relational materiality in formulating policy solutions. This case study is one example of how unpacking punctualisations to reveal invisible network effects and not assuming all re-ordering will be the same, could help meet the needs of non-mainstream groups in policy analysis. This analysis demonstrates (in a form that can be used by the policy analyst) Kitzinger's (1987, p. 192) view that mainstreaming marginalises. She claims the emphasis should be on difference, because the focus on similarity denies political voice to the needs of people that are not mainstream. Mainstreaming undermines the struggle for gaining overt acceptance rather than being tolerated when hidden (Kitzinger, 1987, p.192). ANT has acted as a tool for making difference visible.

This case study demonstrates that ANT can be used to unpack punctualisations that assume similarity between entities. ANT makes visible the invisible effects of this Act on people's lives, and demonstrating these issues in the form of constituent concerns to the politician may result in them being addressed (or "sold" to the politician).

A constrained version of ANT

We have argued that a constrained version of ANT can make a difference to policy analysis. What about offering a new way to conceptualise our understanding of marriage, what about demonstrating the full potential of ANT? Academia has the freedom to expand its focus outside those areas specified in the policy analyst's problem definition, and the portfolio responsibility of his or her Ministry.

Using a different version of ANT, for example, analysing the Property Relationships Act as a boundary object, may provide further insights into how society conceptualises and lives the concept of marriage. According to Star and Griesemer, to "get things done" society needs boundary objects. A boundary object is an entity that intersects social worlds, by satisfying the informational requirements of each of them. Boundary objects "are plastic enough to adapt to local needs ... yet robust enough to maintain a common identity" (Fujimura, 1992, p.173). When the Ministry of Justice applied the

Matrimonial Property Act to all relationship types it created a boundary object that intersected several social worlds. It gave the impression it was robust enough to cover all relationship types. This was because it left to the judge's discretion how many of the networks deemed "marriage-like" a couple had to participate in. However, in addition to boundary objects, Fujimura (1992, p. 173) argues that stabilising action requires standardised methods. So it is not just the objects of marriage that are required to be the same (the Matrimonial Property Act), but also the way the Act is used. While law is premised on an assumption that there will be like verdicts for like cases, the multitude of difference that exists in relationship forms complicates things. To achieve societal stability, consistent application of the Act requires a standardisation of what "marriage-like" is. This ensures alterative networks conform to heterosexual norms (as defined by the Ministry of Justice). This implies that the effect that this law has of mainstreaming all relationships is not an "unintended" consequence of the policy, but in fact is part of the translation processes whereby alternative organising processes (gay relationships) that have the potential to destabilise society are translated into reinforcing networks. The Act will be used to reinforce the weak ties that make up marriage through the creation of institutional culture to regulate it.

This stabilisation process is required to support the foundations of the economy and law – private property. Such a conclusion would support Champagne's analysis of the American Conservative's agenda. He states that Pinkerton, a right wing conservative politician, "supports gay marriages because at the heart of conservatism is the preservation of the family unit. The family fosters social cohesion, emotional security, and economic prudence" (Champagne, 1995, p. xxviii). That is, the family creates an atmosphere of dependence on each other and the need to preserve society because they have a stake in it. Marriage is an institution that binds people to society's dictates. Continuation of the institution becomes more important than the gender of the participants enrolling in the institution. Performance of the enrolment, the acting out of the dependence of people and the State in family units is vital to the continuance of present society. To accept homosexual marriage, or in New Zealand's case regulate homosexual couples

into patriarchally defined marriage-like relationships, allows society and capitalism to continue, adapted to include homosexual unions but mainly undisturbed.[3] The Act enshrines in law not just the definition of what is "marriage-like" but makes material the view that this is how marriage-like relationships should be. That is, they should support present property arrangements. The current Government in New Zealand has made no comments about wishing to destroy the fabric of New Zealand society (either capitalism, or the family). Consequently, as interesting as this conclusion may be to the academic, it is completely outside the constraints placed on a policy analyst to define this situation as a policy problem.

Conclusion

The purpose of this paper was to consider whether a constrained version of ANT could add value to policy analysis. What this case study has demonstrated is that ANT can be of use to policy analysts in making visible the elements, networks, and organising patterns lived by minority groups. This visibility increases the potential for minority needs to be included in mainstream policy analysis. This is the value that ANT adds to policy analysis within the constraints of the political/policy world. Developing a constrained version of ANT means that this paper bridges a gap between academic analysis and policy solutions in the political world (Edwards, 2001, p.1).

The main critique of the constrained version of ANT is that it does not utilise the full potential of ANT to analyse this case study. As demonstrated this is because the full analysis stimulated by ANT could not be used in the pre-existing (or at least pre-conceived) policy world. Specifically, full ANT analysis would shift the results of the analysis outside the parameters of the political/policy world. That is, outside the Labour and Alliance Party manifesto, the Coalition Agreement and the portfolio responsibility of any specific Cabinet Minister. In effect, this would marginalise any change the new analysis could stimulate.

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3. Bech goes further to suggest Denmark's registration system enshrines same sex couples as second class citizens, forever in "marriage-*like*" relationships (Bech, 1992, p.138).

In the form presented in this paper, the constrained version of ANT errs towards satisfying the master of the social world with the power to make change – the policy analysts and the politicians. In this form, ANT may be "sold" to the politician, thus making social science matter (Flyvbjerg, 2001, p.166). This constrained version of ANT could be visualised as a boundary object. Once the boundary object is established in common between academia and the policy world, ANT can be translated into the standardised methods used by policy analysts. This would add value to policy analysis by including some of the diverse needs of minority groups into the policy solutions "for sale" to Ministers.

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Actor Network Theory Let Loose: Ferality, Colonialism and Other Material Relations

Bruce Curtis

Abstract

This paper discusses Actor Network Theory (ANT) and notions of colonisation, ferality and decolonisation. Attention is paid to the colonisation of New Zealand and in particular the flora, fauna and farming systems which secured the colony. Three interrelated elements of ANT are used in the discussion of the materiality of European colonisation and settlement: heterogeneous networks; inscription and translation; and cold and hot situations. Notions of ferality are critiqued as part of an overstated conception of decolonisation. Attention is drawn to "Homestay New Zealand" as a likely future world state. ANT is presented as method rather than as theory.

Introduction

> To an important degree, today the same breeds of animals graze the same English grasses, by the same methods of management, and produce wool, meat, or butterfat for the same market in both countries... Nevertheless, much of the similarity of land use today must be attributed to the continued, direct importations of men, animals and ideas from what we must, in all fairness, term the hearthland (Britain). (Clark, 1949, p. 166)

As we have seen in previous contributions to this special issue, Actor Network Theory (ANT) draws attention to connections between humans and non-humans. In this respect, Andrew Clark's historical geography of the "people, plants and animals" that colonised the South Island is, in effect, a prototype ANT analysis. In it he emphasises the web of relationships between actors and actants, the irreversibility of the process of colonisation and, even more interestingly, its fragility (1949, pp. 381-386). In this article I want to suggest more specifically that ANT offers a way to decode the heterogeneous networks of New Zealand. It suggests a way to

distinguish between productive and unproductive land and biota. It mingles problems of calculation with those of culture (notably, re- and de- colonisation). Three interrelated elements of ANT are used in the following discussion of the materiality of European colonisation and settlement: heterogeneous networks; inscription and translation; and cold and hot situations.

Heterogeneous networks: New Zealand as neo-Europe

From the extraordinary manner in which European productions have recently spread over New Zealand, and have seized on places which must have been previously occupied by the indigenes, we must believe, that if all the animals and plants of Great Britain were set free in New Zealand, a multitude of British forms would in the course of time become thoroughly naturalised there, and would exterminate many of the natives. On the other hand, from the fact that hardly a single inhabitant of the southern hemisphere has become wild in any part of Europe, we may well doubt whether, if all the productions of New Zealand were set free in Great Britain, any considerable number would be enabled to seize on places now occupied by our native plants and animals. Under this point of view, the productions of Great Britain stand much higher in the scale than those of New Zealand. Yet the most skilful naturalist, from an examination of the species of the two countries, could not have foreseen this result. (Darwin, [1859] 1996, p. 272)

So wrote Charles Darwin in his *The Origin of Species*. The chapter in which this passage appears is entitled "On the State of Development of Ancient compared with Living Forms." In this chapter New Zealand flora and fauna are characterised as archaic, less developed by the process of evolution, by natural selection, and consequently readily displaced by their modern counterparts. This is an interesting argument. Some 150 years after Darwin wrote we (New Zealanders) are indeed surrounded by other introduced species, with an estimated 47% of all species in New Zealand classified as introduced (van der Pluijm, 2001).

Further (and thoroughly anecdotally) by far the most numerous species in New Zealand are introduced ones (e.g.: bees, cats, cattle,

clover, dogs, earthworms, eucalyptus, goats, grasses, mice, opossums, pinus radiata, rats, sheep, salmon, sparrows, trout) while many native species are putatively endangered (e.g.: black mudfish, Chatham Island warbler, crested penguin, kereru, kiwi, short-tailed bat, shore spurge, spiral sun orchid, and other equally obscure biota). At the same time, many of the introduced species are distributed throughout New Zealand while increasing numbers of native species are reduced to reserves and island habitats. Arguably it is introduced species that have become the ubiquitous animals of New Zealand. Consider birds. It seems likely, for example, that most New Zealanders have never seen a kiwi, apart from in zoos, and even then there is no guarantee of sighting this icon.

Also, consider landscape, land use and the view from the automobile. The changes in view as we drive through New Zealand are largely variations in arrangements of introduced species overlying topography: rolling hills dotted with black and white Friesian cows placidly munching pasture grasses; or plains dotted with sheep doing the same; or endless pine forest plantations; and so on. This is not to deny the stands of mighty kauri or swathes of uncut rimu which figure prominently in tourist brochures (see photograph 2), but are typically found some way off the beaten track (or at least the State highways) and have survived thus far mainly because of their isolation.

Of course Darwin's claim that British productions would displace indigenous flora and fauna if "set free in New Zealand" is impossible to assess because it ignores the role of humans. That British flora and fauna have displaced their New Zealand counterparts is undeniable but this dislocation was hardly the result of the process of evolution or natural selection. Rather, the confrontation was manufactured. It is an example of what John Law (1999) calls "relational materiality." Perhaps a better description of the introduction of species is then: "Europeans brought a portmanteau biota that unconsciously worked together to favor the spread of European settlers, European power, and European species, and thereby to create ... neo-Europes" (McNeill, 2000).

In terms of ANT the neo-Europe we live in, New Zealand, is an exemplar of the heterogeneous character of actor-networks. In the

examples above we see complex linkages of human and non-human elements or entities. Further, actor-network theory grants all entities (human and non-human) an explanatory status. Actor-networks are heterogeneous in the sense that their construction is explicable in terms of all its elements (human and non-human). Thus the construction of the neo-Europes, including the mixture of indigenous and introduced species currently located in New Zealand can be explained in terms of all the interactions between all the entities - including the non-organic entities like the weather.[1] Of course this isn't really feasible and at the same time some entities and interactions will be privileged over others. Michel Callon (1986) uses the notion of "investments of form" in this regard. Investments of form are ultimately hierarchical and refer to the resources deployed by actors / actants in order to construct networks. Researching actor-networks can be said to centre on which investments of form are successful and thus how networks are constructed (translated).

Inscription and translation: Scene in a paddock at Matamau

From the perspective of ANT the "thought experiment" proposed by Darwin is misleading because it brackets all the investments of form made by humans in the process of colonisation. British productions were not "set free" *en masse* in New Zealand but in piecemeal fashion and typically in a deliberate effort to replicate aspects of British rural life. For this reason McNeill's use of the notion of portmanteau biota (after Crosby, 1986) is a far better

1. Manuel De Landa argues for a symmetry between human and some non-human actors. Ascribing such symmetry is one of the key critiques made of ANT (Pickering, 1995). De Landa's attribution is made on the basis of 'self-organisation'. "For instance, a hurricane is considered by meteorologists as a self-assembled steam roller, running things through a cycle of cold and hot, running out of energy, and it keeps its shape long enough for us to name them—we give them names, we ran out of women's so now we're giving them men's names. We give them names because they are creatures which inhabit the atmosphere. However, these are creatures that create themselves. They don't have genes, they don't have anything that tells them what to do. They are completely spontaneous creatures"(De Landa, 1996).

approximation of the construction of a new network. William Pember Reeves best describes the process in New Zealand:

> Pastoral settlement speedily overran such a land, followed more slowly and partially by agriculture. The settler, not with axe and fire to ravage and deform, but as builder, planter, and gardener. Being in nineteen cases out of twenty a Briton, or a child of one, he set to work to fill this void land with everything British which he could transport or transplant. (Reeves, 1998, p. 36)

While the creation of the void New Zealand as neo-Europe is yet to be properly documented by sociologists it is captured in a multitude of photographs of the era (see photograph 1). In this respect, photograph 1 is by no means unusual, similar ones are displayed in most museums around the country.

Photograph 1 was taken by William Williams in the Hawke's Bay region sometime in the 1880s. Like most photography of the period it is a posed composition. The small family in the photograph are probably wearing their "Sunday best" although father has removed his jacket. Nevertheless, the image captures something of the struggle to bring native bush into production. It encapsulates a moment in and the movement of the colonial frontier. Here domesticity confronts the frontier. Proud husband and wife are featured with their child, surrounded by new farm buildings, presumably which are built in part from the recently felled trees that litter their front paddock. If the single suckling calf is any indicator this is an early autumn setting and the weather is likely to be chilly and damp. Smoke billows from the farm house chimney, within stacked wood is burnt for warmth and possibly to fuel a range cooker. Significantly the new farm house is surrounded by young pine trees (providing shelter in lieu of the bush). Beyond the paling fence lies a ring of dead native trees and, looking up the valley, is a stand of bush awaiting the farmer's saw, axe and fire. There is energy in the photograph for, although the couple looked tired, there is that expression of determination. The message is clear. The bush which still encircles the farm will be cleared in the spring. Soon after the fences which form the current boundaries of the property will be pushed up the valley. The cattle will have more grazing, their

numbers can expand, sheep may be introduced and the family will enjoy a productive farm.

Photograph 1: Scene in a paddock at Matamau

More specifically, the photograph can be understood in terms of two important tenets of ANT: inscription (Akrich and Latour, 1992) and translation (Callon, 1991). Inscription refers to the way artefacts embody and manifest patterns of use. This conception of artefact eschews both deterministic and voluntaristic readings. That is, artefacts do not determine usage (e.g., usage is hardwired) nor are they appropriated flexibly (e.g., usage is the result of limitless interpretation). Rather, inscription is the concretisation of anticipated usage and, as such, the limitation of unanticipated usage. Translation is the process of negotiation by which actor-networks are rendered stable and by which the interests of some actors are advanced over others (in this latter sense, translation is also transformation). Translation centres on inscribed artefacts and involves re-

interpreting or appropriating other's interests as one's own through these artefacts. With the process of translation specific interests (inscribed in artefacts) are presented in multiple ways thereby mobilising broader support and simultaneously stifling alternatives. Actor-networks can be said to emerge only with translation (Callon, 1986). A key issue in such translation is irreversibility. Here irreversibility refer to the strength of inscription or the effort it takes to oppose or work around these artefacts. Callon (1991, p. 159) considers irreversibility to depend on: (i) the degree to which it is impossible to go back to a point where that translation was only one amongst others, and (ii) the degree to which it shapes and determines subsequent translations.

We can begin an analysis of photograph 1 firstly by identifying the artefacts and speculating on inscription and translation. Key artefacts include: the home, the buildings and fencing, the tree stumps, the paddock, the livestock, and so on. Each of these artefacts are associated with explicit anticipations of usage. All seek the creation of a "Britain of the South" in the particular conditions found in the colonial frontier and foster a form of family-labour farming (Friedmann, 1978). The house is made of materials readily available in the region (i.e., hand sawn wood and corrugated iron as opposed to stone and slate or thatch) and is designed for the patriarchal nuclear family. That is, it houses family members who work the farm, rather than providing bunkhouse conditions for hired labour (in New Zealand cowboys did the milking!). Other artefacts point to the anticipated land usage or farming system. This will involve: clearing the land of trees by combination of fire and felling, removing the stumps (where possible), planting pasture grasses (the burn off will provide an initial fertility boost to the soil) and clover (bee hives will be kept somewhere on the property), fencing, running cattle and latter sheep (cattle are more hardy than sheep and also tend to compact pastures).

The artefacts of family-labour farming mentioned above, and the many others that are not, inscribe a decisive channelling of the biota within the networks of the farm. From the perspective of the indigenes the clearing of bush, creation of a farm, represents a loss of species and of habitat. However it is important to remember that

the now much lamented reduction of bio-diversity was a prerequisite of family-labour farming in New Zealand. After all –from the perspective of the colonial farmers- the remnants of indigenous flora and fauna acted solely to reduce the productivity of pastureland. Typically such farming systems are referred to as monocultural. Clearly, this is a typification as they never reach this ultimate state, but they are certainly a reworking of the "primitive habitats" that existed before.

Likewise it is hard to imagine a better example of the irreversibility of translation. Even if the Matamau farm in photograph 1 failed (as many did in the economic slumps of the 1880s and 1920s) a return to the pre-colonial conditions for biota is not likely, or even possible. This expression of irreversibility highlights ways in which inscribed artefacts become actants. In other words, all of the composite parts of the farming system are inscribed and this anticipated usage can be understood as a form of material delegation. Actants operate in lieu of human actors. For example, imagine that the family shown in photograph 1 walked off their farm. The consequences for the networks of the farm would be dire but would take some time to work through. Bees and bumble bees would continue to fertilise the clover. Pasture grasses would continue to grow (more slowly without the addition of super-phosphate). Sheep and cattle would continue to graze (for some time the dairy herd would walk themselves to milking). The fences would still pen livestock. In short, the abandoned farm would operate "as intended" for days, weeks or even months albeit at a much lower level of production. And if left abandoned even decades latter the arrangement of biota would not be that of pre-colonial times but of hybrid forms.

Feral species and Antipodean hybrids

In terms of ANT the Matamau farm and the tens of thousands like it are the successful imposition of design, inscribed in a host of artefacts, across actors and existing networks. Translation is at all times the fabrication of new networks from existing networks. In our scenario void New Zealand is transmographied by waves of

biota and their arrangement on farms (and suburbs, towns, cities and even chosen wilderness). The result of this translation is designated neo-Europe or the Britain of the South or "far flung farm." In this reading colonial intentions and especially irreversibility is prioritised. However, irreversibility does not eliminate unintended consequences. Indeed for some theorists the unintended consequences can be more interesting than the intended. Such is the case for Nigel Clark (1999; 2001). Clark has a somewhat subversive take on the process of colonisation. For Clark (and artist John Lyall) colonisation can be understood in terms of the feral (2001, p. 92): "While some domesticated or semi-domesticated species in New Zealand went wild of their own accord, others were intended to be wild, though often not as wild as eventuated."

The feral character of many introduced species in New Zealand is undoubted (e.g. gorse, opossums, rabbits, stoats and weasels). Yet locating feral in the heterogeneous networks of New Zealand is problematic. In one sense domesticated species running wild are the exemplar of heterogeneous networks (e.g., echoes of the scallops of Saint Brieuc Bay made famous by Callon, 1986). At the same time, the category of feral tends to be applied retroactively (and politically). Thus, the Department of Conservation (DoC) cull of cattle on the Auckland Islands, geese on Lake Ellesmere, horses in the Kaimanawa ranges, thar in South Westland and rosellas on the North Shore (to name but a few examples) enforces the (re)categorisation of species as feral (at least by the officers of DoC). Ten years ago none of these species would have been considered feral and worthy of eradication as pests. Quite the opposite. Until recently each of these species constituted important resources; for hunting, companionship, ascetics, and so on.[2]

2. Sandlos (1997) describes such a social construction of scientific knowledge used in the debate about the control of a water weed, Purple Loosestrife, in North America. This brings together diverse actors, including hunters, scientists and administrators. The result is a process of translation which serves sets of interests. "For the hunting groups that have been supporting Purple Loosestrife control, and for their scientific allies in the universities and government agencies devoted to wildlife management, the wetland exists merely as a waterfowl producing factory, and anything, be it Purple Loosestrife or cattails,

Clark rightly mocks the policies of DoC as evidencing a "metaphysics of conservation." The departmental search for a return to the pristine conditions of pre-colonisation constitutes a sort of biotic lebensraum in which a hierarchy of purity determines the fate of entire populations of species.

ANT diverges from Nigel Clark in at least two areas. Firstly, the notion of "ferality" understates both inscription and translation. Actually, Clark seeks to rework the notion of Antipodean. His intention is to inform the concept with more than simple opposition to the Northern Hemisphere. This is right, proper and perfectly valid as literary device and theory-building. Ferality constitutes a prioritisation of hybrid forms rather than the pure species of "the hearthland." Indeed it seeks to smear such totalising categorisations *per se*. It is somewhat weaker though as a means to explain the world. The sociology of everyday life in New Zealand, let alone its agronomics, botany and biology, suggest that ferality is a pertinent but second order descriptor for New Zealand. In short, neo-Europe is a more accurate categorisation than feral. Secondly, Clark falls into a voluntaristic reading of inscription and consequently the irreversibility of colonial translation becomes trivial. Ultimately this is the confusion of text for context. Not making this substitution is of course what makes ANT interesting. While actor-network theory is happy to draw upon semiotics and to foreground the role of texts in science the process of understanding translation is always a matter of relational materiality.

This is not to say that Nigel Clark is incorrect in his analysis of DoC. There has been a sea change in DoC policy and arguably more broadly. In this respect, arguments about ferality as category and DoC policies aren't so much oppositional as comparable. The potential for change, including the problem of feral species, was recognised early by Andrew Clark:

Footnote 2 continued

that threatens this assigned sociological role must be exterminated as a form of pollution regardless of the effect on the wider wetland community." Clearly the policies of the Department of Conservation could be also unpackaged in this way, although tourist operators rather than hunters are likely to emerge as a favoured group.

> To a considerable degree, however, both islands of New Zealand seem to have finished borrowing from any source... A greater probability for change would be that the demand for New Zealand's present pastoral products should greatly decrease... But whatever the future may have in store there seems no immediate prospect of alteration of basic rural patterns in the island. (1949, p. 386)

Prescient stuff and, it should be noted that, the author made his judgement a quarter of a century before Britain joined the European Community.

Hot and cold situations

The quotes lifted from Reeves and Andrew Clark point to a particular way of understanding the European colonisation and settlement of New Zealand. Indeed they form part of an historical canon which can be encapsulated as the triumph of the nation-state. Until fairly recently this was the authorised view. Its touchstones included: the Liberal Party, four seats for Maori, bursting up the big estates, the rise of cockies, refrigerated shipping, votes for women, a national identity forged in war (WW1), and so on. Hopefully these snatches will be familiar to most readers! At present, in the humanities and social sciences at least, New Zealand as neo-Europe is a decidedly unfashionable characterisation. For example, James Belich's latest tome, *Paradise Reforged*, posits that New Zealand has entered a phase of decolonisation. The break points for Belich (2001) are the 1880s and the 1970s, at which times New Zealand entered phases of (re)colonisation and latterly decolonisation. Central to these moments are New Zealand's relationship to Britain and, in particular, our status as her far flung farm. In part Belich provides an update to the historical canon. Probably most indigenous sociologists and many introduced ones would argue similarly. Some might make careers out of doing so. This is wishful thinking in the main but as an endeavour on the part of some local interests, including the Department of Conservation and Departments of Sociology, likely apt.

To clarify: I am arguing that the concept of decolonisation has limited utility in terms of the flora, fauna and farming systems

unleashed by waves of colonisation. The material relations (to switch John Law's phrasing) of colonisation remain, notably the portmanteau biota -animals, plants and diseases- which secured New Zealand (as well as Australia, most of North America, southern Brazil, Uruguay, and Argentina) as neo-Europes (Crosby, 1986). However, what has changed is –maybe- the extent to which decolonisation is an authorised goal (the extent to which it is a practical one is another issue altogether). In this respect, emphasising the putatively feral character of some introduced species is an effort anticipating a discourse of decolonisation.

It is not an intention of this paper to resurrect the historical canon (which of course told the history, interpretation and the intentions of the ruling elite). Nor is it to take a position on Belich's delight of decolonisation (although how sixteen years of asset sales to foreign shareholders could be encapsulated as decolonisation is beyond this sociologist). The focus is on actor-network theory. Fortunately, ANT does have something to say about the relationships between human and non-human actors which has thrown up both the DoC policies and the concept of ferality. Pertinent to this controversial situation is Callon's idea of cold and hot situations. Cold and hot situations are moments in the process of translation. They relate to the possibility for calculative agents to operate and to frame the world. In cold situations: "Actors are identified, interests are stabilised, preferences can be expressed, responsibilities are acknowledged and accepted. The possible world states are known or easy to identify: calculated decisions can be taken" (Callon, 1998a, p. 261). Hot situations by contrast provide a dilemma for calculative agents:

> In hot situations, everything becomes controversial... These controversies, which indicate the absence of a stabilised knowledge base, usually involve a wide variety of actors. The actual list of actors, as well as their identities, will fluctuate and the course of the controversy itself and they will put forward mutually incompatible descriptions of future world states. (Callon, 1998a, p. 260)

The rhetoric about decolonisation, the policies of DoC, the discovery of ferality and associated historical revisionism are all markers of a hot situation. They are all dilemmas for calculative agents. Consider

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our farming family in their paddock at Matamau in the 1880s. These pioneers were operating in a cold situation. Their roles, preferences and goals were clearly defined as were the measures of success or failure. Ownership of the land was secured and able to be valorised. The divisions were clear between wild and domesticated, between productive and unproductive species. The task at hand for our farmers was to bring unproductive bush (and all the biota it supported) into production. This required eradication of the indigenous order and its replacement, insofar as possible, by an introduced one. Success hinged on the ability to accomplish this improvement, to run livestock for wool, meat or butter fat (destined for domestic and British markets) and to service the debts owed to British banks and stock and station firms. Our farmers in Matamau were of course part of greater networks encompassing a range of calculative agents (Callon, 1998b): other farmers, financiers, suppliers of farm materials, processing firms, shipping lines, wholesalers, retailers and consumers, and so on (Curtis, 2001). Further, the process of calculation which allowed the integration of these networks shared an understanding of future world states: New Zealand as far flung farm.

Belich is probably correct in seeing Britain's entry into the European Community as an economic and cultural rupture for New Zealand(ers). In this sense the argument about the politics of decolonisation becomes "did he jump or was he pushed?" Certainly, Britain's unwelcome decision forced a reworking of the dairy, meat and wool industries that is still unresolved and has resisted the efforts of a range of calculative agencies (Curtis, 2001). In turn, it is increasingly difficult to govern or to find a way through crises whether it be via "Think Big," "neo-liberalism" or whatever the Labour-Alliance Government has cobbled together. These issues go beyond this paper.

What of Andrew Clark's prognosis?: "But whatever the future may have in store there seems no immediate prospect of alteration of basic rural patterns in the island." Here, it is important to reiterate that hot situations involve the presentation of mutually incompatible future world states. Determining the boundaries and implications of ferality is an exemplar of a hot situation. Agreement on what is

and what is not feral can only be found in a situation that is cold. As discussed above, some future world states proffer a strong (re)categorisation of feral.

The coming into play of ferality suggests a partial reversal of the hierarchy of species underpinning colonial New Zealand. In terms of ANT it highlights translation as process. Translation is never completed and never fixed. Situations can never be completely cold. Rather translation shapes and determines future translation. Hence the utter unravelling of the flora, fauna and farming systems which secured colonial New Zealand is unlikely (impossible!). Yet ferality has increasing pertinence for DoC and conservationists, while decolonisation excites local historians and sociologists. Forecasting is difficult. In the midst of a hot situation speculation about future world states can a best involve an examination of actors, their investments of form and the process of inscription. It remains speculation and requires idea experiments of the sort used by Charles Darwin (see above).

Home-stay New Zealand: a new heterogeneous network?

Photograph 2 shows a big kauri tree surrounded by tourists. It is presented as encapsulating the future world state proffered by DoC. It is also presented as metaphor for what might come after New Zealand as neo-Europe/Britain of the South/ far flung farm. This version could be called "Home-stay New Zealand." Home-stay New Zealand can be thought of in terms of the heterogeneous networks that might emerge from the present hot situation. Its most important elements derive from existing investments of form, including: the commercialisation of the ferality project championed by DoC; the Maori renaissance; the economic muscle of tourist operators; the centrality of agriculture and horticulture to the New Zealand economy; popular conceptions of rurality; and the low wage, low interest rate, low exchange rate strategies of Government. Fundamentally, Home-stay New Zealand augments the traditional export sector with tourism. It constitutes ferality in much broader terms in the sense that there is an economic imperative to restore (or, if budgets are tight, to simulate) the pristine conditions of pre-colonisation.

Photograph 2: Tane Mahuta
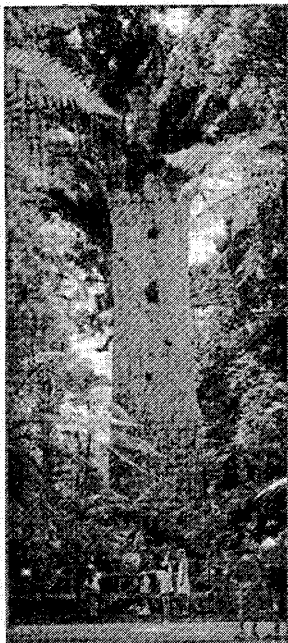
In this scenario Home-stay New Zealand inscribes rural land and biota in three productive categories. First, is the colonial version: dairying and dry-stock farming augmented by new forms of farming, plantations, horticulture and viticulture. Second, is the theme park version. This is a hybrid form of land use given over to tourist pursuits. For example, angling for trout, water sports on hydro lakes, shooting, bungy-jumping, and so on. Third, is the reserves and island habitats championed by DoC. The networks of Home-stay New Zealand diversify arrangements of land and biota considered productive while simultaneously broadening and contextualising the category of feral. As a result feral species are besieged from two sides. Feral or potentially feral species will at best be tolerated in the theme parks, or perhaps they will themselves become a theme park. On farmland the struggle will continue to improve the productivity of land / pasture. This engagement results

in its own categorisation of feral (e.g., TB carrying opossums, pasture destroying grass grub). However the indigenous remnants on farmland are likely to enjoy a new status; protected through voluntary covenants or by Governmental degree. Insofar as farms are the key sites of home-stays, inclusions of forest tracts, bush, swamp (all functioning as scenery) act to improve productivity / profits. In the parks and nature reserves the feral category will be broadened to include all non-indigenous species and DoC officers will be free to purge the introduced offenders.

Of course the networks of Home-stay New Zealand are yet to be fully inscribed and translated. The problems for calculative agents are many. The situation needs cooling. Most important is the problem of calculation. Photograph 2 highlights some of the dilemmas for calculative agents in new conditions of complexity. It should be noted that this big tree is named: Tane Mahuta. This reflects the need for increased complexity and appreciation of detail for any successor to neo-Europe. For the indigenous trees in photograph 1 the designation of "bush" sufficed for the settlers. In contrast the naming of Tane Mahuta in tourist material expresses a respect for Maori sensibilities, the demands of modern marketing and not a little anthropomorphism. Photograph 2 also suggests the nested characteristics of a Home-stay New Zealand. Reserves are nested in farmland but must provide admission to tourists. This is a problem of ready access and enclosure. Similarly, conservatories are nested in farmland but must allow for the successful operation of the farm. On the one hand, the roading network is extended to the remote places where indigenous flora and fauna can be found. On the other hand these remnants are surrounded by fences and "Do Not Touch" signs.

Coda: ANT as method, agnosticism, symmetry

One of the claims about ANT is that it eliminates the micro-macro division. Such is the intention here. At the same time, there is no real agreement on what ANT *is*. Actor-network theory seemingly refers to a large, diffuse and, if a recent collection on the topic is any indicator, an increasingly riven approach to research (Law and

Hassard, 1999). In that collection, *Actor Network Theory and After*, the founding fathers of ANT review the approach and offer prospects for it. However there is no great agreement among the cognoscenti as to what constitutes ANT nor to its future. John Law maintains that as theory ANT is contradictory, irreducible and oxymoronic (1999, pp. 1-14). Bruno Latour argues along similar lines but seeks to "abandon" ANT and to start afresh (1999, pp. 15-25). Michel Callon is more optimistic (and coherent) in his conclusions about ANT but only insofar as: "ANT is not a theory. It is this that gives it both its strength and adaptability. Moreover, we never claimed to create a theory" (1999, p.194).

Maybe then ANT should be AN? At any rate the lack of a theoretical status for ANT is practically more a strength than a weakness. Certainly the approach used in this paper has been to use ANT as a method rather than as a theory. A theory provides a rationale for action, method provides a means of investigating action. Further when viewed as a method two of the main complaints against ANT evaporate. The first complaint is that ANT is agnostic in its orientation (Haraway, 1997). ANT supposedly doesn't try to distinguish between good science and bad science. As a theory the approach is tangential to humanism. However, as method this agnosticism is a saving grace. The second complaint is of symmetry (Pickering, 1995). Here ANT practitioners are accused of making human and non-human actors equals in explaining heterogeneous networks. Pickering asserts that while both humans and non-humans deliver action the intentionality of action is the key. This is a valid but inconsequential point. After all, Latour did not write *The Pasteurisation of France* for bacteria and despite the make believe at the beginning of De Landa's *War in the Age of Intelligent Machines* his only readership is human.

This paper has offset a discussion of ANT against notions of colonialism and ferality. Classically ANT is used to examine the construction of scientific knowledge and the success or failure of various discoveries. Conceptualising the arrangement of colonial flora, fauna and farming and making a prognosis (idea experiment) about future world states of New Zealand is arguably overextending ANT. Regardless, as a sometime user of ANT, its appeal is precisely

the focus on relational materiality and its cognate links to historical materialism. The arguments marshalled in this paper about the history and contemporary status of a neo-Europe consciously owe more to V.I. Lenin's *theory* of imperialism that to semiotic analysis. Consequently ANT is used to broaden and reflect on a critique of political economy and a canon of work about New Zealand.

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Postscript: Entanglement and Granularity

Mike Lloyd

Introduction

You can't go far these days without seeing some reference to Actor Network Theory (ANT), or at least a pithy quote from its most well-known progenitor, Bruno Latour. Here, for example, is how Bauman begins one of his latest articles: "Said Bruno Latour: "we might be leaving the time of time - successions and revolutions - and entering a very different time/space: that of coexistence" (2001, p. 137). Further down the paragraph, Bauman continues (without giving the exact source): "There is still an arrow of time," says Latour, "but it no longer goes from slavery to freedom, it goes from entanglement to more entanglement" (2001, p. 137).

Latour is indeed very quotable, but as the above articles illustrate many others have now contributed to the large and significant body of ANT work, which is itself "entangled" with other cognate approaches. Such entanglement means that there is no possibility here of fully discussing the spread and content of this literature. So, in the short space available I will recap two key ANT arguments, and then briefly discuss some ongoing questions and critical comments.

Two key arguments

1. Move beyond the social/Society

As has been well emphasised above, ANT has helped open sociologists' eyes to the entanglement of humans and non-humans (as Holm and Kendall note, Callon has also made recent use of "entanglement"). Latour has been arguing for some time that sociologists should replace the word "social" with "association," the point being to emphasise how humans are entangled with things, objects, materials, technologies that, like us, are "actants" (i.e. they do things). This can be well understood through Latour's distinction

between complexity and complication, which he illustrates by the example of baboon troops:

> ... society is not made up of social elements, but of a list that mixes up social and non-social elements. This becomes clearer when we express its opposite: when a society is made up of social elements alone it does not have a stable structure. To find such a situation one has to study not human but animal societies.... I have shown how baboon societies, for instance, manage their intense social lives without the use of what we call extrasomatic resources. They build the collective body with their own bodies alone, using no resources beyond these. This leads to the extreme *complexity* of their social skills .... (Latour, 1986, p. 275)

Here, "complexity" refers to the simultaneous presence of a great number of variables, which cannot be disentangled. Take the example of dominant males. To reach the top they must be skilled at fighting, however, these skills (i.e. variables) are always entangled; they can never be entirely "black boxed," for *at any time* another male may challenge their dominance. Hence, the social order of baboon troops is very limited in nature, approaching a Hobbesian "war of all against all."

In contrast when we look at human groups, the use of material resources and symbols add *complication* to social complexity:

> Something is complicated when it is made of a succession of simple operations, which can be treated one by one, and folded into one another (computors are an exemplar of a complicated structure). Let us say ... that we descend from monkeys to humans, falling from high complexity to high complication. At each point, our social life appears always less complex than that of a baboon, but it is almost always more complicated.... Amongst humans ... an interaction is actively *localized* by a set of partitions, frames, umbrellas, fire-breaks, which permit passage from a situation that is complex to one that is merely complicated. While I am at the counter buying my postage stamps and talking to the speaking grill, I don't have my family, colleagues or bosses breathing down my neck. And, thank heavens, the server doesn't tell me stories about his mother-in-law, or his darling's teeth. A baboon could not operate such a felicitous channeling. Any other baboon could interfere in any one interaction. (Latour, 1996, p. 233)

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Complication is why ANT has made so much of objects, even talking of them having agency. Understandably, this has drawn a great deal of bemused reaction and critical comment, however, such responses are relatively easily dissolved. The point is this: when objects are said to "act," unlike humanists and interpretivists who deny any agency to objects, ANT is not giving more than a *share* of agency to the object. Under ANT, any object is never ontologised as standing alone in the first place (I take this point from Munro, 2001). It is always a part of an actor-network, and each entity in that network only acts in relation to and with other humans or nonhumans. Hence the talk of "relational materialism," which is well covered above by Curtis, Denton, Matthewman, and Hill and Smith. Relational materialism is simply another way of saying that we live in a time of entanglement.

2. Drop the micro/macro distinction

The classic ANT statement on the traditional sociological distinction between the micro and macro remains Callon and Latour (1981), however, Law also neatly encapsulates the argument:

> ... it is important not to start out *assuming* whatever we wish to explain. For instance, it is a good idea not to take it for granted that there is a macrosocial system on the one hand, and bits and pieces of derivative micro-social detail on the other. ... Instead we should start with a clean slate. For instance, we might start with interaction and assume that interaction is all that there is. Then we might ask how some kinds of interactions more or less succeed in stabilizing and reproducing themselves: how it is that they overcome resistance and seem to become "macrosocial"; how is it that they seem to generate the effects such as power, fame, size, scope, or organization with which we are all familiar. This, then, is one of the core assumptions of actor-network-theory: that Napoleons are no different in kind to small-time hustlers, and IBMs to whelk-stalls. And if they *are* larger, then we should be studying *how* this comes about – how, in other words, size, power, or organization are generated. (Law, 1992, p. 380, original emphasis)

This stance also explains why ANT work is so full of empirical detail: it makes a serious attempt to put aside assumptions about what is

macro or micro, instead seeking to detail how things and people are made larger or smaller. This cannot be done by theory alone, but requires careful attention to detail and concerted research into particular cases.

In this regard, anticipating a charge of internal contradiction, Lee and Hassard note something important about ANT: "In short, ANT is *ontologically relativist* in that it allows that the world may be organized in many different ways, but also *empirically realist* in that it finds no insurmountable difficulty in producing descriptions of organizational processes" (1999, p. 392). Whether or not you agree with the first option, the second seems entirely sensible: the research and user communities addressed by ANT work can examine and challenge the wealth of detailed description it provides. And, as Austrin and Farnsworth argue so well, the focus on description does not preclude ANT developing a "feeling for genre."

Challenges: Granularity and granting

Some ongoing questions (and critiques) of ANT have been noted by contributors above. The two questions discussed here reflect my own interests, nevertheless, they are likely to be relatively commonly asked.

First is the question, "where does description of an actor-network stop?" Surely, in a trivial sense, everything is connected, which raises the non-trivial question of when description of network elements and connections should stop. The recent introduction of the notion of "granularity" by Schegloff (2000) nicely exemplifies this problem. If two people are talking on a phone, the simple enough question "where are you?" arises. This calls for a "formulation of place" and hence the question of granularity:

> ... granularity showed up as an aspect of the range of potential answers to questions like "where are you," – including such reference forms as "back in the States," "in California," "in L.A.," "in Topanga," "at home," "in the study," "at my desk," "at the computor," "on page 2," etc. The "degree of resolution" or order of place organization invoked by each term "zeroes in" or "pans out" from the target, and this feature is material to the action or other effect achieved by the selection of the term. (Schegloff, 2000, p. 715)

If we make the thought experiment of asking any actant in a network to "describe your network and its elements" surely a similar phenomenon arises: "zeroing in" or "panning out" is endlessly possible as the list of elements and connections is interminable. There can be no logical end to the description of a network. As Austrin and Farnsworth note, the word "follow" occurs very frequently in Latour's methodological injunctions in *Science in action*; the question is, for how long and how far can we tirelessly follow the actants?

In some ways ANT wants to treat granularity as a topic of inquiry. That is, it suggests that networks themselves close off difficult questions about alternative and varying connections between elements. By "punctualising," by stacking "black boxes," by creating "immutable mobiles" and "centres of calculation," the network (e.g. think of "Science") suppresses doubt about which are its key elements and what it is doing. But this still doesn't quell the infinite regress problem.

Ulitmately we have to admit that there is no solution, however, as a practical recommendation the ANT injunction to "describe," to "follow the actors" is as good as we are likely to get. Schegloff's discussion of granularity is consistent with this, as he actually suggests that "closing off" is an ongoing accomplishment *internal* to descriptions: "each level of granularity has the effect precisely of constituting *its* formulation as the relevant structuring of events" (2000, p. 717). That is, in given contexts, somehow we know what kind of description is called for. A key word here is "relevant": commonsensically, we make judgements about relevance, about what the relevant answer to the questions, "where are we?," "where in the network are the actants?," and "when can we stop description?." This is where the empirically realist strand of ANT comes to the fore, and as such it is consistent with the view that the world is full of certainty, not uncertainty (Wittgenstein, 1969). That is, sooner or later we must stop describing the network: suspending doubt and stopping description is just what we have to do, otherwise we descend into unintelligibility.

Second, closely linked to this talk of "relevance," is the question, "who grants agency?." This may well be more commonly asked by those who are prepared to accept some role for non-humans, but are still uneasy with the notion than non-humans act. Lucy Suchman,

most well known for her study of photocopying machines (1987), has recently offered this kind of critical comment on ANT. In brief, she picks up Latour's elaboration that

> an "actor" in ANT is a semiotic definition – an actant – that is, something that acts or to which activity is granted by others. It implies *no* special motivation of *human individual* actors, or of humans in general. An actant can literally be anything provided it is granted to be the source of an action. (Latour cited in Suchman, 2001)

Then she makes the key critical point: "I want to focus our attention on this last phrase; that is, "provided it is granted to be the source of an action." Who or what within the situated practices of constituting agency does this work of "granting" of actor status? Does that form of agency distribute evenly across the human-nonhuman network?" (Suchman, 2001). Clearly, what Suchman is getting at is that it is humans, not non-humans, that grant actor status. This appears to be an argument to which most people would agree.

But such agreement might give us pause for thought. Why can't we say that sometimes granting lies more with humans, other times more with non-humans, that is, they are entangled. In regard to non-humans, there is much to be gained from the Gibsonian notion of "affordance," that is, we can say that objects offer actors possibilities for action; whereas there is always a range of possibilities, affordances are not freely variable (a tree has different affordances than a rock) and hence objects do grant agency of a kind (see Hutchby, 2001; Michael and Still, 1992). Ultimately, as I noted above using Munro (2001), we need only say that agency is a shared project:

> ... processes of membership cannot be fully understood unless non-humans are admitted into the story of agency. Let me repeat this, for I am arguing to include artefacts in *understandings* of membership work; not trying to grant agency as if there could be a "parliament of things" (Latour, 1993). The usual mistake, albeit endemic, is to essentialise the social into *either* things *or* humans, as if one could wash out the socially constructed nature of the former and bracket off a prosthetic "extension" (Strathern, 1991; Munro, 1996) of the latter. If it is an ability to invoke presence, or to make things absent, that determines, for all practical purposes, social relations, then

"things" will often do as well as "people" in forming, or re-minding people of significant others. (2001, p. 488)

If this is taken seriously, the key difficulty lies not in grasping the theory behind the argument, but in actually detailing how these entanglements work out, that is, how to describe them. Inevitably, then, we return to the first question of when description stops. But surely this is a healthy place to be? It puts the onus on sociologists to provide detailed empirical work alongside their theoretical preoccupations.

In this sense while ANT has dropped both the micro/macro distinction and Society/social as key explanatory terms, it nonetheless leaves us grappling with a traditional sociological question: "how is action accomplished?." True, this is probably more likely expressed as "describe translation," where translation is taken to mean both transformation and constancy, but it is still a remarkably traditional question to pursue. In this sense, ANT is not overly radical (sorry for the disappointment). Again, Latour's work is the exemplar. In respect to the so-called "science wars" Latour (1999, p. 1) tells of being asked by a scientist "Do you believe in reality?," to which he replies, "But of course!" I laughed. "What a question! Is reality something we have to believe in?" If we so readily agree with this, then the upshot is that we have to allow room in sociology for much more than the social. It will no longer do to talk of the "social construction of reality" (see Hacking, 1999). ANT is not without its faults, but in terms of moving "sociology beyond societies" (Urry, 2000) it has much to offer.

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Sexual Harassment in the Workplace: A Qualitative Study of Three Contrasting Organisations in a Small New Zealand Town

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Abstract

This research utilised a qualitative case-study design to investigate the contrasting forms which sexual harassment took within three different organisations in the same New Zealand town. Women working at the local meat processing works, a retail store and the local bank were interviewed to determine how their experiences of sexual harassment were influenced by the organisational context in which they worked. The interviews revealed that the three organisations had very different organisational structures and cultures and widely disparate power relationships between male and female workers. These factors had a strong influence on not only the ways in which sexual harassment was perpetrated by male employees and customers but also on the various individual and collective coping strategies which women used to combat harassment.

Introduction

A recent survey of sexual harassment in New Zealand, carried out on behalf of the Human Rights Commission (2000), revealed that around one quarter of women considered they have been sexually harassed at work. Whilst this survey suggests that sexual harassment is a serious and widespread problem within the New Zealand workplace it says little about the form which sexual harassment takes in different organisational contexts. The Human Rights Act (1993) defines sexual harassment as "unwelcome or offensive sexual behaviour that is repeated or significant enough to have a detrimental effect on you". The problem with this and other legal definitions of sexual harassment is that it implies that sexual harassment is clearly identifiable by workers. In contrast, research into sexual behaviour within the workplace suggests the ways in which harassment is interpreted are highly context dependent

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(Williams *et al.*, 1999). For example, several studies have shown that women in male dominated, blue collar organisations are often prepared to tolerate behaviours which professional women would find offensive. (Miller, 1997; Yoder and Aniakudo, 1996).

Workers may also be more likely to tolerate unwanted sexual advances if this is an implicit requirement of the job. Several studies of women engaged in service occupations such as waitressing or tourism have found that workers expect to deal with sexual advances from customers and are reluctant to complain to management for fear of being seen as incompetent. They may also label as sexual harassment only those behaviours which are severe enough to deviate from daily work experiences. As Folgero and Fjeldstad (1995) argued in their study of sexual harassment within the hotel industry, "in a cultural setting where sexual harassment is generally accepted as part of the job, feelings of harassment may be suppressed to a degree where the victim denies the problem exists" (p. 311).

These studies all suggest that men's expressions of, and women's responses to, sexual harassment are part of a complex and context specific social process which is heavily influenced by differing organisational structures and cultures. Such processes cannot easily be revealed using the context-free quantitative research strategies which dominate research into sexual harassment and highlight the importance of developing more varied methodological strategies to research this issue (Arvey and Cavanaugh, 1995; Thomas and Kitzinger, 1997). Unlike most published research in this area, this study utilized a qualitative case study approach to investigate the contrasting forms which sexual harassment took in three different organisations within the same small New Zealand town. By so doing, the study sought to reveal the complex and often subtle inter-weaving between the structural and psychological elements of social reality. As the study shows, structural and cultural conditions within both the wider town environment and each workplace shaped not only male behaviour towards female workers but also the women's perceptions of and reactions to harassment.

Methodology

The research took place within a small, rural New Zealand town with a population of approximately 5,000. The local economy had been relatively depressed since the economic restructuring of the rural economy in the mid 1980s and regional unemployment was around 10%. Employment opportunities for women were limited to a few openings within the local milk processing plant or the meatworks, work within the retail sector or seasonal fruit picking. All jobs were highly sought after and all the women interviewed were aware that employment was scarce.

The three organisations studied were chosen for their contrasting organisational characteristics. The meatworks provided a quintessentially New Zealand example of a long-established male-dominated blue-collar industry. In contrast, the local branch of a well-known national chain store was a female-dominated blue-collar service organisation. Finally, the local branch of an international banking conglomerate exemplified a female-dominated white-collar service organisation, with a contrasting client base to the retail store.

Thirteen women were interviewed, three from the meatworks, four from the store and six from the bank. Respondents were asked to describe their jobs, their reasons for working, the general organisational structure and atmosphere and their relationships with co-workers and supervisors. They were then asked whether they had experienced sexual harassment and how they dealt with it. All interviews were taped and transcribed to determine key themes in the women's accounts.

Case Studies

The Meatworks

The meatworks was the largest organisation in the town, employing approximately 200 permanent staff. Although the plant had only been open six years many of the attitudes and practises permeating the organisation reflected the fact that meat processing was one of New Zealand's earliest industries and a traditionally male domain. Management were entirely male and were recruited from other

meatworks. The majority of the 160 shop-floor employees at the plant were male and the 20 odd women on the shop-floor were only tolerated in the low status occupation of packing. The few women who attempted to break out of this all-female domain were subject to severe harassment, designed to keep them, and other women, out of the higher status and better paid male occupations.

In terms of the local economy, the meatworks paid well for unskilled labour, with pay rates higher than at either the bank or the retail store. The plant was therefore an attractive job option for women prepared to endure a hard working life in return for reasonably high wages. Women at the meatworks tended to be single parents with minimal educational attainments and few occupational opportunities. These women accepted swearing, dirty jokes and pin-ups as part of the price of working in a male-dominated industry. What they were not prepared for was the constant collectively perpetrated harassment they had to endure. The morning intimidation ritual for the all-female packing table provides a good example of the organised and relentless nature of harassment within the plant. As *Holly*, a packer in her early twenties, described it:

> The guys don't have to come anywhere near our table because we're in a different part (of the factory) ... but every morning they walk right around our table, making comments about us to each other, or they chat us up, or maybe they're all singing or whistling or clapping ... but it's like ... "hey girlie, we're the bosses here".

This behaviour continued throughout the day, with quite often, one particular woman singled out for concerted harassment. *Irene*, a single parent in her late thirties, explained:

> This job's boring so to liven the job up they'll all just, you know, be let's all hassle her today. I've seen it, they're a pack, they're very close, and yet none of them like each other much really....

Unfortunately, the women on the packing table were very fractionated, never complained collectively to management and gave each other very little practical or emotional support As *Holly* explained: "A lot of the women are terrified... they just keep their heads down and hope they'll be ignored. Then you get a few who

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like the attention…." In consequence, many, like *Holly*, took the only other option available and left the plant after only a few months to seek alternative employment elsewhere.

The few women who broke out of the packing table ghetto and attempted to fill traditionally male jobs were subjected to even more aggressive harassment, aimed at proving their incompetence and driving them out of the job. Whilst management distanced themselves from the more overt expressions of harassment they tacitly colluded with the men" s actions and often placed structural barriers in the women" s way. For example, *Nora*, the only female meat inspector at the plant, described in graphic detail the indignities she endured when management denied her access to the female plant workers" facilities and forced her to share changing rooms and toilets with the male meat inspectors. Similarly, *Irene*, an ex-packer who had successfully advanced to the mid-status male domain of the boning table, recounted how management had refused to give her additional training or upgrade her again despite the fact that she had done a higher grade job successfully for several weeks when the factory was short staffed. As she explained:

> The males are very "Oh, oh I've cut my finger"… but when the ladies came into the room it made a difference, they didn' t want to be seen as howley bags. A supervisor said to me "The only reason we've kept you women on is because it's hardened the men up."

Some women at the plant had attempted to combat harassment through formal complaints or legal grievance procedures. However, as *Nora* found to her cost such tactics were regarded as evidence of weakness by her colleagues and simply led to an escalation of her harassment. In her words,

> … the bigwigs from M.A.F. came in and I was told "back in the old days you would just have stepped outside in the carpark and had a fight you know as a way of resolving it." It was never dealt with, I kept getting harassed more and more…and I was told off for going to the white collar, bringing in the big guys from M.A.F.

After repeated warnings from management about absenteeism caused by her inability to face her colleagues, *Nora*, like *Holly* before

her, also left her job. She required several months counselling before summoning the courage to apply for unskilled and lower paid work with different organisatiions.

Women who proved themselves physically tough enough to challenge the male workforce fared better when dealing with harassment. As *Irene* explained,

> I personally don't get sexually harassed to my face ... if a guy comes up and grabs me by the butt, I turn round and grab them but not nicely you know. You've got to be what they are which is arseholes.

Whilst such tactics earned *Irene* the grudging respect which enabled her to stay in her job the costs, in terms of both her physical health and family relationships, were high. Describing her physical health she commented,

> I've got this rash on the back of my neck because I'm so tense. I just scratch it till it's raw ... I get home and I'm just ready to explode you know, ...I just want time out and it's straight back into family life ...

Irene had, over the years, developed a very cynical view of other women. When she first started at the plant she fought vigorously against its rampant sexism, often tackling management on behalf of the other women. Six years later, she was simply concerned with self-preservation. In her words,

> I can't see any way of making it better. We're our own worst enemy. If we could all just stand up to them ... .

In conclusion, the interviews with women from the meatworks revealed an environment where sexism was endemic and deeply entrenched within the attitudes and daily practises of both management and male workers. It also revealed a situation where the women were so fragmented, demoralized and concerned with daily survival that they had few effective means of changing the situation.

The Retail Store

The retail store was a small branch of a national chain selling a variety of household goods, clothing and toys. It employed nine full-time and five part-time staff. The three full-time male staff were a married storeman in his fifties, a customer assistant in his late teens and, finally, the manager who was in his mid-twenties and who was being "fast-tracked" through the town as part of the company's management training scheme. The six full-time women were four customer assistants, all of whom were interviewed, and two clerical assistants.

The women formed a cohesive group, despite the differences in their ages, and supported each other within the work situation. In contrast, the three men were socially isolated, partly because of the structure of their work and partly because of their personalities. This ensured that social dynamics within the store differed from the meatworks. The women did experience sexual harassment, from their male work colleagues, employees of other organisations that interacted with the store, and male customers; however they tended to find it irritating rather than frightening and to have effective informal ways of dealing with it. In addition, all women were aware that the store had clear policies on sexual harassment, and all believed the manager would take complaints of sexual harassment seriously.

All the women found the behaviours of the storeman and male customer assistant problematic; however the two sets of behaviours were interpreted very differently. The storeman often made patronising remarks, touched or hugged women or commented on their appearance. These behaviours were explained away as typical age related acts by one of the older women who commented,

> It's an impression thing, you know, "there's still life in me" ... men, they just take a lot longer to get through the aging process because they don't like not being able to keep up ....
> *Ellen aged mid-fifties.*

In contrast to the storeman, whose generalised sexism was tolerated without disquiet, the more personalised harassment perpetrated by

the young customer assistant was regarded with concern by all the women. Nineteen year old *Sarah*, the youngest full-time customer assistant, explained:

> He's always complimenting me and watching me...he's writing a novel and he's based it on people at work and I'm his wife.. it makes me feel uncomfortable ... I thought this is very, very creepy.

The personal focus of these attentions worried the older women, all of whom were keen for *Sarah* to lodge a formal complaint; however her embarassment made her reluctant either to act on her own behalf or to have the other women complain for her. The older women therefore settled for discreetly informing the manager and also ensured that *Sarah* was seldom working near the young male assistant.

The women also had to deal with male customers. Whilst the women tended to accept some sexist remarks as an inevitable part of the job they were also clear that customers who behaved in a really offensive manner should be banned from the shop and confident that the manager would support such requests. The simple fact that they worked in a setting where they interacted with strangers did, however, mean that the women were vulnerable to unwanted attention which could be quite frightening. *Linda* described a past customer by saying:

> We used to have this guy come into the shop and you were always frightened to go home,... you were never sure whether he'd be outside ... waiting ... he'd come into the shop and sort of stand there and giggle... weird, you know.

In contrast to other customers, who were often known to the women, this customer was unknown and perceived as potentially dangerous because his behaviour deviated from normal male behaviour patterns. As the examples of both the male customer assistant and this customer show, the women at the retail store had a clear image of "normal" male behaviour and regarded harassment which fell within these parameters as predictable and relatively innocuous, even if infuriating. In contrast, behaviour which fell outside these parameters was often experienced as threatening and uncontrollable.

In conclusion, patterns of sexual harassment within the retail store differed considerably from patterns within the meatworks. This was partly due to the fact that male staff and customers were in the minority and acted in isolation rather than collectively. This shifted the balance of power between the sexes and enabled the women to combat harassment more effectively both as individuals and as a group. Despite this, routine harassment still occurred. Its levels appeared to be finely gauged by the perpetrators to remain just within the limits of the women's tolerance. In Goffman's terms there was a "negotiated order" concerning sexual harassment. However, the boundaries were frequently drawn in places which were unsatisfactory for the women concerned.

The Bank

The bank was a small, but well established branch of an international institution which dealt mainly with the personal banking needs of the town's professionals, farmers and business people. The majority of the customers were male, most had been with the bank for years and most were personally known to the staff, both as clients and as inhabitants of the district. The branch employed six women, all of whom were interviewed for this research. The branch hierarchy was fairly flat and the workforce consisted of the manager, a personal banker and four cashiers. The branch manager had worked in the branch since it opened twenty years ago and had recently replaced a much younger male manager who, like the retail store manager, was "fast-tracked" into the town and then moved on to a larger branch after eighteen months. She was unusual in having achieved a managerial position, as most higher level positions within the organisation were held by men, and she was determined to make a success of her new position.

In contrast to the retail store where relationships, even with regular customers, were regarded by staff as a series of discrete transactions the women at the bank had a long-term and continuous relationship with customers. The nature of this relationship often constrained their ability to deal successfully with sexual harassment from customers. On the one hand, the women were expected to

maintain a "professional" relationship which was polite and asexual. On the other hand, they had to deal with customer behaviour which was often sexualized without either acknowledging the sexual content of the behaviour or giving offence through overt rudeness. The types of customer behaviour which the women experienced were often similar to the behaviours of the male customers at the retail store, but also included behaviour more closely related to the long-term nature of the relationship such as always asking for a specific teller, arriving with bunches of flowers, or asking women out for drinks or meals.

The women occasionally responded to unwanted behaviours with overt rudeness; however in all cases this was justified by outside acquaintance with the customer or family. In such cases small town norms on dealing with sexual harassment could override professional obligations. Where the customer was not well known, the most common response was stoic endurance, often followed by an infuriated grouse to the other staff. A typical example was given by *Trisha* who commented:

> I've got one customer who winks at me all the time and oh that just sends the crawlies up on me, I mean, I'm never rude to him but I just can't stand him.

As with the women at the store the sexist behaviour of the many customers was dismissed as essentially harmless "acting out" by men unable to accept the encroaching years. Whilst this rationale had the advantage of trivializing the men's behaviour and thus enabled the women to dismiss it more easily, it also had the disadvantage of giving these behaviours a spurious legitimacy as inevitable age-related phenomena besetting the male sex.

In addition to individual strategies for dealing with customer harassment, the women at the bank also had a range of collective strategies. These included behaviours such as arranging to take their lunch-hours when particular customers were likely to enter the bank, deliberately closing their counter and retreating to the back office, and pre-arranging to be interrupted by telephone calls when particular customers entered the bank. Whilst such strategies were evidence of group solidarity similar to that amongst the women at

the store, they were essentially informal solutions to the problem of sexual harassment by customers. Officially, even the possibility of sexual harassment by customers appeared to be rejected. The bank's official code of conduct concerning sexual harassment set out clear guidelines concerning staff behaviour and clear procedures for lodging complaints against staff but ignored the problem of harassment by customers. The manager herself seemed somewhat reticent on this issue. Whilst she was not prepared to tolerate harassment of her staff by employees of other organisations and had complained formally about the behaviour of one of the security guards to his employer, she saw customer harassment as a minor issue which competent staff ought to be able to deal with through informal mechanisms operating at either the individual or branch level. Her role as a sympathetic manager was to facilitate the smooth operation of these informal methods of containment.

Ironically, one of the reasons for the manager's reluctance to acknowledge the problem of harassment by customers may have been her stated desire to prove herself as a woman manager. In her view, this entailed setting professional standards which were higher than those of her male colleagues. Since sexual harassment by customers was not an issue which was raised in the bank's management training courses the implicit message was that this was a non-existent problem. To identify a problem would have required her to step outside the conventional framework of bank management and risk censure from her superiors as a manager unable to handle the internal problems of her own branch. In addition, the manager was aware that many of her customers enjoyed the personal relationship they had with staff. Discussions about families, hobbies and general events were a common corollary of transactions and were seen by the staff as a key feature of the branch's identity as part of the local community. To formally acknowledge problems within the staff-customer relationship would challenge this image and could lead to a decline in the customer base. This outcome would obviously be viewed negatively by the manager's superiors and could affect not only her position, but also that of the other staff, all of whom were aware of the trend towards closure of small branches of international banks.

In conclusion, the bank data illustrates some of the subtleties of gendered organisational power relationships and the pressures upon female managers to adopt the prevailing organisational culture. The manager saw herself, and was seen by her staff, as sympathetic and caring but also as highly professional. However, as a female manager within an organisation where almost all higher authority figures were men she was placed in the position of having to conform to organisational standards developed by men if she wanted to succeed. This meant down-playing the issue of client harassment and treating it as something which should be managed, without loss of face to the client, as part of the ongoing process of maintaining good customer relationships

Discussion

This research has showed how sexual harassment was influenced not only by structural and cultural characteristics of the different organisations but also by characteristics of the local environment. It was clear from talking to respondents that the wider social context influenced the form which sexual harassment took in myriad, often subtle, ways. One of the most important influences was local perceptions concerning the three organisations. The meatworks was seen as rough, tough and misogynist. Women who worked at the meatworks were seen as violating gender norms by working in a male-dominated establishment and were the viewed with both pity and fear by other women. In contrast, both the retail store and the bank were seen as "respectable" jobs for women. These perceptions led to a large degree of self-selection into different types of work by both men and women. The women at both the store and the bank were adamant that they would never work at the meatworks; they were also adamant that they would not become sexually or socially involved with male workers at the plant. In contrast, some at least of the women at the meatworks took a certain grim pride in being hard enough to survive in that environment and cultivated their tough image outside the plant. Clearly, the town was socially stratified in ways which helped perpetuate the dominant culture of the meatworks.

Numerous studies have shown that women in non-traditional manual or factory environments experience more severe harassment than women in other jobs (Ragins and Scandura, 1995). Several organisation theorists have suggested that male sexuality within these environments is socially constructed and serves two main functions. Firstly, it reaffirms male solidarity and masculine worth in situations where the working conditions are alienating and they are objectively vulnerable as a class of worker. Secondly, it prevents encroachment by women into male domains and protects male labour market dominance (Collinson and Collinson, 1996; Welsh, 1999). Conditions within the meatworks lend credence to this argument. The men at the plant were unskilled, easily replaceable labour working in an economic environment of increasing uncertainty. Female inroads into the factory therefore represented a serious threat to male livelihoods. Against this backdrop the sexual harassment of the women functioned as a powerful tool for uniting the men and containing the threat posed by the women. As Kanter (1993) has observed, the presence of a relatively small number of women within the workplace may have reinforced rather than challenged the dominant culture of masculinity by giving the men's misogynism an identifiable focus against actual women.

Management's tacit support of the men's behaviour clearly encouraged the development of harassment within the plant. The reasons for management's support appear varied. At its simplest, several managers were imported from other plants where a masculine culture dominated and may simply have accepted the practises within the new plant as the continuation of traditional ways of working. Management were also scared of many of the workers and may have feared that overt attempts to modify the organisational culture would increase hostility towards them. More subtly, management may have used the men's mysogynism as a way of deflecting collective resistance to the organisational hierarchy. Although the men's pre-occupation with sexuality could disrupt production, it seldom led to serious conflict with management and often provided the men with an outlet for their boredom and aggression. In addition, management often turned the men's misogynism against them and used it as a way of improving

performance by pitting them against token women in order to minimize injury claims or absenteeism.

Given that all the women within the meatworks suffered continuous and severe harassment it is, perhaps, surprising that they never made a collective formal complaint to management. However, the women were, from all accounts, a very divided group. This was partly due to differing job specifications which meant that women like *Nora* and *Irene* were isolated from other women physically and in terms of their job content. In contrast to them the women on the packing table worked together but were still very fractionated as a group. In part this reflects the multi-faceted and subtle nature of sexual harassment and the difficulty women have in framing complaints. However, it also reflects deep divisions within the women themselves. From *Holly's* account it appears that many women on the packing table were quite simply too terrified to react and tried desperately to be as unobtrusive as possible in the hope that they would be passed over, if not forever at least for that day. The women were also divided by the sexual nature of their harassment, which was sometimes about sexual intimacy rather than overt denigration. The younger women were sometimes flattered by expressions of sexual desire by the men and would form liaisons with them. These often led to increased harassment and derision as a woman gained a reputation for being sexually available to all men.

In the absence of a collective will to tackle the problems of sexual harassment women had to respond individually. One strategy which both *Nora* and *Irene* utilized was to prove themselves better than the men at their jobs. Many studies have found that women believe they need to be better than men to gain and maintain traditionally male jobs (Gruber, 1998). Such tactics are clearly highly threatening to men in unskilled occupations, partly because they involve an element of "rate-busting" which highlights various unofficial ways in which blue-collar workers typically manipulate their workloads, but more importantly because they threaten their job security. The men are therefore likely to redouble their attempts to control the women's performance, leading to an escalating spiral of harassment which is often specifically aimed at sabotaging the women's work. As *Nora's* experiences showed, when such tactics are successful they

not only force the woman involved from her position but also reinforce organisational beliefs that women in general are ill-suited to the work in question. This protects male dominance into the future.

The position of male employees at the retail store differed significantly from the position of men in the meatworks. At the lower levels retailing is essentially a low status, poorly paid, female-dominated occupation (Kemp, 1994). In consequence, the men in the store were in the minority and in disparate organisational roles which limited their power and cohesiveness. In addition, cultural perceptions of store work as "women's work" influenced the women's perceptions of the storeman and the customer assistant both of whom were seen as relatively weak and unsuccessful characters.

In addition to dealing with their co-workers women at the store had to deal with harassment from customers. The dominant North American literature on retail service workers suggests that the "cult of the customer" severely constraints the ways women can deal with harassment (Hughes and Tadic, 1998). Whilst the women in this study tended to subscribe to the view that appropriate job performance entailed being polite to customers and tolerating a degree of mild verbal harassment they were less constrained in their responses than the American literature implies. The reasons for this seemed to lie in the down-market nature of the store, its relative dominance within the local economy and the fact that most customers were women. Male customers were therefore not essential to the economic viability of the store. In addition, staff regarded interactions with customers as a series of discrete transactions in which neither side had any long-term interest in the financial relationship. These factors, combined with relatively lax staff surveillance mechanisms, enabled the women to respond to harassment rather more assertively than other studies imply. The small size of the town was also a factor here as several women mentioned that they could deal more forthrightly with customers they knew socially than with unknown customers.

The women at the bank experienced greater constraints in dealing with sexual harassment from customers. Although the women had

a supportive female manager who would facilitate collective as well as individual strategies for managing harassment these strategies were invariably indirect and non-confrontational. Their aim was to minimise the effects of harassment whilst protecting the customer, or any other customers present at the time, from any overt unpleasantness. The differences between the behaviour of women at the retail store and the bank are explicable in terms of the differing structural contexts they work in. The trend towards targeting the customer-worker relationship as a key site of profitability is more developed within the banking sector, and the costs of losing a customer are far higher given the long-term nature of the banking relationship, the numerically lower customer base and the greater number of alternative institutions for bank customers. In such circumstances workers become highly constrained in their ability to deal with harassing behaviours, since failure to manage them to the customers' satisfaction may impact strongly on the branch's viability.

The bank's location within a small community meant that the requirement to retain a quasi-personal relationship with customers could impinge on the women's non-work lives. Several women mentioned the requirement to be polite to customers when they met in the community and described the exportation of mildly harassing behaviours into the non-work setting. Since the bank's clients mainly comprised the upper echelons of local society, the customer service norms of a large international institution thus helped reinforce and reproduce the strictly local level social stratification within the town.

In conclusion, this study shows that sexual harassment within the workplace takes many forms and has multiple meanings and consequences. The boundaries which women draw between acceptable and unacceptable male behaviour are highly context specific and vary between different occupations. The ways in which they deal with sexual harassment are also highly context specific and are heavily influenced by both the amount of social support available from other women and from the wider organisational culture.

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Does Gender Really Matter? Criminal Court Decision Making in New Zealand.

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Abstract

Internationally, the matter of gender difference in criminal court decision making is a contentious one, but in New Zealand little substantive research or debate has occurred on this issue. This paper attempts to remedy this deficit by summarising research findings from a larger PhD project (Jeffries, 2001) which considered the question of gender and criminal justice decision making in New Zealand. Results from this project show that a) sentencing and remand outcomes often differ for adult men and women, with the former usually receiving "harsher" sanctions, b) different factors are often considered when determining men's and women's judicial outcomes and, c) certain "types" of men and women are more likely to be extended judicial leniency. In explanation, gendered ways of viewing, understanding and judging offenders indicated the manner in which judicial processing came to be differentiated by sex. Theoretically, these findings can be partially understood using chivalry, paternalism, social control and social cost arguments. However, by themselves, none of these theoretical perspectives are considered complete and a more integrated theory of gender and criminal justice processing is called for.

Introduction

Does gender differentiation operate in our criminal courts? Do men and women receive different judicial outcomes when they appear before the court under similar circumstances and if so, how can these sex differences be accounted for? These questions have been the subject of extensive international investigation over the years, and research exploring this issue has produced mixed findings. Some writers have found no evidence of gender differentiation, fewer still have argued that women are treated more harshly than men, but the vast majority of high quality research tends to find gender differences which appear to "favour" women over men. For

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example, compared with men, women are often found to receive less severe sentencing and remand outcomes when they appear before the court under similar circumstances (see reviews by, Parisi, 1982; Nagel, & Hagan, 1983; Daly & Bordt, 1995).

In New Zealand, little is known about the importance of gender in criminal court outcomes. This paper hopes to remedy this deficit by summarising results from one of the first substantive New Zealand investigations of gender and criminal court decision making (Jeffries, 2001). This project was undertaken by the current author and asked whether a) sentencing and remand outcomes differed for men and women, b) different factors are considered when determining sentencing and remand outcomes for men and women and, c) if sex differences in sentencing and remand do exist how can they be accounted for? In the international literature there are four common theoretical explanations for gender difference in criminal court outcomes – chivalry, paternalism, social control and social cost. The ability of each theoretical perspective to explain the current research results are also discussed in this paper.

Theoretical explanations for gender difference in criminal court sanctioning

Before presenting the research findings it is important to first set the theoretical context. This will enable us to see if and how the present research findings fit with current theoretical debates.

Chivalry

Theoretical arguments about gender and criminal justice decision making have raged internationally since 1950 when Otto Pollak claimed in his book, *The criminality of women*, that female offenders were preferentially treated in a criminal justice system which is dominated by men and thus characterised by male notions of chivalry. In what became known as the "chivalry hypothesis", Pollak argued that men are socialised to behave towards women in a fatherly and protective manner, resulting in female offenders being compared to mothers and wives, whom the male judiciary cannot

imagine behaving in a criminal way. Pollak presumed that offending women were "placed on pedestals", treated "gallantly" and "protected" from punishment, with the result that their criminal activity was less likely to be detected, reported, prosecuted, or sentenced harshly (cited in Belknap, 1996, pp. 70-71). Chivalry thus presents as having only positive effects on women.

Paternalism

In the literature, the term "chivalry" is often used interchangeably with the term "paternalism". However, it is important to distinguish between the two because the latter appears to have emerged partly as a critique of the former. Unlike chivalry, paternalism is often depicted as having both positive and negative effects. It proposes that preferential treatment is only given to some women, over some men, at some stages of the criminal justice process. Moulds (1978) argues that the concept of "chivalry" is only helpful in so far as it describes "the superficial elements in male-female relationships, namely, the social amenities" (p. 418). Women are seen to benefit from this relationship in that "chivalry" results in men placing women "on pedestals" and treating them "gallantly" (Belknap, 1996). In contrast, "paternalism" acknowledges gender-based power relationships (Odubekun, 1992, p. 353). Whether women benefit from their exchanges with predominantly male law enforcement officials varies and depends on the fulfilment of gender role expectations.

For example, women who are wives and mothers or otherwise express acceptable "female attributes" such as dependence are, in contrast to their less "feminine" counterparts, noted to receive less severe judicial outcomes (see for example, Nagel, 1981; Nagel, Cardascia & Ross, 1982; Farrington & Morris, 1983; Channels & Herzberger, 1993). It has also been argued that women whose crimes conflict with dominant gender ideals will not be extended preferential judicial treatment. It appears that while "traditional" female crimes (i.e. prostitution) may result in judicial leniency for women, committing "non-traditional" crimes (i.e. certain kinds of violence) may result in harsh treatment (see Simon, 1996; Feinman, 1980; Parisi, 1982; Wilbanks, 1986; Chesney-Lind, 1995).

Unlike "chivalry", "paternalism" proposes that there are costs, as well as benefits, to the "differential" treatment of female offenders. Although the initial benefits to women may be their freedom, the major cost is the reinforcement of a dominant gender role ideology, which keeps women dependent and powerless, denies female agency, and holds that women are less able than men and in need of special protective treatment.

Social Cost and Social Control

"Paternalism" represents an improvement over "chivalry" but both have been criticised as misguided and overly simplistic. "Paternalism", like "chivalry", assumes that sexism is overtly practised by the judiciary; it is seen as something that is "done to" offenders. As such, unequal treatment is considered problematic because protecting women is construed as an ideological front for patriarchy (Daly, 1989b).

However, one alternative viewpoint is that any apparent leniency directed toward female offenders may have little to do with "patriarchy" or the "chivalrous" protection of women by men. Proponents of the social cost thesis argue that judicial concern may in fact be directed towards the welfare of innocent third parties, such as children and other family members who would be adversely affected by the harsh treatment of women. This sentiment is reflected in the following statement from New Zealand District Court Judge Ron Young (1997) who notes that:

> As a broad principle women cannot avoid imprisonment simply because they have a family to care for. However the fact a woman is a care giver is often highly relevant to sentencing choice. It can reduce a sentence of imprisonment on the rationale that the consequences for the offender and family are greater. (p. 22)

Daly (1987a, 1987b, 1989a, 1989b) argues that observed sex differences in judicial outcomes simply demonstrate the high value that the criminal court places on the caring/nurturing role that is usually performed by women. Indeed, it is noted that men who are responsible for the care of others may be treated as leniently as their female counterparts.

Advocates of the social control thesis assert that there is an inverse relationship between formal (state) control and informal control. While proponents of paternalism argue that preferential treatment for women is dependent on fulfilling gender role expectations, social control theorists assert that the more an individual is subject to informal social control, the less need there is for the judiciary to impose formal controls to prevent future offending. Women are more likely than men to experience a high degree of informal social control via their dependent status in the family (see Hagan, Simpson & Gillis, 1979; Kruttschnitt, 1982). In comparison to men, women's lives are notably characterised by economic dependence on partners, the state or other family members. Compared with men, women's behaviour is also seen to be restricted by higher levels of supervisory activity within the family.

Linkages between social control, social cost and judicial processing are emphasised in the work of Daly (1987a, 1987b, 1989a, 1989b), Kruttschnitt (1982 & 1984; Kruttschnitt & Green, 1984; Kruttschnitt & McCarthy, 1985) and Eaton (1986, 1987). What emerges from this literature is that when theorising about gender and judicial outcomes it is important to consider both social control and social cost arguments. Being dependent on and controlled by the family, in addition to being depended on by the family, may explain any apparent "favouritism" toward women by the judiciary.

The Current Research — Methods

Jeffries' (2001) research analysed a sample of indictable cases sentenced in the Christchurch District Court and the Christchurch High Court between January 1990 and February 1997. Cases involving drug offences, violent offences, and property offences for adult offenders (aged 17 years and over) of both sexes were included. All women sentenced in the three offence categories during the seven year study period were included in the initial sample used for the statistical analysis, while the male portion of the sample was selected using a matched sampling method. First, men were matched with women by court of sentencing, major statutory offence, and year of

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disposition. For example, a woman convicted of burglary in the High Court in 1990 would be matched with all males convicted of burglary in the High Court in the same year. Next, women with more than one male match on the above three variables were matched with men who were similar on plea, number of charges, ethnicity, age, and sentencing Judge. In cases where more than one match remained, previous convictions were examined and the male who had the most similar number of previous convictions to his female match was retained. Thus a 1:1 male to female ratio was obtained. Sex differences in the severity and type of crimes committed by men and women are well documented so this matched sampling method was chosen to ensure that male and female offenders were as "similar" as possible from the outset.

Approximately one quarter (50 matched pairs, 100 offenders) of the overall sample used for the statistical analysis was then selected for in-depth case studies. To allow generalisations between the case-study sample and the original statistical sample, cases selected were representative of the statistical sample in terms of the court of sentencing and offence categories. The offence characteristics (role, number of co-offenders, number of counts convicted, use of weapons, victim-offender relationship, sex of victim, injury to victim and value of property involved), conviction histories, and plea for each pair were examined and the closest matched pairs selected. Ethnicity and age were also considered in the matching process but legal variables took precedence.

The research findings

Using both a statistical and a case-study analysis, Jeffries' (2001) research found patterns similar to those identified in the international literature. Overall, it was found that a) sentencing and remand outcomes often differed for adult men and women, with the former usually receiving "harsher" sanctions and, b) the criteria used for deciding these outcomes were also gendered (i.e., different factors were considered when determining men's and women's judicial outcomes, and certain "types" of men and women were more likely to be extended judicial leniency). In explanation, gendered

ways of viewing, understanding and judging offenders indicated how men and women come to receive different treatment. The results are summarised below.

Statistical Findings

Multiple regression techniques were used to establish whether women and men received different sentencing and remand outcomes once other key factors were statistically controlled (e.g. criminal history seriousness, current offence seriousness). In all but one case (the initial decision to imprison) sex was found to have a direct impact on the judicial outcomes investigated including: length of imprisonment term, remand status, length of custodial remand and bail conditions. With other factors statistically controlled, women's imprisonment terms were found to be substantially shorter than men's. For combined offences (drug, violent, property) women's imprisonment terms were approximately 8.5 months shorter than were men's. Female violent offenders received imprisonment terms approximately twelve months shorter than men, and female drug offenders' terms were around five months shorter. Women were 14% less likely than men to be remanded in custody for combined offences and 24% less likely for property offences. Of those offenders remanded into custody, men remained there for 42 days longer than women (on average) for combined offences and 26 days longer for drug offences. Finally, for those offenders remanded on bail, male property offenders were 40% more likely than women to be given special bail conditions, and men were 8% more likely than women to be given special bail conditions overall (combined offences).

A further statistical investigation was undertaken to ascertain whether the decision-making processes, rather than outcomes, were differentiated by sex. First, results suggested that the criteria used for deciding judicial outcomes differed for men and women. Second, there was evidence that certain "types" of men and women were more likely to be extended judicial leniency. Support was provided for the argument that women whose crimes conflict with dominant gender ideals will not be extended judicial leniency. Committing a

drug offence in a public, as opposed to a private setting, substantially increased the length of time women spent in custodial remand but had no impact on men. Women who victimised men also had their chances of getting an imprisonment sentence increased. Aside from these two factors, criminality and judicial processing variables were generally more likely to disadvantage men. Serious criminal histories, causing injury to victims, victimising women, using weapons, playing an active role in the offence, having co-offenders and pleading not guilty, impacted substantially on men's judicial outcomes.

It is possible that the sex differences found in the statistical analyses were artificial in some way or reflected an inability to capture gendered differences in offenders' criminality and lives using a numerical coding schedule. It may actually be the case that after a further, more in-depth inspection, gender differences in judicial processing are found to exist for other more subtle reasons.

To investigate this possibility and illustrate the manner in which disparities occur, a closer case study analysis was conducted. One-hundred individual offenders (50 pairs) were selected from the larger sample used in the statistical analyses ($n = 388$). Pairs sentenced for the same statutory offence, in the same court (District or High) with similar offence characteristics, criminal histories, pleas and biographical details (age and ethnicity) were examined and the best matched pairs were then chosen for inclusion in this case-study sample. To enable generalisations from the case-study sample to the larger original sample, statutory offence and court distributions similar to those in the statistical sample were maintained.

Case-study findings

In the first stage of the case-study analysis, the crime details or stories for the 50 pairs of offenders were examined to determine whether criminality of similar seriousness resulted in similar judicial outcomes for men and women. The purpose of this analysis was simply to confirm (or otherwise) the patterns disclosed in the prior statistical analysis. A pair-wise (men vs women) comparison of criminality was undertaken using factors recognised as important in judicial decision-making (e.g. victim provocation and

vulnerability of victims). Cases were grouped using a framework similar to that utilised by Daly (1994). Judicial responses were either considered *similar*, *different* or *disparate*. A disparate response was highlighted when it was not immediately plain why two people had received different punishment for criminality of comparable seriousness, or the same punishment for criminality of different seriousness. Disparate sex-based outcomes were found in the majority of case studies, thus confirming the statistical findings. In most of these disparate cases, men either received different or more severe punishments for criminality of comparable seriousness to women, or women received the same punishment as men for more serious criminality.

Second, in order to reveal the process by which disparity creeps into the judicial process, a case-study analysis of Probation Officers' pre-sentence reports and Judges' sentencing remarks was conducted. This analysis considered how Probation Officers and Judges screened and/or weighted factors differently according to gender when they made their decisions. In comparison to the statistical analyses, these case studies produced a more subtle, complex and meaningful account of how gender operates in judicial processing, producing different outcomes for men and women. Results showed that dominant ideas about masculinity and femininity permeated Probation Officers' and Judges' discussions. Gender impacted not only on what was said but also on what was not said. Probation Officers and Judges screened and presented information differently for men and women in accordance with dominant gender ideologies. What emerged were two gendered ways of viewing, understanding and judging offenders, and this explained how men and women came to receive different judicial outcomes. In particular, the family and mental health were identified as key sites of gendered variance.

Female offenders challenge appropriate ideas of "femininity" through their criminality and involvement in the criminal justice system, both of which are traditionally the domain of men. Thus, when confronted with criminal women, it was found that the justice system tended to see them as either "not women" or "not criminals".

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1. Similar patterns have also been noted by Worrall (1990).

Women were constructed within dominant ideals of femininity in relation to the family and mental illness, and this provided a way to reposition offending women as "real" women and not really criminal after all.[1] For example, women were presented as nurturers, dependants, pathological and victims of circumstance. This neutralised their dangerousness, blameworthiness and responsibility, making punitive sanctions seem less appropriate.

An analysis of judicial discourses surrounding male offenders revealed discussions bound by dominant masculine assumptions which usually made punitive sanctions more, rather than less, likely. Dominant judicial discourses of masculinity were focussed on badness, disruption, and criminality. There was no need to reconcile men within dominant gender ideology because criminality is consistent with "manliness". Thus, judicial sympathy was rarely extended to men because most were seen as a threat to the social order and in need of state-controlled regulation. A few men were able to demonstrate a more socially controlled yet acceptable form of masculinity via their involvement in paid public work. Employment was beneficial to men, especially if they had families to support financially. Being seen as a "hard worker" and controlled by "breadwinning" commitments often decreased men's chances of imprisonment.

Acceptable ideals of masculinity require men to be providers rather than carers of families so, unlike women, men's child care responsibilities were rarely discussed or used to legitimate sentencing leniency. Similarly, constructions of acceptable femininity presented women as carers rather than providers, so women's employment was rarely discussed or used to mitigate sentence severity. Dominant discourses of femininity also ensured that pathology, emotionality, inner turmoil and trauma were discussed and used to excuse women's criminality, while detracting from their potential to be dangerous. These constructions helped to rationalise rehabilitation over punishment. Judicial presentations of men, on the other hand, supported a masculine ideology, denying men of feeling, vulnerability, weakness and the general right to experience mental unwellness. Men were instead placed in the domain of human action, being presented as actively adopting an offending

lifestyle or at fault for not ridding themselves of their criminality. Constructing men as powerful actors by presenting them as definers of their own destiny meant that criminal men were more likely to be held responsible for their actions and to be seen as dangerous. Primacy could therefore be given to punitive sanctioning over rehabilitative measures.

Discussion

The social construction of gender is ongoing in all spheres of society. Thus, it is hardly surprising that New Zealand's criminal justice system is not a gender-neutral institution but instead presents as a site where gender and its associated role expectations are actively produced in the same way as in other social domains. Analysis of the pre-sentence reports and Judges' sentencing remarks made it clear that the relationship between gender and judicial decision-making is something that is being actively generated through an interactive process which includes offenders, Probation Officers, Judges, other judicial actors and the public. Different social processes and criteria are being fulfilled in the process of "being a woman" or "being a man" and this in turn results in Judges and Probation Officers making different decisions for male and female offenders (Allen, 1987b, p. 114). How then does the current analysis fit with theoretical notions of chivalry, paternalism, social cost and social control?

Each theoretical perspective is arguably useful because none is necessarily contradictory with the other (Crew, 1991, p. 61). It is conceivable that female offenders benefit, in part, from legal officials who treat them "gallantly" and are reluctant to inflict harm on them – that is officials, who are "chivalrous". Furthermore, this research shows that sanction severity is not always reduced for all women, over all men, all the time. Treatment often depends on whether or not men and women appear as "appropriately" masculine or feminine, which in turn links closely to dominant gender-role expectations (paternalism). Finally, gendered differences in social cost and control are also seen to play a part in judicial sanctioning. Women often avoid harsh sanctions because of their status as

nurturers and because their position within the family unit is both stabilising and restrictive in its own right. Conversely, men avoid harsh sanctions if they are employed and committed to "breadwinning". However, the locus of social control and cost is clearly gendered. For example, in the cases of men who were solely or primarily responsible for childcare, their capacity to give care and experience familial social control was all but ignored in judicial discussions. Similarly, (un)employment and breadwinning is not prioritised in discussions about women's lives (in contrast to men's lives). Thus, evidence from the current research suggests that elements of paternalism, social control and cost may operate in conjunction to produce different outcomes for men and women.

The current study also finds, that "boundaries between victim and offender were more often blurred in the women's social histories" (Daly, 1994, p. 260). This result is consistent with international research which also finds that gendered constructions of women as "troubled" can partially account for why judicial sanctions are less severe than men's (see, for example, Allen, 1987a, 1987b, 1987c).

Chivalry, paternalism, social cost and social control do not directly address the gendered nature of the "troubled" vs "untroubled" offender and the subsequent impact this has on judicial decision-making. Furthermore, criminological writers rarely acknowledge the gender differences in judicial considerations of social control and cost in any explicit way. Thus, while somewhat beyond the scope of the current paper, it appears that a more integrated theory of gender and criminal justice decision-making is required. Such an approach to studying and thinking about women, men, and criminal justice would need to consider, in more depth, the impact of gender not only on women but also on men. Future writers will need to link criminal justice processing to the social structure more explicitly by considering the social structural importance of "masculinity" as well as "femininity" in judicial decision making. In particular, feminist scholars must start rendering masculinity "visible" if a more thorough understanding of criminal justice processing is to be achieved. Gender permeates our society, and as the research summarised in this paper has shown, it also

permeates criminal justice by impacting on how it "gets done" for men as well as women. Therefore, theoretical explanations can not be reduced solely to social cost, control, paternalism or chivalry because explanations are far broader and far more complex than this.

Acknowledgment

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BOOK REVIEWS

Pickering, M. (2001). *Stereotyping: The politics of representation*. New York: Palgrave.

Reviewed by Nick Perry

Michael Pickering's writings will already be known to many readers of New Zealand Sociology. Prior to taking up his current post at Loughborough University, he taught at Massey's Palmerston North campus. From this latter location he made astute and subtle contributions to a locally-grounded understanding of issues of nationalism, colonialism, the media and the politics of identity. The present work presumes, and is perforce directed towards, a more clearly generic exploration of such themes for a predominantly UK readership. The book's preface nonetheless nods towards its origins in an essay written for the New Zealand education journal Delta, and there are brief references in the main text to works by Donna Awatere, Bruce Jesson, Jock Philips, Bev James and Kay Saville-Smith, as well as a cryptic critique of Bill Willmott's conception of cultural identity (p. 91).

Read one way, the frisson of pleasure induced by this matter-of-fact acknowledgement of locally produced work would seem to be wholly innocuous. Nevertheless, those of a gloomier or more skeptical turn of mind might interpret such a response as effectively confirming the resilience and persistence of the cultural cringe, and hence as signalling that the presumption of a postcolonial present is altogether too premature. Read another way, however, it appears to represent an academic version of the one-time claim by the formerly New Zealand-owned brewing company Steinlager that, "They're Drinking Our Beer - Here." In this reading it could therefore be said to offer a hint that - in the current phase of globalization - neither "here" nor "there," or indeed "ours" and "theirs," or centres and margins, are quite what they were. But read yet another way, it is precisely the associated temptation to amplify the importance of such citations that typifies the kind of practices that stereotyping

serves to consolidate. And it is just such practices - with their confusion of nuance with essence, their naturalization of the contrast between "theirs and ours," and between "them and us"- that the book sets itself against.

Pickering identifies Lippman's dilemma (p. 16) as the point of departure for his critique. In an influential formulation that dates back to the 1920s, the political columnist Walter Lippman came to understand stereotyping and modernity as linked. He saw stereotypes as inadequate, biased, and resistant to rational evaluation and change, but he also saw stereotyping as a necessary way of processing information, especially under the conditions of social differentiation that are characteristic of modern societies. Lippman viewed the distinction between the former, political sense of the term and the latter, psychological perspective as endemic - in which each testifies to the presence of compelling but contrasting imperatives. His "solution" to this dilemma was to align himself with the interests of order. Pickering commends and concurs with Lippman's posing of the problem, but not his way of responding to it. Hence the remainder of the book is, in effect, devoted to explicating and illustrating a methodology that will allow what Lippman had interpreted as universal and necessary to come to be seen as historical and contingent.

What is crucial to this strategy is Pickering's recourse to the concept of the Other (pp. 47-78). Bringing stereotyping and the Other into analytic conjunction is seen as serving to foreground the structures and relations of power which invest stereotypes with their binding force. Such a move is therefore understood to have the additional merit of subverting those essentialising, reductionist and judgemental tendencies that bedevil the traditional concept of stereotyping. The remainder of the book develops this argument by engaging with, in turn: nationalism and the politics of belonging; colonialism, racism and the politics of not belonging; postcolonial critique; censure, normality and deviance; strangers and ambivalence.

Although stereotyping acts as a conceptual link between these themes, it is modernity that provides the historical engine. Perhaps this is why that version of the self/other relation associated with the work of George Herbert Mead is not considered, since for

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Pickering's purposes, such an otherwise puzzling omission (with its bridge between psychology and a sociology of culture) would seem to offer, and to depend upon, too invariant a conception of identity formation. By contrast, modernity and its proliferating discourses is a developmental mechanism whose complexity all but defies representation - at once global in its reach and generic in its processes, and yet specific in its local articulation. Hence those particular permutations on modernity that Pickering explores obviously cannot, and do not, exhaust the range of meanings that are associated with the term. There is, for example, not only Bob Cumings' (1993) pithy characterization of modern Japan as "industrialism without the Enlightenment," but also Dorinne Kondo's (1990) argument that the Japanese self/other relation should be understood as differently interpreted - or even as differently constituted - than in the West. Moreover, Japan is a society in which the doctrine of nihonjihron (Japanese distinctiveness) and stereotypes of the gaijin (foreigner) flourish alongside a delight in, and enthusiasm for, things foreign that Michael Brannen (1992) has interpreted as a form of reverse Orientalism.

What this suggests is that one way in which Pickering's general line of inquiry might productively be extended/amended is by engaging with a non-Western modernity. What this would also encourage is a more explicit consideration of the distinction between modernity and modernism. For it appears that for Michael Pickering himself it is this latter - insofar as it is understood in terms of an interrogating, change-oriented but morally complex and reflexive sensibility - that constitutes a discursive location from which the former may continue to be called to account.

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Reviewed by Martin Tolich

Maureen Baker astutely recognises a gap in the New Zealand literature on the sociology of the family and fills it admirably with *Families, labour and love: Family diversity in a changing world.* This accessible text is as suitable for undergraduate students in Sociology, Women's Studies, Social Policy and Business Studies as it is for advanced researchers wanting to explore contemporary literature on the sociology of the family.

The author, formerly at McGill University, Montreal and now Professor of Sociology at Auckland University, uses Canadian and New Zealand material in a comparative perspective, and adds the experiences of the Australian family to the mix. The comparison between these three countries is based on their similarities as white settler commonwealth colonies. In addition, each country has experienced neo-liberal government experiments in the past twenty years. This comparative perspective crossing national boundaries is found in her two previous books: *Poverty, social assistance, and the employability of mothers : Restructuring welfare states (with David Tippin),* and *Canadian family policies: Cross-national comparisons.*

Families, labour and love is divided into ten chapters. The first four chapters provide an excellent theoretical framing for the Sociology of the family in terms of a comparative cultural and historical framework. This provides a useful overview of the central debates. The book then moves to discuss love, exploring topics of marriage, childhood and divorce. There is also a central focuses on labour, with the issues of paid and unpaid work peppered throughout the book. Also discussed are marriage and work, child rearing and work, and the effects of divorce on family poverty levels.

A central theme of the book is the relationship between the social structure/social policy and the individual family. Chapter ten, for example, embodies this central theme of society and the individual by exploring cross-national state regulation of family life. While the

interplay of the sociological imagination between social and political change and biography is central to the book the theme is not always well developed. The opening sentence of the book unsuccessfully attempts to create an interactive dialogue between writer and reader: "Think of the last time you witnessed a television document .... Many of these items now begin with a personal story designed to attract our interest...." A universal example reaching over three countries would have been a useful aid to help engage the reader.

The book has many features that teachers and students will find useful learning aids. The seven or so study questions at the back of each chapter are very useful for focusing the reader's attention. When read in advance the questions are likely to promote reflective interaction. Equally useful are the questions the author introduces in the text to move the story along while capturing the central theme of society and the individual. On page 151 Baker states *"Historically women's entry into paid work has been influenced by many factors other than their own ambitions."* This could easily be used as an exam or study question. In addition, the glossary of terms and the book's frequent tables are helpful. The tables and the text itself are continually cross referenced and integrate other relevant parts of the book.

Researchers wanting a "pony" to take them through the family literature will be well served by the extensive cross-nation bibliography. However, at times the textbook and this battery of references provides only a sampler of topics rather than giving the reader an in-depth summary of a topic. On page 168 children's work is discussed very briefly with an expectation that the reader explore the references themselves.

Reading the text as a lecturer of family and work in a New Zealand University I found the book a refreshing contribution. For example, the book's critique of industrial sociology's traditional focus on men's jobs is highly effective giving emphasis to women's paid and unpaid work as a starting place to explore men's lack of contribution to the second shift. I was also pleased with the good coverage of New Zealand literature. Examples of Maori and Pacific people reflects the fact the author is now domiciled in New Zealand. I was left wondering if an Australian lecturer would have found a

similar level of coverage. Having said that I would also remark that at times four countries were in the comparative mix with more than enough comparison between Canada and the USA.

In sum, this is an excellent book but there is still room in our small market for a labour of love devoted solely to exploring the theoretical dimensions of the New Zealand family by itself. However, fortunately, Professor Baker's text *Families, labour and love* does begin to fill a gap in our literature.

Montgomerie, D. (2001). *The women's war. New Zealand women 1939-45.* Auckland: Auckland University Press.

Reviewed by M. Tennant

War provides perennial subject matter for New Zealand history. In recent years official war histories have been supplemented by more personal accounts, including oral histories of individual battles, collections of soldiers' letters and reminiscences, and the usual crop of self-published memoirs. In 2001 at least one battlefield guide was published for those visiting overseas sites where a past generation of New Zealand men died in vast numbers (McGibbon, 2001). Politicians readily agree to launch the more prominent of these publications, capitalising on the nationalistic and often heroic associations of the genre (admittedly more muted and ambivalent now than in the past).

Women's role in war has been marginal to the main war history narrative. As Montgomerie points out in the excellent introduction to this book, the few women who wrote of their wartime experiences before the 1980s tended to do so within the paradigm of military service, mostly as nursing sisters. But, fuelled by the women's movement and a new interest in "women's history" a spate of autobiographical collections appeared from the mid-1980s. These shifted the focus to the "home front" and the impact of war upon civilians, acknowledging women's work and relationships in particular, and culminating in Gaylene Preston's film and book of the same name, *War stories our mother never told us*.

While overseas literature of the 1970s and 1980s presented women's war effort as a watershed for women's work, academic

studies of the home front in New Zealand came at a time when this view was subject to revision; when the limitations of wartime change were being argued. Montgomerie's masterate thesis, from which *The women's war* developed, was presented in 1986. It focused on women's work and, like the book, argued that pre-existing domestic ideologies "acted as a powerful constraint on the extent of change in the position of women in the paid workforce." However, *The women's war* is considerably more than a belated revision of a very able thesis. It shows how a revisiting of earlier work can benefit from subsequent research and new conceptualisations, resulting in a publication which is both broader in vision and tighter in structure. The influence of recent literature on gender shows through, as does an awareness of female sexuality and desire in wartime contexts. *The women's war* addresses men's and women's experiences in a less explicitly relational way than Montgomerie's (1999) chapter on "Gender and the Second World War" in her co-edited book, *The gendered kiwi*, and it still foregrounds women's work experience, but chapters on "Wives and lovers" and "Rehabilitating the gender order" also emphasise personal lives and women's multiple roles.

Montgomerie suggests that "Four principal factors inhibited the war's implicit gender radicalism" (p. 23): the assumption that wartime change was temporary and expedient, the continued commitment by employers, workers and unions to a hierarchical sexual division of labour, continuities in the domestic division of labour and the continued strength of ideologies that defined masculinity and femininity as opposites, assuming that this opposition was essential to social stability. Successive chapters explore these factors, first in relation to women's voluntary work in wartime. This is taken to include pre-existing voluntary organisations, which often took on wartime activities in addition to, or instead of, their peacetime concerns, and the new women's auxiliaries run on quasi-military lines. Interestingly, Montgomerie also includes women who voluntarily entered the paid workforce in this category, distinguishing their combination of patriotism and economic pragmatism from women conscripted or "manpowered" into essential industries after 1942. Industrial conscription was not only to ensure labour for such industries: it was also an attempt to keep a lid on women's wages. Because women were most needed

in the low status and poorly paid jobs which were already their domain – the clothing and service industries in particular – manpowering reinforced the existing division of labour and restricted women workers' ability to profit from the war situation.

Motherhood is also women's work, an arena which assumed additional ideological force in a war situation. Childbearing was a patriotic statement, "A fine way of saying 'Yah' to Hitler" as a *Listener* article put it. Montgomerie disputes claims that war made it acceptable for mothers to work outside the home, pointing out that mothers with child care responsibilities were exempted from manpowering, and that when they did take on paid work, they "faced qualified disapproval, not affirmation or support." Within the home context, motherhood was complicated by new responsibilities and the need to assume unconventional familial roles, and Montgomerie shows the particular difficulties women faced in maintaining relationships between children and absent (then returning) fathers.

Relationships feature in the book's penultimate chapter on "Wives and lovers," which departs from the earlier analysis of work, but shows that war no more offered sexual than economic freedom. Drawing on collections of war reminiscences as well as her own interviews, and supplementing these sources with statistics on illegitimacy, divorce and treatment for venereal disease, Montgomerie suggests that the evidence for an increase in extra-marital sexual activity is ambiguous. Overall, the sexual double standard stayed firmly in place despite moral concerns – women who crossed the boundary between respectability and unrespectability were still expected to pay the price for their transgression.

With the end of the war the pre-existing gender order was rapidly restored, most women appearing to welcome the primacy accorded homemaking and motherhood as "women's career." Here it is interesting to read Montgomerie's argument alongside that of Melanie Nolan in her 2000 book *Breadwinning. New Zealand women and the state*. Nolan's coverage of the Second World War is relatively slight, but she argues that the post-war years were characterised not simply by state-sanctioned domesticity and the reimposition of

the gender order. She points to the "non-monolithic" nature of the state, and some government departments' post-war sanctioning of policies which, effectively, encouraged married women into paid employment (Nolan, 2000, pp. 229, 300). Taken together, these two books provide a more complicated and certainly more contested picture of women's work in the mid-twentieth century than preceding studies which tended to take domestic rhetoric at face value.

The women's war adds to the literature on women's work in New Zealand, seeing World War Two as continuing earlier ideological and labour force trends rather than precipitating a radical break from the past. It injects a sophisticated (and rare) gender analysis into the literature on New Zealand's wartime experience. The text is reinforced by striking visual images, cartoons and advertisements which show how any supposedly liberating elements in women's wartime activities were constantly undercut by mocking stereotypes and a continuation of maternal images. Thoughtful captions ensure that these are closely integrated with the text, but they stand as a telling commentary in their own right. Analysis of policy is tempered by personal stories and anecdotes, though Montgomerie has, perhaps, been less incisive than British historian Penny Summerfield (1998) in teasing apart women's construction of a wartime "self" in oral histories and personal narratives. *The women's war* is essential reading for anyone interested in understanding the histories of gender, of work and of wartime experience in New Zealand.

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Jocelyn Handy originally trained as a clinical psychologist in the UK, then completed a PhD looking at occupational stress in psychiatric nursing. The sociologist who supervised this research had an enduring influence on her intellectual thinking, convincing her that you cannot understand people's motives or actions without a good grasp of social context. Her current research interests are qualitative research in organisations, women and work, and the work/family interface.

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INSTRUCTIONS FOR CONTRIBUTORS

Submissions of Manuscripts. All manuscripts submitted will be considered for publication, on the understanding that they are original material and are not being considered for publication elsewhere. Please submit only finished manuscripts.

Length. Manuscripts should not exceed 6 000 words.
Number of copies. Three (3), preferably laser-printed, copies of manuscripts should be provided for consideration. These should be sent to:

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Specifications for manuscripts. Text will be double-line spaced on one side of A4 paper. Authors should consult articles in current issues of *New Zealand Sociology* on general matters of editorial style, e.g. titles and headings, indentation of paragraphs, form of referencing, etc. Do **not** underline any words in the text. Manuscripts must begin with an **abstract** of about 100 words. Please ensure that your text conforms to UK spelling rather than American.

Graphics. Type each table on a separate sheet with as few lines as possible, and indicate the placing of the table in the text. Use wide spacing in tables. Tables should be numbered in Arabic figures with a clear legend to identify the table. Drawings (graphs, figures, etc.) should be on good quality white paper and on separate sheets.

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Citations. These must conform to the style set out in the *Publication Manual of the American Psychological Association*, 1994, (4th Ed.). Citations in the text should be indicated in parentheses, e.g., "It has been argued (Smith, 1995, p. 47) that..."; It has been argued by Smith (1995, p. 47) that..."

References. A reference list consisting only of those references cited in the text should be arranged alphabetically using the following American Psychological Association style:

Book: Keane, J. (1996). *Reflections on violence*. London: Verso.

Chapter in Book: Matei, S. (1999). Virtual community as rhetorical vision and its American roots. In M. Prosser and K.S. Sitaram (Eds.), *Civic discourse: Intercultural, international, and global media*. Stamford, Connecticut: Ablex.

Article in Journal: Lichtenstein, B. (1996). Aids discourse in parliamentary debates about homosexual law reform and the 1993 Human Rights Amendment. *New Zealand Sociology, 11* (2), 275-316.

Unpublished paper: Ryan, W. (2001, June). *Globalisation and governance.* Paper presented at the Association of Asia-Pacific Social Science Research Council's (APSSREC) Seminar on New Zealand and the World: The impacts of globalisation - social, economic and cultural dimensions, Wellington.

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