1 Introduction: on recombinant knowledge and debts that inspire

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The chapters in this collection are connected through the inspiration they draw from the scholarship of Marilyn Strathern, one of the most compelling and innovative social anthropologists of contemporary times. From early fieldwork and a series of monographs on the Hagen people of Papua New Guinea, Strathern earned a reputation as a Melanesianist, but her theoretical interests have always also been oriented towards Euro-American (that is, her own) society. Scholars in both the social sciences and the humanities know her as a feminist and trailblazing anthropologist of, amongst other things, new reproductive technologies, gender, kinship, economics and law. Over a forty-year career, Strathern has insisted on the constructed nature of such marks of professional and other identification, often convening them into new relations or radically recasting their accepted bearing to each other.

Strathern's reconfigurations have yielded a number of particularly invigorating conceptions of knowledge that have surprised in both their representations and their effects. Her pioneering works on the social and cultural dimension and implications of a range of technological and ethical changes in our time have had a defining, or perhaps a definitively unsettling, role in articulations of what is at stake in a number of current research projects across the humanities and social sciences. How, then, to begin to unpack and introduce Strathern's enormous contribution to scholarship generally and social anthropology specifically? Chronologically? Thematically? Through an archaeology of her key concepts? A review of her writings? Such strategies seem inadequate – inappropriate even. They go against the grain, risking the imposition of an arbitrary structure on a contribution

that defies a linear account and is as immeasurable as it is uncontainable. Strathern's writings hold up for scrutiny familiar and 'taken for granted' concepts and she pays sharp attention to the premises on which 'western' scholarship is built. Such a compulsion is as destabilising as it is exhilarating and its impact, as noted above, is felt beyond the discipline of social anthropology. Yet 'impact', again, does not seem quite the right word.[1] Strathern's insights are subtle. They get under the skin and niggle. They work on you as much as you (have to) work on them.

The authors of the chapters presented in this collection take various strategies and we take our lead from them. Their brief was to pick up, run with and depart from key Strathernian concepts by way of their own current research. The result is something more stable than such metaphors of flight suggest. Instead of running, the authors of these chapters have decided to dwell. Debbora Battaglia (beginning this volume), for example, remarking on the generosity with which Strathern cites her students and colleagues and on how she reworks and re-worlds their ethnographic accounts, shows what it might mean to accompany rather than depart from Strathern: in her words, to go a-worlding with her. Adam Reed (ending this volume) is more cautious: for him, it is a moot point whether Strathern's generosity in citing her students is evidence of her having been inspired by them: but, dwelling on the concept of inspiration itself, Reed reveals its unbidden, all-encompassing, dynamic and deeply social and sociable nature. Multiple flows of inspiration run through the various chapters in this volume and not only between Strathern and her students. Bearing in mind, however, that Strathern's analytical categories have a tendency to dislocate and introduce incommensurabilities of time, place and scale between what, from another perspective, are tokens of the same current social meaning, our attempt to dwell in analytical restlessness poses a particular challenge.

In *After nature*, Strathern outlines a working conception of merographic connection. Similar to but not the same as the relationship between part and whole, a merographic connection depicts the capacity in Euro-American thinking to connect up entities, tropes, images and so forth in

[1] And even less so at a time when 'impact' is mooted in the UK as an appropriate measurement of the worthiness of research.

domains of knowledge: connection in one domain entails disconnection from another. 'Nature' and 'culture', for example, are similar (connected) in the sense that they operate in comparable ways while having laws of their own. 'Culture' and 'nature' work in different fields of fact; each elicits, and is elicited by, sets of connections which differentiate the pair. Difference, then, becomes 'connection from another angle' (1992a: 73). Strathern's tendency and capacity to rework and recombine knowledge originating elsewhere – in other persons and other relations – can itself be seen as an instance of the merographic. She unmoors ethnographic insight from its origins, and unhitches common idioms from familiar domains, mobilising them in a different conversation and connecting them in often unexpected but always productive ways. The authors of the chapters in this book follow suit: they make connections between their work and hers and in so doing make explicit her influence. They also, however, work their ethnography through contiguous research in their field and with the subjects and persons of their study. It is the duplex characteristic of these chapters specifically and the book generally that we want to flag here. While this volume pays tribute and is profoundly connected to Strathern it is also devolved from her and pursues its own lines of enquiry.

Continuing the theme of the duplex, we introduce the authors to you twice: once through some of their specific concepts and then through their place in the structure of this book. First we should note that the thematically diverse chapters in this volume are also linked by the person of the authors. They were all supervised by Strathern as PhD students and their diversity in terms of ethnographic sites, styles of writing, and what they have chosen, or felt compelled, to do for a volume that deliberately makes reference to her ideas and influence is indicative of her eclecticism and intellectual generosity. Strathern has a canny capacity for forging and maintaining relationships across institutions and disciplines, but perhaps more noteworthy, here, is her capacity for nurturing relationships with and between individuals 'across the board'. This latter characteristic is recognised by colleagues (see, for example, Benthall 1994) perhaps because, in itself, it is remarkable in the world of British academia where antennae are often, and still, finely tuned to all kinds of distinction. It is almost an anthropological truism to say that Strathern takes 'the relation' seriously at all levels.

Recombinant knowledge

The anthropological relation that Strathern unpacks is a duplex: simultaneously conceptual and interpersonal (and see both Riles and Putniņa, this volume). Connections between idioms of thought run in tandem with connections between persons (with specific histories). This volume is itself an example of the duplex nature of the anthropological relation. Its contributors have benefited from their relationship with the person of Strathern and owe a personal debt which they cannot, should they wish to do so, completely unhitch from the relationship between their and her ideas (and see Reed, this volume). Yet even though the duplex nature of 'the relation' might mean it is partisan to privilege one aspect (for example, the conceptual) above the other (for example, the interpersonal), our intention was to be partisan: to black box the interpersonal and engage the conceptual. The authors have succeeded in doing this: they have engaged Strathern conceptually and run with her ideas in novel and unpredictable ways. Moreover, in the nature of the anthropological relation, the following chapters are also, and significantly, each an instantiation of a specific interpersonal relationship.

The anthropological relation that Strathern unpacks is also a tool: anthropology's technology. Like the biotechnologist's use of enzymes to splice and combine DNA where 'life is put to work on life … the anthropologist uses relations to explore relations' (Strathern 2005a: 7). Extending the analogy with recombinant DNA, we draw on the notion of recombinant knowledge to flag the novel entities forged through splicing and melding different ways of knowing. Recombinant knowledge serves as an organising trope for this collection on various levels. First, as a whole, the volume brings together (recombines in novel form) the writing and ideas (knowledge-making) of anthropologists whose regular stomping grounds do not usually overlap. Here, researchers who work on Melanesian law and aesthetics enter into conversation with those exploring Japanese corporate business models, insect experimentation in Africa, and same-sex parents in Latvia: how might Strathernian projects link relations among such authors? Second, the term introduces individual chapters which themselves recombine

different kinds of knowledge: for example, anthropological and entomological (Kelly); categorical and relational (Putniņa); customary and judicial (Demian); design and feminist (Berglund). Third, each author engages (combines) Strathern. While it might be trite to note that they deploy different Strathernian concepts and draw on different writings, and that, between them, they cover publications that span three decades and more, it is nevertheless exciting to see the range of insights that have 'grabbed' them and how they have, in turn, put those insights to work. As Strathern herself remarked, '[t]o argue with an idea is to be captured by it' (2006a: 203). The authors here have clearly been captured by Strathern but their chapters also show that they have not been held captive.

Recombinant technology

Paul Berg received the Nobel Prize in Chemistry for his part in developing techniques for recombining DNA in vitro in 1980. The award was not given, however, without dispute over the 'true' origins and 'real inventors' of the technology. As in all ground-breaking science, perhaps in all science, a linear narrative with a focus on a single scientist hardly captures the sources, pooling and sedimentation of knowledge that makes for any 'breakthrough' (a theme explored also in Demian's and Berglund's chapters of this volume). Such narratives will not do justice to the ways in which ideas circulate, lose their moorings, get appropriated, rerouted and adapted and are put to work for different ends than those for which they were conceived. Nonetheless the technology that allowed two DNAs to be combined was granted a patent the same year that Berg received the Nobel Prize. The patent named Stanley Cohen and Herbert Boyer, responsible for developing the technique that allowed DNA to be cloned, as 'sole inventors'.

Reconstructing an inevitable multiplicity of origin, Doogab Yi (2008) has assembled the key actors and events that led to the Asilomar Conference of 1974 and the application for a patent on DNA cloning technology the same year. As a historian of science, Yi connects key actors, a chronology of events and the social and political climate in which they occurred. His purview and connections differ from those of the scientists; in Strathernian terms, he 'summons other contexts'. Berg

himself writes that the exact chain of events in developing recombinant technology has escaped him: 'Time and faulty memory have obscured some of the circumstances and events that led to the scientific breakthrough and the path to Asilomar' (Berg 2004). For Yi, it was Berg's paper reporting on his method for inserting genetic information into viral DNA, published in 1972, that 'heralded a new era for gene manipulation' (Yi 2008: 613). This paper paved the way for the creation of hybrid genes stemming from different organisms. Berg's subsequent research, which aimed to insert viral DNA into *Escherichia coli* bacteria, rang alarm bells, however, and concerns were raised about the safety of the procedure. What were the risks in creating transgenic bacteria for which there were no known antibodies? Could they be controlled? Would they constitute a biohazard? The Asilomar Conference of 1974 in northern California is remembered for agreeing a voluntary moratorium on further rDNA research and being instigated by the scientists themselves.

Yi writes of how, after the conference and the agreements reached there, the move by Cohen at Stanford University and Boyer at UC, San Francisco to file patent for rDNA came as a surprise. In the subsequent controversy, Cohen and Boyer claimed that universities rather than industry should benefit from the commercial potential of the technology. For their critics, not only was the timing bad but also the fact of the application itself was questionable. Should those who called for a moratorium now be seeking right of ownership on research that had been suspended? Why were there only two named 'inventors'? Should higher education institutions benefit from research that had been funded by taxpayers? These questions and more exercised critics and supporters alike.

The patent application was initially rejected on the grounds of 'prior arts'. It was, eventually granted, however, in 1980 and two other rDNA patents followed in 1984 and 1988. According to Yi, the first patent of 1980 helped 'transform this new techno-cultural entity – genetic engineering – into a new legal and commercial form – biotechnology' (Yi 2008: 628). It struck the spark that ignited the explosion of the biotechnology industry on North America's west coast.

Strathern has eloquently charted the implications of a shift from discovery to invention. Invention, she points out, modifies nature;

discovery does not. Patents acknowledge modification, inscribing the work and effort of the scientist. Recall here the oft-cited John Moore who the Supreme Court of the State of California decided had no property claim on cells taken from his body (Rabinow 1996). The point was that he had no claim on any financial profit gained from the stem cell line that had been developed, by a team at UCLA, from the cancerous cells of his spleen. The cells had been modified and, no longer the original raw material, they could be, and were, patented. John Moore's body cells had been cultured-up in more ways than one. Invention, to borrow again from Strathern, cuts the network: in John Moore's case it cut the links between the source of original material and its beneficiaries. In the case of the Cohen and Boyer patent, it cut out other persons and relations through which knowledge had been routed.

Adam Reed (this volume) makes the interesting and eloquent observation that the work of drafting and redrafting a text makes the author. What may have been initially inspired by or borrowed from another is, with effort, re-authored: the inspired, in Reed's terms, is rendered uninspired or more nearly self-sufficient. Of course, this process, as we can read for ourselves in his chapter, renders the final text no less inspirational. Here, the 'un-' in the uninspired merely indicates the cover-up of one source of inspiration. Reflecting on the unmooring necessary for the making of claims to autonomy (and autonomous knowledge), Yi shows how the Cohen-Boyer patent has become a gloss and shorthand for a complicated configuration not only of persons but also of politics and countercultures. By the end of the 1960s, the United States was host to a significant counterculture critical of science and technology. This current coexisted with a mainstream political will to fund biomedical rather than basic research:

> To some molecular biologists, it seemed that the future of their discipline increasingly depended upon its ability to find available intellectual and institutional niches in order to become a constitutive part of the expanding biomedical complex. (Yi 2008: 602)

Such a conjunction of impulses placed enormous pressure on funding agencies and scientists to produce medical applications. President Richard Nixon had declared, amongst other wars, a 'war on disease'; this summons, combined with a biomedical interest in viruses, was

exploited by entrepreneurial biochemists and molecular biologists. There was a mass migration of biochemists and molecular biologists from prokaryotic (bacteria) to eukaryotic (higher order) systems, with viruses being construed as the link between 'basic' and disease-orientated research. One further element of Yi's account of the provenance of recombinant DNA technology is noteworthy among these relations. By the early 1980s, commercialisation had become a significant social activity for North American universities, coming to figure in their mission statements. Universities thus felt bound by the moral imperative that academics should exploit and market their research findings for the financial benefit of the institution.

Yi tells a North American story, but one that resonates with research culture in the UK. Turning to British universities and to the keen ethnographic eye Strathern brings to the management of knowledge, and to the conditions in which research thrives (or not), we can follow again the contributors to this volume and attend to Strathern's analyses of the ratcheting-up of institutional mission statements and the tyranny of institutional practices of audit and transparency (which intriguingly, as Riles addresses in this volume, did nothing to curb the excesses of banks which, amongst other things, precipitated the current financial crisis).

Mission creep

Strathern has a prescience second to none for identifying key questions of the day, both political and theoretical. As well as compelling us to look at our own concepts (whether the 'ours' is the generic anthropologist or the generic Euro-American) with a critical eye, Strathern has commented astutely on the underlying assumptions and rhetorics of persuasion deployed by the two major political regimes of late twentieth- and early twenty-first-century Britain. While Prime Ministers Margaret Thatcher and Tony Blair do duty as proxies for these two regimes, they also stand for a broader 'environment of fact' which Strathern charted and articulated precisely. It may seem odd to emphasise Strathern's political sensibility – she is not one for public emotion, soapboxes, denunciations or the like. Perhaps this is partly why her critique is so effective; why, indeed, it has been so apt. While statements from Thatcher such as

'there is no such thing as society' were never going to go unremarked, it was Strathern's fine-grained analysis of its connotations and her merciless unpacking of 'enterprise' that captured the mood of the day.[2] And while some of us will remember relief bordering on euphoria at the prospect of regime change in 1997, there were already hints that Blair's New Labour and Thatcher's Conservatism were in some respects shades of a similar hue. Strathern had her finger on the pulse and did not miss a beat: from 'enterprise' to 'prescriptive consumerism' she moved on to the tyranny of accountability, transparency and audit. Her analysis of the political zeitgeist was all the more pertinent for not focusing directly on [P]olitics. Her remarkable rendering of the mores of the day was routed first through debates on new reproductive technologies, then through changes in higher education and the management of British universities: both cultural revolutions in their own way.

To exemplify the tone and texture of Strathern's critique of some of the innovations in the management of higher education that have occurred during her watch, we draw on just one of the many seemingly mundane materials that she productively engages – the mission statement (Strathern 2006b). In an unflinching (and witty) analysis of the format (bullet points for the first time in 129 years) and content (a mixture of exhortation and hope) of the 1996 mission statement of Cambridge University, Strathern describes how mission statements have become the University's (not just Cambridge's) form of 'bullet proofing'. Laying out its mission to 'respond to the needs of the community' and 'encourage and pursue research of the highest quality across the full range of subjects', the University displays evidence of high quality within and wards off accusations of poor governance and intervention by central government. Strathern describes the mission statement as a 'protective aversion tactic', and to be effective it borrows the language and format of its auditors. The problem comes when the universities not only respond to external audit in the language of

[2] The difference between the last Conservative government and the recently 'elected' Con/Dem coalition (2010) might be crudely caricatured as a shift from 'no society' to 'the big society'. Strathern's unpacking of the concepts underpinning visions of society promoted by prime ministers Thatcher and Blair will be invaluable when we come to investigate the voluntarism and 'people power' entailed in prime minister David Cameron's appeal to the 'big society' (launched in July 2010).

'assessment-accountability' but then go on to deploy the same in their internal regimes. This, of course, is not peculiar to Cambridge University. It resonates not only across most other UK universities but also across public and private sector organisations more widely (see Berglund, this volume). Again Strathern's insight was prescient. As the language, once borrowed to deflect, became ubiquitous, it gained traction shaping not only the way in which institutions reflect on themselves and each other but also, now, on the way in which its members reflect on themselves and each other. After four research assessment exercises, it could be argued that British academia is a leaner and meaner machine. In the exercise of explicitly valuing selected items of academic achievement, which are then made *the* measures of worth, the phatic – the padding and polite communications required to oil the system – inevitably slides into the interstices of academic life. There, without vigilance, it will atrophy for want of affirmation. But, as we hope this volume exemplifies, not only is vigilance exercised but enthusiasm abounds and the point to underline is that vigilance has been inspired and promoted, in no small part, by treating the academy with the ethnographic seriousness it demands.[3]

It would be a mistake to think audit culture a bureaucratic quirk of the UK: its reach is long and tragic. As we write, a report on the current British military intervention in Afghanistan is in press. Produced by the House of Commons Foreign Affairs Committee, it identifies 'significant *mission creep* since deploying to Afghanistan in 2001'. In a creeping and creepily growing list of responsibilities and targets, today's 'mission' in Afghanistan encompasses 'counter-narcotics', 'human rights' and 'state building'. While new mission statements displace former ones, they do not fully replace them: traces of earlier wishes, desires and targets remain, and new missions must both consolidate and differentiate themselves from earlier projects. As Strathern has so tellingly analysed their trajectory, there is a built-in expansive nature to mission statements: to reduce, scale back, slow down or back-pedal is to pull away from the dilation of the 'mission'.

[3] For excellent analyses of the contribution Marilyn Strathern has made to ethnographies of bureaucracy and notions of public value see the volume edited by Lebner and Deiringer (2009).