

MANAGING THE SOCIAL/KNOWLEDGE EQUATION

ALBERTO CORSÍN JIMÉNEZ

Let me start with mathematics. Mathematics, economists argue, are good to think public knowledge with.¹ Once made public, no matter how often a mathematical theorem is taught, she who knows it cannot have the knowledge taken away; economists call this property of public knowledge, 'non-rivalry': my knowledge of a subject poses no threat or rivalry to someone else's. On the other hand, once a theorem is published, anyone with the will and skills to learn it can have free access to the theorem; economists call this property of public knowledge, 'non-excludability': knowledge is public when no one is excluded nor discriminated from accessing it.

Note that both non-rivalry and non-excludability define the qualities of public knowledge in terms of epistemic abundance or surplus: knowledge is public if it cannot be depleted by generalised access or consumption. If my holding of knowledge subtracts nothing from what others can have, then we may say that what makes knowledge public is also what makes it as 'big' as society: no matter how many people are out there consuming it, knowledge will remain public if its stock remains at a par with, for lack of a better word, Society.

In this article I would like to inquire into the sociological imagination of public knowledge as 'something as Big as Society'. I am intrigued by the terms through which mainstream economic sociology imagines the relationship between knowledge and society, and in particular by the ways in which such relationship is said to hold public value.

My interest in the public qualities of knowledge is a response to a prevailing discourse in the academy that equates the social production

¹ For example, Dominique Foray explains the nature of the 'public good problem' (the problem that accrues when the net private gain of producing a good is less than the net social gain of having it available) by asking about the distributive justice of mathematical theories: 'What is the social return of Pythagoras's work and how can it be rewarded "fairly"?' (Foray 2006: 114–15). A similar analogy is drawn by Joseph Stiglitz (1999: 308). My remarks build on their analogies.

of knowledge with its public value. There is a sense in which calls for promoting interdisciplinary research and collaboration, or the transfer of scientific knowledge to society, are all premised on the assumption that there is something inherently public about knowledge, which can be brought out and extrapolated if properly managed. Management, public value and knowledge are becoming thus correlative terms in a univocal institutional project.

In this light, the article sets out a preliminary inquiry into 'management' as an anthropological category. I want to understand how management produces knowledge, and how and when this knowledge takes an epistemic as well as a self-consciously social form. Following the lead of Marilyn Strathern's Huxley Memorial lecture, I am interested in the forms of 'micro-management' through which knowledge is lent different leases on life through different social practices (Strathern 2006: 192). A central concern of the article, then, is to try to elucidate what is involved in *producing* knowledge in contemporary knowledge-management contexts, and to disentangle different modes of production from different moments of social recognition. Thus, I am interested in the consequences for anthropological theory of one being able to speak at all of 'managing the social/knowledge equation'.

The article reports on two recent field experiences where I have been documenting and studying the production and management of knowledge as an explicit political and economic resource: fieldwork among historians of science and philologists at Spain's National Research Council in Madrid; and among knowledge and architectural management consultants working for one of the world's largest oil companies in Buenos Aires. My interest is in the social processes through which knowledge appears ethnographically as an object of public concern in contemporary knowledge management contexts. In what follows I attempt to sketch a repertoire of *forms* through which knowledge made its appearance and was managed in these two institutional settings.² Some of these forms are common to both

² I borrow here from Annelise Riles approach to the study of bureaucratic formations (2001). In this context, a form carries both descriptive and analytic potency. For example, 'guesswork' as used below describes both a personal experience and an institutional pattern. The qualities that I ascribe to knowledge below are formative because they are both intersubjective and institutionally interobjective. In this guise, the revelation of how forms work, indeed, of what they do, echoes Latour's definition of the term, where the form is 'simply something which allows something else to be transported from one site to another.' (Latour 2005: 223) Thus, guesswork is a form for transporting knowledge about management, and in so doing, a form of 'knowledge management' itself.

institutions; some are unique to either of them. Importantly, all forms are *recognisable* by people in both organisations. They include things like the fragility of knowledge practices; the orientation of knowledge towards self-contextualisation or reversibility; its economic optimism, purity and shamelessness; or its structural serendipity, capriciousness and repetitive scale.

My suggestion here, briefly put, is that parlance of 'knowledge management' has made vigorously explicit certain hidden, historical assumptions about social theory's own sociological ontology. In particular, it has made clear to what extent modern social theory has created and upholds styles of reasoning and argumentative logics that juxtapose and play off certain categories of analysis against others. This 'playing off' of a set of categories against others is most prominent in the very way in which 'knowledge' and 'the social' have been made to work as correlates of each other. More to the point, such correlation entails imagining an equation between knowledge and the social where each becomes a proportionate form for the other. Deleuze once observed how central to Baroque thought was the imagination of two organising forces: the vertical, which concentrated the expressiveness of the world into one intentional and singular moment; and the horizontal, which informed the harmony between the world's different parts. 'To the degree that the world is now made up of divergent series... [a] vertical harmonic can no longer be distinguished from a horizontal harmonic... The two begin to fuse on a sort of diagonal' (Deleuze 1993: 137). The diagonal, for Deleuze, was emblematic of our neo-Baroque age. In what follows I explore the diagonal or proportional form that emerges from contemporary knowledge/social assemblages.

The horizontal: public knowledge

In *Public goods, private goods*, philosopher Raymond Geuss offers a genealogical analysis of the public/private distinction and its relation to the human condition (Geuss 2001). One of the contexts he studies is the notion of the public as a space to which anyone can have access to and where there is maximal observation of what he calls the principle of 'disattendability', that is, the principle of unobtrusive behaviour to others in public places. His exemplar is the famous episode of Diogenes of Sinope's masturbation in the marketplace (Geuss 2001: 12–13), where intimacy, privacy and the public collapse shamefully onto one another. Following Geuss, we may observe that there is an intriguing sense in which disgust, human vulnerability and the inside/outside of a body map onto the cultural form of the classical western public. In this view, the public is a shameless object. It is the main place where we are all

strangers to one another, and hence where there is no place for disgust. We cannot pollute others in public.³

Now it is perhaps not a coincidence that the most recent economic theory (e.g. Cornes & Sandler 1996: 6) defines public goods as 'externalities', in other words, as agencies that create effects beyond their original catchment area. Music is a public good because anyone coming within earshot of a street musician, for instance, will benefit from exposure.⁴ Thus defined, economic public goods are essentially polluting agencies, insofar as they stretch out and spill over into extraneous and foreign environments. It is this surplus or excessive feature of (positive) externalities that lends them their public quality.

Let me add a third quality to the modern liberal conception of the public (beyond those of shamelessness and excessiveness). That is that the public is a space of horizontal relationality. This follows from the public being conceived as a conceptual meeting point for social relationships unburdened with shame and disgust. To address the public is to relate horizontally: to relate with no effect, bringing shame to no one, disgusting no one, polluting no one. Michael Warner hints at this when noting that in public spaces we encounter 'stranger-relationality in a pure form' (Warner 2005: 75). One can embrace the whole world in a relationship of strangeness, because nothing is at stake except sheer and fleeting connectivity with others. It is for this reason that Warner criticises those academics who misunderstand the *public* nature of their work and who, 'think[ing] in horizontal terms', make the assumption that a good public intellectual is she 'who seek[s] socially expansive audiences' (Warner 2005: 144).

Shamelessness, excessiveness and horizontal relationality lend the conception of the liberal public a particular social character, at once complex and contradictory and yet ultimately energetic and consequential. As a liberal political form, the public's shamelessness pre-empts pollution; as an economic agent, on the other hand, its virtue and desirability lies precisely in its capacity at bringing about pollution (i.e. at generating positive externalities and spillovers). It would seem,

³ The etymology of the word, in fact, can be traced back to *pubes* and *pubic*: masculinity, sexuality, power and pollution are central to the western imagination of the public.

⁴ Although the externality may be reversed: music may be too loud and deemed annoying, thus calling for the regulation of street performances, an example elaborated on by Geuss (2001: 93–94)

therefore, that pure relationships generate public objects, while public objects irradiate impure relationships.⁵

The contaminating yet moral undertones of the liberal public resonate with current descriptions of the arrhythmia and self-combustion of the new economies of knowledge. Mike Featherstone and Couze Venn, for example, have recently written about the epistemic change that digital networking may be effecting to our concept of 'knowledge' (Featherstone & Venn 2006). The technological capacities of online communications, they argue, is bringing about a de-cadence of knowledge, a shift towards non-linear and a-synchronic, autopoietic and vitalistic modes of knowing. Indeed, knowledge itself as an epistemological enterprise may be gradually assuming the form of an existential politics. In their words,

If a public involves self-organizing open communication amongst strangers, then there may be many emergent forms of public life. Rather than the model of the global public sphere, it can be argued that it would be more appropriate to think of 'global public life', with the displacement of the term 'sphere' by the term 'life' suggesting the difficulty of separating politics and aesthetics, and cognition and affect. The accent on life, furthermore, points to the potential for information to be conceived as *alive*, as an autopoietic system, or as a complex multiplicity which does not necessarily behave and act as a docile tool but rather is worldling, inventive and generative (Featherstone & Venn 2006: 11).

A somewhat similar point has been made by Nigel Thrift (2006), who sees in the rise of such an ontology of *puissance* (Featherstone & Venn 2006: 11) capitalism's latest reinvention. For Thrift, business is now attempting to locate value in a new distribution of the sensible (of affect and emotion, of the fleeting and transitory) as sheer contingent possibility. Characteristic of this phase of capitalist reorganisation is the extraction of surplus value around the 'whole of the intellect' (Thrift 2006: 296). Capitalism is here factoring 'existence' itself into its profit margins, thus making self-knowledge and self-expression repositories of value.

Ontologies of affect and vitalism lend knowledge unsuspected potency and energy. They render it into an almost self-combustive

⁵ In outlining the qualities of the liberal public I have taken inspiration from Alastair Hannay's recent study on the subject (Hannay 2005). For Hannay, the notion of 'publicness' works as a conceptual fund wherein notions of (i) liberal individuality, (ii) a space of intellectual and market exchanges, and (iii) new social and political audiences take form.

form.⁶ There are echoes here of Gabriel Tarde's description of the economy of innovation as 'germ-capital', a mode of production organised around the pure openness and vibration of ideas (Lepinay 2007). Philosophically, one may also read here an effect on the economy of what Peter Sloterdijk has dubbed 'spherology', the objectification of the world into 'a sort of vibrant and hyperactive jelly', where everything collides and creates effects on everything else (Sloterdijk 2007 [2005]: 29, my translation). But what draws my attention at this point is the image of the horizontal. When everything collides and creates effects on everything else, the history of economic thought has taught us to look for a market sociology (Mirowski 1994): a sociology of signals calling out and effecting changes upon other signals on a horizontal plane. Perhaps the most famous example of a market sociology for knowledge is Friedrich Hayek's description of the surge of knowledge in a price system (Hayek 1945).

For Hayek, knowledge is found distributed across society as circumstantial evidence, embedded in times and places, so frail and elusive that is often, especially among those scientifically minded, taken for non-knowledge, 'apparently because in their scheme of things all such knowledge is supposed to be "given"' (Hayek 1945: 522). Thus, for Hayek, one should not take knowledge for granted, but let it transpire and come-into-being instead as a self-evincing object. In this guise, the image recalls for instance the self-combustion and spontaneity of Featherstone and Venn's autopoietic knowledge capitalism. Unlike Featherstone and Venn, however, Hayek thinks that the spontaneity of knowledge renders its intelligibility problematic. If knowledge crops up here, there and everywhere, then we are going to need some sort of mechanism or instrument that can point us in the direction of new knowledge appearances. The mechanism in charge of bringing all such

⁶ The choice of word (combustion) is not gratuitous. The term aims to capture what some authors call the 'infinite expansibility' of public knowledge. Paul David cites Thomas Jefferson in this respect:

That ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like *fire expansible over all space*, without lessening their density in any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation' (cited in David 1993: 26, emphasis added).

Fire is also famously what lay at the centre of Françoise Quesnay's economics of nature. For Quesnay, the ethereal and energetic matter of fire provided the material substance for the flow of productive forces in the physiological and ecological economy of nature (Christensen 1994).

knowledge within public purview is the price system. For Hayek, the price system works 'as a kind of machinery for registering change, or a system of telecommunications which enables individual producers to watch merely the movement of a few pointers... in order to adjust their activities to changes of which they may never know more than is reflected in the price movement' (Hayek 1945: 527).

The price system renders society self-intelligent: every price signal points to a knowledge repository, which functions in turn as residency for (part of) society. Said differently, different parts of society tell us about their need for recognition through the price system; and we generate and develop the capacity to stock (economic) knowledge when we acknowledge their existence. Hayek's economic sociology therefore maps Knowledge, Society and the Market onto one another, turning them into correlative terms in an equation. In its purest horizontal expression, Knowledge=Society=Market. And this is Public Knowledge.

The vertical

I noted in the introduction that one of the most interesting aspects of the new economy and management of knowledge is the way in which the production of knowledge is entangled in a variety of modes of social recognition. Indeed, the sociological imagination of the new economy, as we have seen above, blurs the distinction between *production* and *sociality*, so that the appearance and recognition of knowledge as an epistemic object is taken as an expression of social life's inherent productive capacities; or said somewhat differently, is indicative of the way in which production and sociality are liable of *commensuration*. As we have seen above, today this is accomplished through the discursive and economic regimentation of 'public value'.

In what follows I want to explore ethnographically this equation between sociality and production, looking at the articulations between the two and interrogating the notion that the 'management of knowledge' should indeed be concerned with and capable of bringing about the commensurability of productive social forms (in the shape of public value).

Over the past two years I have been involved in two separate although converging research projects. From June 2006 to September 2007, I carried out fieldwork among historians of science and philologists at Spain's National Research Council (CSIC). My time at the Council coincided with a critical moment of organisational change within the institution, when the humanities and social sciences (H&SS) were being relocated to a new building on the outskirts of Madrid. The move was seen by senior management as an opportunity to restructure the

academic organisation of the H&SS: academic departments were disbanded and researchers were asked to create or affiliate themselves with research groups, if possible in terms that would promote scientific interdisciplinarity and the transfer of knowledge to society. The movement of knowledge workers from one building to another was therefore taken as an opportunity to reshuffle and reorganise anew the very knowledge stock of their trade – an opportunity for making knowledge more responsive and dynamic.

In September 2007, within days of having concluded my fieldwork in Madrid, I moved to Buenos Aires to collaborate with an international ‘innovation consultancy’ firm in designing the ‘knowledge environment’ of one of the world’s largest oil companies’ new headquarters in Latin America. On arriving, I joined a team of ten people, including architects, engineers, geologists, public relations managers, IT specialists, consultants and graphic designers, who were dedicated to the task of designing a new office environment for the company’s new purpose-made 34 storey building. The plan was to relocate over 2000 people from a variety of office locations in Buenos Aires to the company’s new, flagship building in the luxury harbour area of Puerto Madero. In terms not unlike those of the Council, the change of building was seen as an opportunity to restructure the company’s ‘workplace strategies’, coming up with a blueprint for an ‘ecology of new ways of working’ that would promote knowledge and managerial transparency, team work, work flexibility and mobility, and the reconciliation of professional and lifestyle values. The movement of people from a variety of offices to a central location was taken as an opportunity to shake-up and loose old and antiquated work habits and practices – an opportunity for making work more dynamic and adaptive to change.

Note the difference in managerial objects: CSIC’s reorganisation was spoken of in terms of ‘knowledge management’; at the oil company, however, the project was conceived as a change in the way people work. Knowledge vs. work: whereas the former is an object of productivity (knowledge has to be *demonstrated*), the latter is an object of production (work *monstrates* itself in action).⁷ My interest here is in both

⁷ Echoing a distinction first made by Aristotle, José Ortega y Gasset (1992: 178) once differentiated between ‘demonstration’ (in the original Greek, *deîxis*) and ‘monstration’ (*apodeîxis*): a second-order proof versus a first-order appearance. Reality, Ortega y Gasset held, manifests itself, ‘appears’, in a sort of emergent mode, an appearance that is ‘pure exhibition’, pure spectacle (ibid. 179). The difference between the deictic and the apodeictic, then, lies in mode of appearance: Whereas the former requires a context to convey its meaning, the latter emerges simply as its own epistemological context-in-

'monstrations' and 'demonstrations', and the way they intersect and re-articulate different processes and practices to make room for the appearance of knowledge as an object of management. In what follows I provide a catalogue of institutional forms that render social life liable for 'producing knowledge' – a possibility afforded in the Euro-American context by a new imagination of the social as somewhat analogous to a form of 'micro-management' (Strathern 2006).

Reversibility:

Steve Fuller has given the name 'reversibility' to a procedural-cum-epistemological requisite of the production of science that leaves open the possibility for revisiting decisions in the future (Fuller 2000). Knowledge is tightened up by leaving it deliberately loose. Reversibility points to a kind of knowledge practice that strives to capture its own sense of perpetual displacement by making room for future movements.⁸

Reversibility was very much present at the Council; it was absent at the oil company. A noted example of reversibility at the Council was an informal coffee discussion held by various historians on the topic of Spanish historiography.⁹ The discussion went along the following lines. At an informal coffee gathering, a young assistant professor called Luis spoke of his recent experience as a visiting fellow at the Institute of Historical Research at the University of London. A senior researcher

action. On the difference between the demonstrative and the monstrative in the knowledge economy, see Corsín Jiménez (2008b).

⁸ In a study of Cambridge's Genetics Knowledge Park interdisciplinary network, Marilyn Strathern glosses as 'rehearsals' the kinds of informal exchanges and conversations through which academics outline and prepare the grounds for future work (Strathern 2004b: 41). The example Strathern provides captures this sense of reversibility well. She reports a casual conversation between herself and an informant (an academic himself) later becoming the subject of that very informant's appreciation of his own knowledge production (of a seminar talk later delivered by this person). As she puts it, the effort of collaborating makes one realise that '[f]rom looking forward one finds one has swiveled [sic] round and is looking back', an instrumental talk between colleagues becoming thus an expressive object of knowledge (Strathern 2004b: 41). Elsewhere, she describes this opening-up of knowledge to its own future re-versions as a faculty for 'engagement': 'For nothing more is implied beyond each act of engagement, insofar as each contains the possibility of re-engagement without specifying what it would be.' (Strathern 2006: 203) On reversibility more generally, indeed, on its capacity to work as an anthropological concept of the concept, see Corsín Jiménez and Willerslev (2007).

⁹ The following example is drawn from Corsín Jiménez (forthcoming).

asked Luis whether during his time at IHR he was ever asked about the kind of work done at the National Research Council. Luis thought about it for a second and then replied that no, that in fact no one had ever asked him about the work being carried out at his home institution back in Madrid. A brief silence followed. This was broken by a young researcher protesting rather loudly about the arrogant views that Anglo-American historians had of Spanish scholarship. 'How many seminars at British universities on Spanish history or Latin American issues are carried out in Spanish? How many? I mean, some of the people who work on these subjects can't even read Spanish!!'

The protest by the young scholar gave rise to an intriguing debate on the nature of historical work, including the relationship between national identities and reflexive historicity in the making of productive scholarship. To the young historian's declamation about the arrogance of Anglo-American academics, a professor replied that 'There is nothing new here. We all know that English is the lingua franca of international academia.' Two researchers noted that, indeed, the historiography of the Spanish civil war was still to this day a 'predominantly British affair', with 'most of the classic works on the topic having been written by British academics.' The observation prompted a professor to remark that 'Spanish academics are very bad at writing synthetic works. We love to go on and on over the same topic, but have no skill at synthesising information and providing a bird's eye view of events.'

Luis, who had remained silent throughout most of the discussion, re-entered the conversation at this point. He drew a comparison between Spanish and British skills at doing syntheses. The latter, he said, were at an advantage, because they had 'completed their own historiography long ago. They have written on and documented every conceivable aspect of their own history. From parish or village histories to national politics there is nothing left for them to do. No wonder they decide to jump over and do other countries' histories.' 'For this reason,' he added 'we should think of ourselves as being very lucky, because there are plenty of topics and themes we can still write about.' 'Yes,' remarked a professor in a slightly frustrated tone, 'but that is also why the English have such a capacity for abstraction: because they are one step ahead of us all the time. They can spend so much more time speculating, creating complex connections between topics, figuring out new ways of being creative, because all the basic stuff is there, done.'

The conversation at the café shows the complex epistemological economies and epistemic reflexivities through which historians working at the Council construct the institutional imagination of what it means for them to engage in productive scholarship. The production of Spanish historiography appears in this context embedded in a rich and dense

economy of international collaborations, transversal and cross-country interpretations of national academic traditions, seminar cultures, language barriers or formative careers. The 'sociology of knowledge' of history, if I may use the phrase, cannot in this context be apprehended through the sociological vocabulary or imagination of externalities or public value. Rather, it is inextricably embedded in its own process of historicisation, a process that is at once institutional and epistemic, and that I dub here reversibility.

Reversibility was not a dimension of the production of knowledge at the oil company. A somewhat similar process of re-contextualisation, however, was that of *guesswork*.¹⁰ Guesswork worked as an indigenous theory of knowledge management: in the face of lack of evidence and information about almost everything we did, we generated relevant contexts for action through guesswork. We speculated about the motives different senior managers may have had for not attending crucial meetings, or for leaving half-way through a meeting, or for providing apparently contradictory explanations to different audiences at different times; we speculated about the reasons a senior manager may have had for appointing as key member of the project someone we thought poorly trained for the task ahead, or for withdrawing from the project someone whose vision and skills were ideal for its development. We speculated about the Argentinian political scene, about the well-known ties and friendship that linked the company's president with the prime minister, and about how that relationship might trickle down and affect our own work. Importantly, guesswork always centred around people. Guesswork was the style of reasoning through which we provided theoretical commentary on the personalities of different people and their motives for doing different things. So guesswork worked as a cultural resource of folk psychology: it was our cultural habit to engage in amateur psychologising. It is not as if we did not enquire for the reasons, or search for the information that led different people to act and will the way they did. We aimed for such knowledge too. But confronted with a sense of ambivalence and uncertainty, guesswork provided the most significant managerial tool for mapping the structures of the project. In this sense, knowledge about the project emerged as a long speculative conversation about people's biographical, personal and psychological relationships. Guesswork was also the most reliable source of institutional *formation*, in the sense that a corpus of historical guesswork developed over time that legitimated further guesswork about the

¹⁰ I borrow the notion of 'guesswork' from Amy Pollard's forthcoming PhD dissertation (Pollard forthcoming). My warm thanks to her for generously sending me her unpublished work.

intricacy of the organisation's entrails. We turned the organisation inside-out through the terms of guesswork. At the oil company guesswork was an integral means of knowledge management, that is, of managing knowledge inside the organisation and of knowing the principles of management.

Fragility and delicacy:

At the oil company, guesswork was a means of responding and accommodating to the politics of uncertainty. But uncertainty never showed up alone. Looming large behind the shadow of uncertainty was fragility. One of the most remarkable aspects of our job as management consultants was the inherent fragility of the knowledge we mobilised. We had to be careful about every situation, every detail, every conjuncture. We had to watch every word we said, and to whom we said it. Saying too much too quickly could endanger the project by generating a situation of panic, suspicion and discontent. Words were therefore fragile and ought to be pronounced with delicacy.

Fragility was also a dimension of the cultural management of knowledge. There were proper and improper ways of circulating and distributing knowledge. Although one of the project's aims was to promote a culture of transparency and collaboration, it soon became clear that some knowledge ought best to be kept in the dark. For example, on more than one occasion someone in our team was told off for copying too many or not enough people in an email's distribution list. Information ought to be treated with delicacy. The processes of knowledge, it was intimated, were fragile; too much light could break them (cf. Tsoukas 1997).

Now in some respects fragility is indeed an index of what Michel Callon calls 'hot' situations of knowledge-making (Callon 1998). Knowledge is fragile because there are tensions and conflicts of expertise, power or technical competence among those with claims or rights over it. But whilst hotness is a useful metaphor to think about the politics of knowledge, fragility points instead to the terms of ontological self-recognition through which knowledge 'monstrates' in action. Hotness is a quality of contemporary knowledge politics; fragility is an ontological quality of knowledge in the process of producing management.

Yes Economy:

At the management consultancy firm the production of robust knowledge was seen to depend on the stability of future streams of funding. This was partly a response to the inherent fragility of

knowledge management projects, as noted above. For this reason, management consultants are constantly generating new contexts for the validity of their knowledge. They say 'yes' to everything: new responsibilities, new tasks, new duties. This helps them to substantiate their deliverables in the future (every 'yes' becomes a deliverable of knowledge recognised as such in advance by both parties), but it also helps their own work roll forward: opening up new avenues for their future involvement in the organisation. By taking up new and occasionally unsolicited responsibilities today, they open up a time slot and an opportunity for accepting additional commitments in the future.

Optimism:

Fuelling the Yes Economy from the inside is optimism. Optimism is a necessary quality of the future-orientation of knowledge management. It is the central force organising management consultants' 'structure of feeling' (Williams 1961). In a management context, optimism is a necessary inflection of the processes through which knowledge is made to appear.

Consultants boast optimism to display a sense of capacity and empowerment. It is an anticipated signal of knowledge's eventual productivity.¹¹ Optimism also elides into a deferral of responsibility, into a vague open-endedness and a climate of uncertainty. These are conflated: a good knowledge manager can handle uncertainty because his optimism is well-founded. This signals the optimist as omniscient, and echoes Leibniz's theocratic optimism, where the best of worlds is a necessary corollary of perfect knowledge (Wilson 1983).

Optimists are shamed by no one and nothing. In fact, if not openly looking for confrontation they certainly do not shy away from it. Their shamelessness and omniscient self-esteem bestows them with the confidence to think of every occasion as a win-win situation: where others see problems and cultural barriers, optimists see only lack of

¹¹ But too much optimism can also intimidate. During a series of workshops organised at the oil company as part of our change management programme, we closed our presentation with a quotation by Victor Hugo: 'The future has several names. For the weak, it is the impossible. For the fainthearted, it is the unknown. For the thoughtful and valiant, it is an opportunity.' On reading the quote, some participants came forward and expressed reservation. A woman remarked that she had never thought of herself as particularly valiant or courageous. Though she understood and agreed that some of the knowledge management changes being proposed would probably facilitate the exchange and circulation of knowledge in her work environment, she felt put off by the structure of feeling associated to the changes. If knowledge management is for the valiant, then knowledge management was not for her.

knowledge and understanding. Granted enough transparency, optimists reason, we would all make the same choices. Optimists are therefore strangers to no one: because although we do not all know the same things, given enough time and explanation, we will. This is important because at meetings management consultants behave as such: as though there were no strangers in the room. Or rather, as if not knowing someone did not entail a condition of strangeness. Social knowledge and the shame of strangeness are therefore mutually evacuated in a regime of optimism.¹² If we follow Warner's insights above about the public indexing stranger-relationality in pure form, then optimism is the natural structure of feeling for the production of public knowledge.

Urgency:

In management contexts, urgency is not so much a temporal framing of events – such that one feels the need of making decisions (because these are almost always postponed) – but the way for consultants to embed themselves in the organisation. At the oil company, urgency worked as a metaphor for expertise. It was invoked every time we wanted to lay claims and legitimate the relevance of our expert knowledge: we would say things such as, 'in our experience now is the time for XXX' or 'the opportunity costs of not doing XXX now will be enormous'. Importantly, urgency was also explicitly stated as a quality of knowledge management. By stamping quotidian activities with the imprimatur of urgency, management consultants opened-up a space for their own expert presence in the future.

Serendipity and capriciousness:

Academic knowledge travels in ways that are serendipitous (cf. Merton & Barber 2004). Over a lunch or coffee, or in the brief interlude that precedes a meeting or a seminar talk, academics exchange references, comment on books they are reading, conferences they have or will be attending, or websites with information they have found useful. Much of this information is forgotten or ignored. Some, however, finds its way into the production of scholarship. Serendipity provides an image for knowledge that emerges on the margins of other knowledge: on footnotes or references, through the metaphorical connotations of words, via friends and acquaintances. On the other hand, as a mode of production of knowledge, serendipity is completely alien to

¹² Robert Jackall hints at this when he writes of corporate managers' rational self-control over their own bodies that they 'must learn to streamline oneself shamelessly' (Jackall 1988: 74).

management consultancy work. At most, it is anecdotal, something to amuse with over a business lunch, to impress an audience during a workshop, to introduce a note of cynical scepticism and distance towards one's own work. Insofar as it is a cue for marginal knowledge, it remains just that: marginal.

There is, however, a different mode of *marginal* productivity of knowledge that is widely mobilised in managerial contexts. In contradistinction from serendipity, I shall call it *capriciousness*.¹³ Like serendipity, capriciousness emerges too on the sides of standardised and institutionalised modes of production. But unlike serendipity it accrues value and managerial purchase through acts of conspicuous appearance and extreme visibility; such movement between the visible and the invisible links capriciousness to the management of secrecy. At the oil company, for instance, some of our interlocutors inside the company were extremely secretive about certain aspects of the project. Crucial to the *management* of such knowledge was making it clear that they were in possession of knowledge not known to us: the capacity to manage company secrets is something external consultants do not have. The point is not moot because, pressed to make room and develop a 'capacity for innovation', many firms are turning today to knowledge management consultants to provide the relevant expertise. Outsiders are therefore brought in to make relevant to insiders knowledge they already have, a situation that is likely to provoke discomfort. Capriciousness is therefore what knowledge produced by insiders looks like when pressed to accommodate to a knowledge management programme.

Repetition:

Seen as a rhythmic pattern, the workday of researchers appears monotonous and repetitive. Biblical philologists, for instance, would arrive to work at their offices between 8–9am every day, would dedicate the morning to administrative tasks, would take half an hour on a coffee break with their peers between 11 and 11:30am, only to return to further administrative tasks until lunch time at 2pm. The same people would go out for coffee and lunch breaks every day. At around 4pm they would be back in their offices. Afternoons and evenings were quieter and most philologists would employ this time in their own investigations, either in the solitude of their offices or in the Centre's library, leaving for home

¹³ Following Robert Jackall's terminology (Jackall 1988: 73). For Jackall, 'managers have a sharply defined sense not only of the contingency but of the capriciousness of organisational life.'

between 7–8pm. Scholarship thus took shape as a structure of habit and routine.

At the oil company, the work life of knowledge managers was of a more unstable and unpredictable nature. There were telephone calls to ad hoc meetings, urgent requests for disparate kinds of information, random audits of our work by the project's internal supervisor. Notwithstanding the apparently erratic nature of much of this work, most of it was sourced on a consolidated and structured database of information. Not a day went by, for example, without having to work on a PowerPoint presentation or an Excel sheet. These documents were always versions of older documents. Much of this work consisted in browsing through digital archives looking for past presentations, identifying images or texts that would serve present purposes, copying and pasting them into the new presentation. In Tardean fashion, in this context 'innovations are, for the most part, combinations of previous examples' (Tarde 2000 [1899]: 23). As important as these documents were, however, they actually made little pedagogical impact. It was their recurrent use and their becoming icons of knowledge management that seemed to make a difference. The later stages of our knowledge management programme, for example, required the organisation of over a hundred workshops, reaching c. 10% of the company's population. At each workshop we would show the same PowerPoint presentation, explaining the basics of the changed management programme to different audiences. Our script was well rehearsed and soon after our sixth or seventh workshop we would anticipate the directions and turns that different audiences would take during question time. We would talk and go over the same protocols and proceedings, introducing subtle variations and what might look like concessions to our audiences. We shifted and adapted our knowledge management script, making it look adaptive and responsive to the needs of users. But adaptiveness emerged only as a marginal accretion. In the last instance, the management of knowledge was pedagogically effective because of the economic scale of our programme – because we were given the chance to repeat one hundred times the same message to different members of the organisation. If the economy of knowledge of scholarship is based on the structural repetition of habit and routine, the economy of knowledge of management is based on the actual scale of repetition (Corsín Jiménez 2008a; Thrift 2005: 215).

Structure:

As intimated above, structure is central to the management of both knowledge and research. In an economy of scholarship, the production

of knowledge is seen to be favoured by the institutional organisation of research as structure. In a managerial economy, the production of knowledge is seen to be favoured by the institutional structure of scale. Thus, despite all the talk about the non-linearity and autopoiesis of knowledge, both at the oil company and the research council, those involved in the production of knowledge – not to mention those with a commitment to its productivity – spent most of their time trying to identify and bring to the fore the structures that would make knowledge appear. The challenge for all is how to render new knowledge pliable to existing structures. Never have the dictums of structural-functionalism been truer than in the knowledge economy: when urged to apprehend and make sense of an intangible asset such as new knowledge, both the people I worked for at the oil company and academics at the Research Council resorted to institutional structures to make sense of, or resist the changes brought before them. The *relationship to knowledge* is therefore always *structural*, even if the conditions and qualities of such a structure vary. When looking to understand what knowledge is and how it works, one should therefore at some point always ask what the structure of its relationality is.

Deliverables:

An interesting aspect of the structural relationality of knowledge is its moment of demonstration: when the production of knowledge becomes *productive* and thus self-consciously articulated and apprehended as a knowledge object of sorts. When a knowledge worker thinks to himself, 'How do I account for my day?' (Strathern 2004b: 23), what concerns him is the productivity of knowledge. When a client asks the management consultant that works for him, 'How should I account for your day?', what concerns him is the processes that structure the mode of production of knowledge.¹⁴ In both cases, deliverability provides a categorical justification for management's relation to knowledge – for the management of knowledge.

Pollution:

The pinnacle of our knowledge management programme at the oil company was the implementation of a 'clear desk policy'. This required

¹⁴ The former is a question about the economy of labour and what Simon Schaffer has called the 'geography of intelligence' (Schaffer 1994: 223): an inquiry into the political and economic structures of the modes of production of knowledge. The latter, on the other hand, is a question about the cultural and moral practices that circumscribe and account for knowledge as a boundary object.

employees to leave their desks clear of all papers, personal objects and removable storage media before they left the office every day. A central part of the consultants' philosophical approach to knowledge management, the clear desk policy was intended to maintain the appearance of a new working environment, to discourage the retention of unnecessary paper, to promote the storage of classified and sensitive documents and thus reduce the risk of unauthorised access to information, and in the long run to help promote mobile work by ensuring that shared workspaces would not become owned by individuals over time.

Clear desks were the tip of a wider knowledge management programme that encompassed a new architecture of digital information storage and archiving, new ways of handling the paper legacy, and an overall effort at generating cross-cutting and transversal organisational synergies. In this model, paper became a token and emblem of informational pollution. 'Information', consultants would argue, 'is free, what varies are the mediums (paper, digital) through which it travels.' Paper was therefore seen as a (superfluous) intermediary between information and efficiency. In its ideal form, pure information was paper free.

In the economy of knowledge management, purity is also what lends information its public quality. Information in a state of maximal purity is digitally open, freely accessible by all, and stored once and only once in a consolidated and robust archive. Pure information is therefore transparent: everybody knows where it is archived, how to access and retrieve it, and who is or should be responsible for keeping the information up to date. Moreover, the public transparency of information is what activates it as a shameless object. However, when invited to rethink the architecture of their archiving systems, our clients at the oil company would often look to us with scepticism: people, they said, will hesitate when it comes to giving up information to some centralised intelligent system. An explanation often given was that people hold on to paper copies of all information because they do not want to find themselves empty-handed whenever their bosses come around asking for unexpected or long-dated copies of paperwork. Paper mediates the relation that people have to information through the relationships they have to other people (and their bosses in particular), and paper archives embody the structure of all such personal relationships. Consultants would respond nonetheless, saying that a common archiving system would help take responsibility away from people and distribute it equally among everyone: information would no longer be 'owned' by an individual but would be publicly available and accessible through the system. Individuals would therefore be spared

the embarrassment of not knowing or not having a particular piece of information when asked by their bosses. Relations (to information) and relationships (to people) would be kept apart. Notwithstanding, on being told about the alleged shamelessness and relational purity of information, some employees grinned and murmured that 'information may be public, knowledge is not'.

At the Research Council, discussions about the coherence or holding together of knowledge were also framed in terms of pollution. For instance, the call for disbanding academic departments was fiercely resisted by many on the grounds of disciplinary integrity and purity. Some researchers resorted to the vocabulary of historical identities: for example, Spanish philologists lay claims to a historical school of classical philological work whose genealogy to the present would be shamefully interrupted if the department was disbanded. On the other hand, certain social scientists, especially those of a statistical bent, were dismayed at the prospect of having to share the same workspace and resources (especially, the same library) as philologists, whom they thought of as academic antiquarians. For some quantitative sociologists, the building that hosted the humanities prior to the relocation was a nineteenth-century relic that remained infused with the corrupted and polluting air of a National Catholic bureaucracy. The very idea of having to collaborate with some of these humanities scholars was repulsive to them. Some mixtures of knowledge would simply never blend.

Conclusion

How is knowledge produced? Gibbons et al. famously observed that the historical economy of knowledge can be analysed in terms of two regimes of production: Mode 1, characteristic of the epistemic culture of science and research, academically-driven and disciplinary-based; and Mode 2, problem-oriented, interdisciplinary, context-driven and socially robust (Gibbons et al. 1994). To this classification, Dominic Foray has added a third mode, what he calls 'integrative knowledge', typified by the production of metrological norms and standards (Foray 2006: 67–68).

Modes 1 and 2 and the model of integrative knowledge are all descriptions of the organisation of the production of knowledge that take the public value of knowledge for granted: public value is what the organisation of knowledge should ideally aim for. Such models put knowledge on a par with society, as if the one was a homological reflection of the other. Such economic sociology participates of what I have called elsewhere a proportional imagination, that makes concepts and social forms work in proportional correlation to one another (Corsín Jiménez 2008c). Thus, the important point about Hayek's sociology is

not that it invokes the fiction of a normative equation between Knowledge, Society and the Market, but that it does so by making these terms work as proportionate forms of one another.

My concern in this article has been to elucidate some of the institutional forms that the labour of knowledge assumes in the process of producing management, and in particular to interrogate the extent to which 'knowledge', 'management' and 'public value' may indeed be said to appear as proportions of one another. Building on Marilyn Strathern's original contrast of research and managerial economies of knowledge (Strathern 2004a; Strathern 2006), I have tried to provide ethnographic substance to the modern sociological oscillation that lends 'knowledge' both productive and social capacities.

When put to the ethnographic test we have seen that the production and flow of knowledge in management contexts rarely assumes a correlative form of any kind. Knowledge is hardly if ever self-combustive, it never flows uninterruptedly in a horizontal way, and its use, circulation and appropriation is almost always likely to produce effects that are shameful, disgusting and most certainly repudiated, or at the very least calling for a cautious suspension. We have seen some examples above: the objectifications of knowledge as a fragile piece, that needs to be handled with delicacy; the calls for making knowledge self-contextualised, sometimes to reverse upon itself, even if this provokes uncertainty or instability; the demands to make knowledge dependant on its future others: through urgency, deliverability and the optimism of a 'Yes Economy', which are always contingent, despite the gloss of their affirmative appearance; the structural serendipity and capriciousness of knowledge, always built upon an economy of repetition. Finally, knowledge's polluting effects, which ambiguously play on the shamelessness and purity of structure.

Unlike the horizontal/proportional equation of knowledge with Society, Economy and other objects of a market sociology (such as governance, innovation or management), the ethnographic indeterminacy of knowledge requires first to identify and label the processes whereby knowledge is laboured into an object capable of flowing or moving at all. One would say that the labour of knowledge creates a vertical incision on its potential for flow. In this sense, the crucial dimension that such verticality lends to the economy of knowledge is to distinguish between the *agency* and the *capability* of its relations (cf. Sen 1993); between externalities, for instance, and reversibles. Relational knowledge carries and is co-extensive with an agency; but it also carries and is co-extensive with a set of capabilities. Knowledge may have an inclination or agency to pollute (externalities), but under certain circumstances it may not be capable to do so, or its

capabilities may extend its agency in novel and unexpected directions (reversibles). For this reason, it is all very well to speak of *knowledge as an object* as a public good, but *knowledge as a process* may only be dubbed public if one is willing to recognise the *labour of knowledge* as a socially productive/public good itself (Corsín Jiménez 2008b).¹⁵

The distinction between the horizontality:verticality of knowledge and its agency:capability brings me to my final point. Knowledge is sometimes spoken of as a source of instability and pollution; sometimes, it is called-for because of its structural coherence and purity. For philologists, we have seen, research is a vertical/intensive process to be distinguished from the horizontal/communicative productivity of knowledge. The labour of scholarship is imagined in terms of a quiet and craft economy of repetition, where knowledge folds and refolds over itself, creating pools of stable, integrated scholarship. For management consultants, on the other hand, the productivity of knowledge is imagined as a horizontal process: a flexible, transparent and instantaneous breaking-down of physical and conceptual barriers through communication. Whilst knowledge is an input to be vertically laboured in the former, it is the outcome of a horizontal process of communication in the latter: an economy of repetitive verticality vs. an economy of horizontal excess.

Note how the processes through which different kinds of knowledge are produced yield different kinds of effects. Such effects are the consequence of a *gradient*: there is always a vertical point of reference that is summoned (whether explicitly, more often than not, implicitly) to explain or justify the horizontal, and vice versa:

Any vocabulary we might adopt to follow the engagement of non-humans into the social link should consider both the succession of hands that *transport* a statement and the succession of *transformations* undergone by that statement... The word 'statement' therefore refers... to the *gradient* that carries us from words to things and from things to words. [...] We thus define two dimensions: association... and substitution... To simplify even further, we can think of these as the AND dimension ... and the OR dimension... Any engagement of non-humans can be traced both by its position on the AND-OR axes and by the recording of the AND and OR positions which have successively defined it. The vertical dimension corresponds to the exploration of substitutions, and the horizontal dimension corresponds to the number

¹⁵ My use of the term 'labour' at this point in the argument is deliberate (vs., for example, 'production'), to signpost a certain distance from descriptions of knowledge as an immaterial good or cognitive capital (Hardt & Negri 2000; Lazzarato 1996). Following Caffentzis, I want to bring attention to the *patterns of production* that organise the labour of knowledge (Caffentzis 2007), still to this day built on the imagery of machine labour (see also Schaffer 1994).

of actors which have attached themselves to the innovation. (Latour 1991: 106)

Latour's argument is a propos the effect of technology and technological equipments in the making durable of Society as a sociological object – although of course what consolidates Society is not the extensibility and concatenary capacities of actants but Latour's own proportional imagination. Thus we see how *the vertical and the horizontal are played-off against each other to form or disjoint a proportion, a gradient*. And this, I think, is worth a pause.

My final proposition is that the production of knowledge in the modern age is largely premised on the creation of such a sense of magnitudinous difference. Or rather, that there is a tension between commensurability and dis/proportionality in the way we imagine 'knowledge' as a productive category of social theory. This is also what renders *disproportionality* the effect through which social theory discovers its own productivity in modern society: it makes us see knowledge when knowledge is out-of-synch with our categories of sociological description.

Given the remarkable ways in which commensurability and dis/proportionate work as forms for one another, I am tempted to conclude this article with a Strathernian suggestion. In what I take to be one of her most insightful propositions, Strathern has suggested that social relationships may be co-constitutive of their anthropological objects of study through the purchase lent to them by analytical relationality. Relationality is a form of knowledge capable of making both the social and the analytical visible at once.¹⁶ What if, however, we were to render relationality itself disproportionate? What form would relationality need to take to become commensurable once again with the social?

Acknowledgements

A first version of the argument was presented at 'Legal knowledge and anthropological engagement: a conference in honour of Marilyn Strathern', held on October 2008 at Newnham College, Cambridge. I am thankful to Monica Konrad for the invitation and to the audience for their questions. James Leach invited me to present a second draft of the paper to the Department of Social Anthropology at the University of Aberdeen, an occasion which provided me with the opportunity to make further improvements to the argument. Amy Pollard read the

¹⁶ Most recently, in Strathern (2005).

original draft and generously sent me comments and advice, which helped shape up the piece to its present format.

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Alberto Corsín Jiménez
Consejo Superior de Investigaciones Científicas (CSIC)