A new kind of symmetry: Actor-network theories and the new literacy studies

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Abstract
This article offers an introduction to both actor-network theories and the new literacy studies, assuming no prior knowledge of either, but referring to examples of empirical research in both areas of study. The article points to useful lessons for adult education research that might be derived from approaches developed in the Sociology of Scientific Knowledge. The goals of such research are to enhance our understanding of educational policy and practice as effects of power circulating in networks of human and non-human entities. There is a critical discussion of some of the concepts and assumptions underpinning both actor-network theories and the new literacy studies, and some of the problems are not resolved in this article, but identified as issues to be worked through in practice. An example of current government strategy for improving adult literacy and numeracy skills in England is mapped onto a framework designed for researching four stages in the translation of complex networks into ‘facts’ about phenomena that scientists seek to control.

Introduction
What have the activities of marine biologists, scallops and French fishermen, or the global topology of anaemia, got to do with reading and writing in local communities, or with a national strategy for ‘improving adult literacy and numeracy skills’? The connections explored in this article are between actor-network theories and the new literacy studies. My interest in exploring these connections is in the possibilities they offer for new ways of engaging with the complexity of adult education research as it spreads out from its institutional settings to the multiple sites and diverse networks of lifelong learning. A particular interest in adult literacy provides a focus for this exploration of a conceptual framework in which both the subjects and objects of knowledge can be observed empirically as entities circulating in networks. I shall argue that the value of this framework is that it invites adult educators to question the
hierarchical ordering of knowledge, skills, learners, teachers, technologies and spaces that characterise our working life. When we start to look at how this ordering and classification is produced, we can begin to think about how things could be different.

The New Literacy Studies (NLS) is a recent label for a body of theory, practice and research, which has been developing since the 1970s, that is based on an understanding of literacy as social practice, rather than as a set of technical and transferable skills. This approach has generated a rich collection of descriptive accounts, demonstrating the diversity of products, practices and social relations associated with reading and writing in different contexts. However, while NLS research continues to generate ever widening conceptions of literacy events and practices, we are faced with international literacy programmes, accreditation frameworks and other measures of acquisition and competence, which reduce literacy to homogeneous packages of functional skills. Within current policy for lifelong learning around the world, a prevailing rhetoric of global competition, skills deficit, human capital and social exclusion underpins prescriptions to remedy low levels of performance in functional literacy and numeracy among the adult population. In England, these are supported by the net of ‘widening participation’ as it sweeps through job centres, community projects, workplaces, pubs and football grounds, trawling for ‘people with difficulties’, who are often ‘reluctant to admit that they have a problem’ (DfEE, 2001, p 28). How has this problem been constructed? How are the goals, desires and aspirations of individuals brought into alignment with a problem that they didn’t know they had? How are the energies of teachers, managers and politicians, the resources of local projects, national programmes and international campaigns summoned to address this problem? In what follows, my aim is to outline some of the concepts and methodological principles from actor-network theory, which may help to illuminate questions such as these.

The article begins with an acknowledgement of the dangers of trying to reduce a complex body of work to a series of transparent explanations. I continue to pursue this problem in a discussion of the use of singular or plural references to both literacy/literacies and theory/theories. Setting these concerns aside, I embark on an introduction to actor-network perspectives on the material, discursive and social attributes of human and non-human entities, and on the notion of power as an effect of practices and relationships in networks.

Drawing on examples from both the NLS and actor-network theory, I go on to explore some of the ways in which the latter contributes to our theorising of relationships between diverse actors and entities, and between particular events and wider social practices. Actor-network theory clearly offers tools for analysing the ‘literacy practices of the powerful’ as illustrated in Mary Hamilton’s (2001) study of the networks mobilised, in the International Adult Literacy Survey, to generate functional tasks and standards for ‘basic skills’ in literacy. This kind of research enhances our understanding of literacy as a material and symbolic means of ordering and classifying knowledge and social interaction. But it should also alert us to the need to reflect on the pre-understandings of literacy that we bring to ethnographic studies of local literacy events.

I conclude this article with the suggestion that actor-network theory offers alternative points of departure for studies of literacy and power, which point to the need for local studies of both literacy and ‘non-literacy’ events. The aim of such studies would be to challenge the hegemony of literacy as a regulatory actor and to investigate
the diverse semiotic modes through which people learn, communicate, invent and express themselves in different social contexts.

The treachery of translation

Actor-network theory (ANT) is characterised by ethnographic studies which do away with essential differences between people, objects, machines, animals, plants etc. in order to, ‘find a way of talking about the social-and-the-technical all in one breath’ (Law, 1991, p 8). In one of its forms, ANT is referred to as the ‘Sociology of Translation’ because of its concern with a process in which networks combine in particular ways to produce objects, knowledge or facts through the displacement or suppression of dissenting voices, or of those ‘facts unfit to fit’ (Gebhardt, 1982, p 405).

To translate is to displace... But to translate is also to express in one's own language what others say and want, why they act in the way they do and how they associate with each other: it is to establish oneself as a spokesman. At the end of the process, if it is successful, only voices speaking in unison will be heard. (Callon, 1986, p 223)

My desire to produce a clear and succinct summary of the key principles and concepts of actor-network will inevitably be thwarted by ANT's refusal to be reduced, or translated, into 'voices speaking in unison'. A singular account of the principles of actor-network theory would also constitute a betrayal, since one of the clearest principles involved is an anti-reductionist commitment to working with complexity. Lamenting the 'overwhelming pressures on academic production to render knowing simple, transparent, singular, formulaic', John Law (1999, p 11) points out the similarity in Latin languages between traductore / tradittore - translation and treachery. I have been warned!

Adding an ‘s’ to the theory?

Gunther Kress (2000a, p 9) has argued that pluralising literacy to literacies, although intended to mark out multiple sites of literacy practices, has the effect of undermining the view that language, literacy and grammar ‘are always and constantly reshaped by those who make use of these resources’. The same argument might be applied to my use of the plural in the title of this paper, that actor-network theory, like literacy, is essentially plural and contingent. As an experienced practitioner of literacy pedagogy and research, I have no problem with Kress's argument, since I am confident in my own authority to attach the label of literacy to diverse but specific networks of resources, interactions, signs and social relations. This authority is founded on a long personal history of investment and interest in a community of practitioners who talk, write and argue about what counts as literacy, drawing on shared understandings of why it matters.

Coming upon actor-network theory as an outsider, however, I initially favoured the plural, actor-network theories, to signal my uncertainty regarding which of the concepts, principles, assumptions and practices has to be embraced for a theory (or method or text) to earn its place within the actor-network canon. Is the theory best summed up in the notion of 'relational materialism' (Law, 1992) or in the principle of 'generalised symmetry' (Callon, 1986)? To what extent will ANT absorb critique or modification of these concepts and principles before it becomes something else? How
important are Susan Leigh Star's (1991) reflections 'on being allergic to onions', or the topology of anaemia in Africa and the Netherlands (Mol and Law, 1994)? Do we need to understand the French terms: problematisation, interessement, enrolment and mobilisation, deployed by Michel Callon (1986) to describe four 'moments' in the process of translation? Will Mary Hamilton's (2001) account of the networks mobilised through the International Adult Literacy Survey count as an actor-network analysis? Or Simon Pardoe's (2000) application of the principle of symmetry to his research on student writing? And what of the 'partial connections' cited by John Law (1999, p 11) between Donna Haraway's (1985) concept of the cyborg and the ANT idea that human bodies and identities are constructed across natural/social boundaries? Resisting the temptation to pile in more examples, this list represents a selection from the actor-network literature that I shall bring together in this article. They have been chosen through serendipity and partiality, and not as an attempt to set myself up as a spokesperson for actor-network theory, or to represent a set of voices 'speaking in unison'. This is why I used the plural theories as a starting point.

But there is another problem with the singular/plural argument that is particularly apparent in the recent proliferation of references to literacies in the educational discourses of participation and social inclusion. Computer literacy is commonplace. In England there is a campaign to promote emotional literacy as a 'Fourth R' in schools, (www.antidote.org.uk) with 'financial literacy and citizenship' included among the Skills for Life prescribed for adults. The moral and functional sense of 'literacies' in these examples may have little to do with reading and writing, they are conceptualised as autonomous, generic and transferable basic skills (Street, 1995). The problem with basic skills is that they tend to be defined by powerful groups who decide for the rest of us what everybody ought to know and be able to do. And one effect of dividing basic skills into discrete packages is to obscure the ways in which these combine to support a particular view of how society should operate within global capitalism, and what every citizen needs in order to participate in that society.

This alerts me to a possible danger that adding an 's' to theory could look like an attempt to isolate discrete elements of actor-network theory, thus rupturing important linkages and productive tensions between these elements. This would be anathema for a body of work which, if it has any unifying identity, is characterised by the conviction that knowledge is produced in heterogeneous networks. If, as John Law (1999, p 12) argues, ANT is neither a single thing nor the multiplicity or plurality of 'a random heap of bits and pieces', then neither theory nor theories will do. However, I shall labour the point no further and revert to the singular ANT or actor-network theory when referring generally to ideas, perspectives and texts which seem to characterise a particular network of ideas and the people, processes, relationships and materials involved in their dissemination. With reference to ANT's disciplinary origins in the Sociology of Scientific Knowledge and the study of Science, Technology and Society, James Gee (2000, p 182) refers to 'The new science and technology studies'. This sits comfortably beside the new literacy studies and draws attention to the diversity of sites and practices that characterise both. They each derive understandings of what is called science, technology or literacy through ethnographic studies and, for ANT, 'what is called knowledge cannot be defined without understanding what gaining knowledge means . . . ' (Latour, 1987, p 220). Similarly, in the New Literacy Studies, what is called literacy cannot be defined without understanding what gaining (and using, producing or engaging with) literacy means. So where, or what, are the theories?
What is ‘new’ in the new studies (of literacy, science and technology)?

NLS starts from a theory of literacy as a set of social practices that can be ‘inferred from events mediated by written texts’ (Barton and Hamilton, 1998, p 14). This is ‘new’ in its rejection of old, but powerfully persistent, understandings of literacy as a set of autonomous skills residing in the minds and bodies of individuals and effecting cognitive changes that are associated with rationality, civilisation and socio-economic development. Recognising that some literacy practices achieve dominance through power relationships and social institutions, NLS brings to our attention the diversity of ‘other’ literacy events and practices that can be identified in different social contexts. The New Literacy Studies shares with ANT a common heritage in anthropology, but different theoretical understandings, both within and between ANT and NLS, determine how any particular social context is defined and what can be named, observed, recorded, analysed and represented, or ‘translated’. NLS draws on perspectives from cultural studies, social psychology and sociolinguistics to illuminate the social meaning of literacy practices among, for example: families from three distinct Appalachian communities (Heath, 1983); Spanish-speaking women in Los Angeles (Rockhill, 1987); literacy practices in an English urban community (Barton and Hamilton, 1998); the ‘Situated Literacies’ identified in a South African settlement (Kell, 1996); or UK men’s prisons (Wilson, 2000). New Literacy Studies in schools and other institutional settings where the interest is in learning and the acquisition of literacy/ies, have drawn particularly on social theories of language and learning derived from Bakhtin, Vygotsky and Volosinov (Ivanč, 1997).

In all these studies, what constitutes a literacy event depends on the researcher or the participants identifying (or producing or interacting with) what Gee calls the ‘literacy bits’ and what Kress calls the ‘stuff of literacy’ in a particular situation. These ethnographic studies concentrate primarily on providing descriptions of what kinds of events and practices produce what kinds of literacy in different contexts. Local events are seen as being embedded in wider social practices, and can be cited as evidence of the diversity of language and literacy practices and the unequal value and status accorded to these in different situations. But work in the New Literacy Studies has tended to rely on pre-defined categories, which assume some of the things we want to explain. It then becomes difficult to show how literacy itself acquires attributes that set it above other forms of cognition, expression and communication. In conceptualising the relationship between local events and the social order ‘out there’, actor-network theory gets rid of ‘out there’ altogether. John Law (1992, p 380) argues that, instead of assuming that we are observing traces of a macro-social system in a local context, the ANT ethnographer starts from the assumption that the local is all that there is.

This, then, is one of the core assumptions of actor-network theory: that Napoleons are no different in kind to small-time hustlers, and IBM’s 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.

This approach is derived from the studies of people ‘doing’ social life which have been developed in ethnomethodology and Conversation Analysis. But rather than aspiring to reproduce the ‘real’ world in a sociological representation, ANT acknowledges the role of narrative construction in research. All references are treated as ‘simultaneously real,
like nature, narrated, like discourse, and collective, like society' (Latour, 1993, p 6). So what can be observed locally are the ways in which ‘out there’ is produced in the patterning of relations between actors or entities in a network. In order to do this, ANT derives conceptual tools from French philosophy and semiotics, challenging traditional categories from the social sciences and combining Foucault with Machiavelli in its analysis of power as effect rather than as a set of causes.

Humans rule OK: Relational materialism and generalised symmetry

The most radical claim of actor-network theory is that all of social life consists of patterned networks of people, animals, machines, texts, buildings, plants - any material entity that is brought into a network. These entities have no inherent qualities but take their form and acquire their attributes through relationships in networks with other entities. This goes beyond the idea that humans behave differently or take on different roles in different social situations, or that plants wilt when the soil is too dry or that light bulbs need electricity. Donna Haraway’s (1985) imagery of the cyborg offers a vision of the hybrid creature of machine and organism that is produced in both science fiction and modern technology and medicine. As we move through buildings, use tools, travel in cars, trains or planes, wear clothes, consume chemicals, plants and animals, read books - all these entities circulate through us as we circulate through them. Cyborg imagery invites us to consider the creative possibilities for these interactive relationships but also to take responsibility for the social relations of science and technology. It means recognising that machines, animals, micro-chips and people, as well as identities, categories, spaces and stories, all have politics and all are implicated in power relations.

In this view, the very humanity of human beings is an effect of the networks through which we derive ‘human’ attributes in relation to other human and non-human entities. This is what John Law describes as relational materialism.

The argument is that thinking, acting, writing, loving, earning - all the attributes that we normally ascribe to human beings, are generated in networks that pass through and ramify both within and beyond the body. Hence the term actor-network - an actor is also, always, a network. (Law, 1992, p 384)

The materialism of this position is in the idea that even abstract entities like power, literacy, love or the global economy are materially embodied in social, conceptual, technical or textual forms, and these can be observed empirically as network effects. Using the approach derived from ethnomet hodology for observing local events, the observer tries not to privilege any of the actors’ points of view or to impose analytic grids, or to fix their identities if these are still being negotiated. This is, of course, problematic, as critics have pointed to the undesirability of ignoring those ‘enduring cleavages in the social order’ like class, race and gender (Nespor, 1994, p 15) and of denying the significance of these in the observer’s embodied and socially embedded perceptions and understandings of people and events. I shall come back to this and other criticisms of actor-network studies. First I want to identify the positive insights that can be produced through research that ‘follows the actors’ as they define and mobilise entities in their discussions, employing the principle of generalised symmetry. The principle is that the observer uses the same register, or repertoire of explanation,
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Latour (1993, p 95) argues that, unlike social constructivism which relegates nature to phenomena that are constructed and explained through human discourse and social relations, the principle of generalised symmetry locates both nature and society on an equal plane. From this symmetrical point we can employ the same explanatory repertoire for the observation of quasi-objects that take on natural or social attributes in the networks in which they are enrolled. This means suspending judgements about what is natural or social, true or false, right or wrong and looking at how such judgements are made when entities are brought into particular relations in an actor-network. Simon Pardoe (2000) employs this principle of symmetry to account for an approach that is used in NLS to investigate literacy practices without prior distinctions about which of these should be classified as right, correct, successful, appropriate or otherwise. When Roz Ivanic (1996) asked students about their choices around the use of punctuation in their writing, she was interested in their reasoning and understanding as they drew on various textual and other resources to negotiate their way through complex rules, conventions and literacy practices.

Such conversations have provided teachers with valuable insights. They enable us to identify those resources that are most likely to help students produce successful writing for particular purposes and effects. The benefits of suspending judgement in this way have been recognised by teachers and researchers working from a stance which may have owed more to political convictions and intuition than to a conscious application of the principle of generalised symmetry. Pardoe argues, strategically, that the latter provides a more powerful justification for the NLS position when there is a need to persuade research funders and policy-makers of the instrumental value of this kind of research. Employing symmetry in his own research on science students' writing, Pardoe explains how insights derived from investigating texts that were deemed both successful and unsuccessful by course tutors pointed to a wide range of contributory factors. These locate students' difficulties in relation to a whole set of practices in science education and relevant published texts rather than to notions of individual deficit.

Much of the recent actor-network literature might be viewed as part of a wider 'spatial turn' in social theory, which draws on social geography and post-structural perspectives on globalisation (Clarke et al, 2002a; Law and Hetherington, 2001). Mol and Law (1994), for example, add a third dimension of 'fluid spatiality' to the topologies of regions and networks through a study of the question 'where is anaemia?'. This is an empirical study ranging across the inadequacy of anatomical explanation for tracing the movement of blood cells in the body, through laboratory and clinical networks, to the regional differences in what it means to be anaemic. If there are plenty of iron tablets available, 'anaemia' is a good diagnosis. If there's no iron, and no good food and no way to cure worms or malaria, then there is no point in using machines to measure haemoglobin levels. Anaemia is real, our bodies need iron; it is narrated, or discursively constructed in the context of different experiences and understandings; and it is social in the sense that what it means and what we do about it is something that is moved around in the fluid spaces of bodies and social relations. The symmetry in this kind of account, is in the recognition that, whatever story is being told, we are reminded that 'it might have been otherwise' (Hughes cited in Star, 1991).

Reijo Miettinen (1999) identifies three fundamental problems with the principles of
generalised symmetry. First, how do you decide, from among the limitless possibilities, what to look at when choosing to analyse networked relations? Any such choices rely on prior theoretical preconceptions of some kind, whether or not these are acknowledged. Related to this is a problem regarding the neglect of marginal or silent actors in many of the earlier ANT studies. I shall return to this problem after showing, with examples from both ANT and NLS, what can be gained by focusing on the more powerful actors in a network. Third, the principle of symmetry is undermined if we acknowledge the singularly human attributes of cognition and intentionality in the process of network construction and the exercise of power. Miettinen draws on conceptual tools from Activity Theory to argue that these problems can be resolved by restoring the distinction between knowing subjects and the objects of knowledge through Vygotsky’s concept of ‘mediated action’. I do not have the space to develop and evaluate Miettinen’s ideas here, but highlight his proposals for a dialogue between ANT and Activity Theory as a source of fruitful possibilities.

While Miettinen’s concerns echo some of the questions which have always bothered me in the ‘real world’ representations of ethnomet hodology and the ‘discovery’ claims of grounded theory, my continuing interest in actor-network theory is in the kinds of stories it enables us to construct about the world. Applying the principle of generalised symmetry means asking how the attributes of some entities in a network are assumed to be certain or natural while others are open to negotiation. This offers a systematic approach to the problem of both asserting linguistic equality, for example, and acknowledging the inequalities of power and status attached to particular dialects and genres. It is an approach that enables NLS researchers to head off criticisms that they perpetuate the status quo by valorising low status language and literacies in an ‘anything goes’ relativism (Street, 1996). But if we want to ask who makes these criticisms; how some understandings of literacy, basic skills or scientific facts come to hold more power than others; how certainties are constructed and how they might be blown apart; we can draw on actor-network theory’s notion of translation to provide a methodological framework for investigating these processes.

The four moments of translation

The goal of translation is to bring together complex entities into a single object or idea that can be mobilised and circulated like a branded commodity or a taken-for-granted fact. Latour (1987, p 131) explains that:

*The problem of the builder of 'fact' is the same as that of the builder of 'objects': how to convince others, how to control their behaviour, how to gather enough resources in one place, how to have the claim or the object spread out in time and space.*

The four ‘moments’ of translation are derived from Michel Callon’s (1986) classic study of attempts by a team of marine biologists to raise scallops on artificial reefs on the French coast. In Callon’s analysis of this enterprise, he accords agency and desire to each actor in a network that includes marine biologists, local fishermen, the wider scientific community, the scallops and their non-human predators. However, and this is where Machiavelli comes into the frame, Callon chose to construct his story from conference papers and scientific reports, representing the world-building activities of the scientists as key actors who control a network in pursuit of their particular interests. In the following account, I shall use a single document, *Skills for Life* (DfEE,
2001) to suggest a framework for analysis that could be mapped on to Callon’s explanation of each stage in the process of translation. *Skills for Life* is a policy document that sets out a ‘national strategy for improving adult literacy and numeracy skills’ in England. An important actor, or entity, in this text is a population of ‘7 million adults’ whose attributes pose a threat to national prosperity and the social order. This entity is introduced into the policy text as a fact, ‘A shocking 7 million adults in England cannot read and write at the level we expect of an 11 year old’ (DfEE, 2001, p 1).

Drawing on concepts from the sociology of translation, Mary Hamilton’s (2001) analysis of the procedures and published findings of the International Adult Literacy Survey (IALS) shows how this was just one of many facts produced in a process of translation and mobilisation. The actors in Hamilton’s story include a far-reaching network of international agencies and institutions, experts, research instruments, statistical outputs, teachers, learners, politicians and journalists. The embedding of the ‘7 million adults’ in educational policy for England attests to its successful mobilisation through the IALS network as a token that can be compared quantitatively with similar tokens of civilisation, development and technical progress in other countries. My interest, like Callon’s, is to identify the points in the process of translation where dissenting elements can disrupt or sabotage the Machiavellian workings of powerful actors in such networks, and introduce the possibility that things could be different.

**Problematisation (or how to become indispensable)**

As the first stage in building a network, problematisation establishes a focus on a particular goal or a problem to be solved. Whoever gets to define the problem locates themselves as the gatekeeper and casting director, determining who/what the other actors are and claiming to know what they want. In the story of the scallops, the problem to be solved was that of an insufficient supply of scallops to meet consumer demand in the context of the socio-economic relations of global capitalism. The scientists made themselves indispensable to the other actors in their network by defining the problem in terms of a specific research question about the capacity of scallop larvae to attach themselves to artificial collectors. This question then became the ‘obligatory passage point in the network of relationships’ through which the other actors must pass. Whether or not the agency and desires of the other actors include self-perpetuation, making a living or learning about marine science, the scientists establish their question, together with its underpinning assumptions and associated relationships, as the path of action and key to satisfaction for all the other actors. Similarly, the problem at the centre of the *Skills for Life* strategy is ‘the country’s ability to compete in the global economy’. The Department for Education and Employment (DfEE) makes itself indispensable by defining the problem in terms of the educational ‘needs’ of a population that holds us back in this competition and ‘places a huge burden on society’ (DfEE, 2001, p 3).

The diagram in Figure 1 is modelled on Callon’s representation of the way in which the key actor defines the other actors and draws them through the ‘obligatory passage point’. The actors and their identities are those invoked in the text of *Skills for Life*, in which the question, ‘*How can we improve adult literacy and numeracy skills?*’ is defined as one that is in the interests of all the actors to pursue. There appears to be no room in this network for challenging definitions of literacy and numeracy, or for actors to claim that what they want is not addressed in this question. This obligatory passage point thus defines the network, the actors and the relations between them.
How can we improve adult literacy and numeracy skills?

**Figure 1**

*Interessement (how the allies are locked into place) and Enrolment (how roles are defined in relation to each other)*

I have grouped these two moments together to emphasise the point that they are not consecutive, but describe the actions that exclude competing interests and secure alliances among the actors in the network. Enrolment is the goal of interessement, whereby actors take on the network’s problematisation as their own. We can employ all kinds of research methods for collecting evidence of these moves, and draw upon our own particular expertise for the analysis of spoken and written language, of technological processes, or of animal and human behaviour, to show how actors can be enrolled into particular relationships with each other. For example, analysis of discursive and rhetorical strategies in policy texts, news headlines and institutional practices can show how subjects and objects are constituted as ‘us’ and ‘them’, as problem or solution, as fact, prediction or vision. Ethnographic descriptions can provide accounts of social encounters and institutional practices that draw a group of entities into a network and establish connections based on assumed values and beliefs. Callon (1986, p 211) points out that ‘enrolment does not imply, nor does it exclude, pre-established roles’, but their alliance must be secured, and in his story this was not achieved. First, very few larvae attached themselves to the collectors. These eventually hatched, but after two years the few resulting scallops were ‘shamelessly fished, one Christmas eve’ before the scientists had been able to come up with an explanation for the deviant behaviour of those larvae which they had failed to enrol. The upshot of the story, as Callon (1886, p 220) relates is that, ‘Faced with these silent mutinies of scallops and fishermen, the strategy of the three researchers begins to wobble.’ This calls into question not only the original problematisation, but also the identities and assumed interests of the implicated actors.

In Figure 2, the network of actors enrolled in the *Skills for Life* strategy is enclosed by a sweeping arrow, which represents an attempt to exclude complexity and dissent. As long as the entities maintain their relationship through the ‘obligatory passage point’ of the *Skills for Life* problematisation, their respective attributes can be fixed in place. This ordering can be disrupted, however, if competing definitions and perspectives...
acquire the strength to permeate the barriers of *interessement* constructed around the network. In the boxes on the left, I have indicated some possible alternative problematisations, which suggest attributes for literacy that are quite different from those that are produced in the network enrolled in *Skills for Life*. Researchers and practitioners who wish to explore such alternatives would need to enrol a different set of actors and establish their relationships with each other through the process of

![Diagram]

**Figure 2**

*interessement*. If any of the actors in a network can be unhitched from the relationships that hold them there, the network boundaries can be eroded. The effect of this instability is to interfere with the fourth moment in the process of translation.

**Mobilisation**

Callon describes the ‘moment’ of *mobilisation* as that in which the various actors are transformed into manageable entities that can be transported into government reports and used by politicians in electoral speeches. Entities that have been successfully translated are like carefully packed suitcases which glide smoothly round the airport carousel or stack tidily in the luggage compartments on a train. More difficult to mobilise are the contested entities which, like carrier bags and chicken hampers and cardboard boxes tied with string, threaten to burst open and spill their messy contents on the ground for all to see. Stephen Brown and Rose Capdevila (1999) point out that a lot of the best ANT stories have been about failures of translation, and they suggest that this could be inherent in the ANT narrative structure – the need for a story with an ending. Of course, it is the narrator who decides where the story begins and ends, and the boundaries between networks can only be mapped out by first making a selection from the available evidence.
In her story of the International Adult Literacy Survey, Mary Hamilton (2001) shows how entities like literacy and the 7 million adults in England who are deemed to have a problem, have been produced in the process of translation. Their representation as facts in Skills for Life attests to their successful mobilisation within certain powerful networks. Hamilton concludes that employing actor-network concepts to analyse this process has persuaded her of the potential for New Literacy Studies, substantiated by ‘convincing ethnographic research’, to generate alternative networks and powerful discourses which mark ‘the beginnings of a strategy for entering the field of policy and practice’. The question this poses for me is whether, in turning our gaze to the centres of power, we are turning our backs on those who stand at the periphery. In other words, whose interests are being served when we embark on such a strategy?

**The Prince and the Pauper: where does the observer stand?**

In one of the few texts that has drawn extensively on actor-network theory for educational research, Jan Nespor (1994) departs from what he calls the ‘Callon and Latour account of mobilisation’ in which the focus is on the powerful actor or actors at the centre of a network. These studies of opaque and subtle manoeuvres and translations, associated with the archetype of Machiavelli’s Prince, are important to our understanding of the ‘field of policy and practice’ to which Mary Hamilton refers. However, Nespor points out that a focus on the mobilising activities of central actors in a network neglects the perspective of those being mobilised at the margins. This is important for any educational research which aspires to take account of the experiences of adult learners, and particularly of those who are mobilised as entities like England’s 7 million adults in the powerful network of the Skills for Life strategy. The other problem that Nespor (1994, p 15) associates with this centre-outward focus is that:

> From the centre of an intersection things seem to come from every direction, everything is flow: from a distance, however stable divisions and routes become visible.

Citing Donna Haraway’s (1992, p 332) criticism that ANT neglects ‘matters like masculine supremacy or racism or imperialism or class structures’ Nespor argues that ANT’s emphasis on fluidity of networks should also recognise that the social world ‘flows at times in very deeply worn channels’. The focus of Nespor’s study is on the space-time relations of knowledge, learning, curriculum and disciplinary practices. This is an ethnographic study in which Nespor (1994, p 15) uses a geographical approach to knowledge construction which ‘allows for the existence of worn landscapes as well as flows’ in both the material and representational production of space and time. Another way in which ANT studies might claim to address those ‘deeply worn’ power differentials is in the continual questioning of how ideas about what is natural or ‘normal’ are constructed both within networks and across network boundaries.

Drawing on her own experience of being allergic to onions, Susan Leigh Star points out that the McDonald’s hamburger empire may provide ‘sameness and stability for some people’, but for her it is ‘a source of chaos and trouble’ (Star, 1991, p 42). John Law’s (1984) actor-network analysis of McDonald’s describes the enrolment and interessement of eating patterns, franchise marketing and employment practices, in which the act of standardisation involves a series of inclusions and exclusions. Star
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points out, however, that, 'no matter where you fall on the scale of participation', most of us live with the fact of McDonalds because of its ubiquitous presence around the world. This is illustrated in a hypothetical scenario in which Star imagines McDonalds developing technologies to enrol more and more divergent groups, including those who can't eat onions. But who would she be if, for example, she joined a 'League to Protect Small Family Owned Businesses'? From being an excluded or problematic customer, for whom McDonalds must diversify their provision, Star (1991, p 39) would then become a different kind of subject:

This is not the disenfranchised, which may at some point be 'targeted'; not the residual category not covered in present marketing taxonomies. This is that which is permanently escaping, subverting but nevertheless in relationship with the standardized. It is not nonconformity, but heterogeneity.

By adding a hypothetical 'self to which they are blind, but which affects my interaction with them' Star (1991, p 37) conjures up a scenario that suggests a productive point of departure for New Literacy Studies. When NLS ethnographers set out to study literacy events in local contexts, we are interested in all the rich and diverse ways in which people engage with the written word in their communities. But this depends on an understanding of literacy that, like McDonalds, is already so ubiquitous and powerful that it is impossible to avoid living with the fact of literacy.

Conclusion

If the fact of literacy is unavoidable, then I want to propose a research agenda that goes beyond NLS to challenge the hegemony of literacy in any situation, and this means asking how else could things be done. What human, technological, conceptual or material resources can be substituted for the written word, and what would be the effects of enrolling these resources in a particular network? This challenge to the pre-eminence of literacy has been taken up by Gunther Kress (2000b), who argues that our understanding of the material and social world is constricted by current theories of meaning. As a product of the high value placed on written language in the public domain, the assumed dominance of language 'constitutes a major impediment to an understanding of the semiotic potentials of, among other modes, the visual and its role in cognition, representation and communication' (Kress, 2000b, p 159). Kress therefore calls for new theories of meaning based on a concept of Design, in which individuals become the transformers of diverse representational resources instead of being regarded as merely the users of stable systems. In drawing upon a wider range of resources, and using these to pursue our particular interests, we engage in the transformation of these resources, the effects they produce and of ourselves as active 'designers'. It is thus possible that providing access to diverse opportunities for communication and self-expression may foster cognitive skills and creative talents that have been suppressed in a culture dominated by the word (West, 1991). These ideas are leading me towards an exploration of visual approaches to research (Clarke et al, 2002b) and an interest in ethnographic studies of adults learning through both literacy and 'non-literacy' events, based on the principles of generalised symmetry and relational materialism.

Employing the principle of generalised symmetry does not simply mean asking why
literacy practices are accorded particular attributes in a network. It also means asking why is literacy there at all? This would involve reflecting on our own interests in constructing a particular network as the locus of enquiry into a 'literacy event' or as a network of literacy practices, and considering the position from which we observe and tell stories about these events and practices. There is little evidence of this kind of reflexivity in most ANT stories, and little or no account of the relationship between the researcher and researched. On the other hand, NLS research with adults has often, though not always, been characterised by collaborative approaches in which research subjects participate, to some extent, in the interpretation and representation of their literacy practices. The lessons we can draw from each would underpin a research agenda that combines the detachment and symmetry of ANT ethnography with a commitment to reflexivity and collaboration.

For when Mary Hamilton (2001) argues for 'convincing' ethnographic research, we have to consider who we are trying to convince, by what means, and to what ends. No educational practitioner can avoid a relationship with attempts to standardise literacy (and serve it up, with or without onions, in fast-food outlets around the world). But educational research can set out to disrupt this relationship by emphasising the heterogeneity of semiotic and communicative practices and by including ourselves - as diverse actor-networks of teaching, learning, research and political engagement - among the 'permanently escaping' subjects. As Star (1991, p 52) points out, we are all members of multiple communities of practice or social worlds, each of which generates its own metaphors, and 'power is about whose metaphor brings worlds together, and holds them there.' The task of NLS has been to generate new metaphors through studies of small events in local communities and to bring these together in the form of stories that disturb the global homogenisation of literacy. The contribution of actor-network theory to this task is to provide a rich fund of ready-made examples to learn from, and to suggest points of departure for new stories about how people learn what they learn, and how adult educators decide what other people ought to know.

References


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