SAGE Biographical Research

Repositioning Documents in Social Research

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In matters of social research sociologists and other social scientists have tended to view documents primarily as sources of evidence and as receptacles of inert content. The key strategies for data exploration have consequently been associated with various styles of content or thematic analysis. Even when discourse analysis has been recommended, there has been a marked tendency to deal with records, files, and the like, primarily as containers — things to be read, understood, and categorized. In this article, however, the author seeks to demonstrate that by focussing on the functioning of documents instead of content, sociology can embrace a much wider range of approaches to both data collection and analysis. Indeed, the adoption of such a programme encourages researchers to see documents as active agents in the world, and to view documentation as a key component of dynamic networks rather than as a set of static and immutable 'things'.

The Role of Documents in Social Research

In one of the most influential texts on social scientific research methods produced during the second half of the 20th century, Glaser and Strauss (1967: 163) argued that, in matters of sociological investigation, documents ought to be regarded as akin 'to the anthropologist's informant or a sociologist's interviewee'. The authors subsequently devoted an entire chapter to how the principles of grounded theory could and should be deployed on inert text. Nowadays, of course, grounded theory is commonly viewed as a method to be deployed on interview (speech) data, and the prominence that was given to text by the two 'discoverers' is routinely overlooked.

In this article, however, it is not the relative neglect of text and documentation in social research that I wish to address, but the very notion that documents should be brought into the research frame solely as 'informants'. In fact, and on reflection, there is an interesting inattention in the work of Glaser and Strauss, as well as of most of the subsequent grounded theorists. It is an inattention that serves to highlight how limited was their vision of the role of documentation in the research process. Their oversight concerns the fact that documentation – especially in the form of the research Memo – was recommended as an essential and indispensable research tool (Lempert, 2007), and not simply as a source of information. And, as a tool, the grounded theorist's Memo was geared toward influencing the key research processes **[p. 224 ↓]** of data collection, data analysis, and report writing (Glaser and Strauss, 1967: 112). In that sense one might legitimately consider the Memo as an active agent in the production of sociology. Unfortunately, Glaser and Strauss seemed blind to the suggestion that documents might ever *do* things as well as contain things.

With that blind spot in mind, and in what follows, I intend to show how documents should not merely be regarded as containers for words, images, information, instructions, and so forth, but how they can influence episodes of social interaction, and schemes of social organization, and how they might enter into the analysis of such interactions and organization. In pursuing that aim, I provide a range of examples that draw, in the main, upon my own data, all of which relate in one way or another to research problems associated with the field of medical sociology. My examples, however, are not offered for any substantive interest they might hold, but are intended

to be illustrative of a wider argument – namely, that in matters of social research, documents do much more than serve as informants and can, more properly, be considered as actors in their own right. As a preface to that argument, the following section opens with some illustrations and a discussion of the ways in which documents and documentation are currently regarded in sociological research.

Re-positioning Documentation

In most forms of social research documents tend to enter and to leave the 'field' in relative silence. Indeed, their place in empirical research is more often than not linked to the use of 'unobtrusive' techniques. Yet it is quite clear that documents are ordinarily positioned to fulfil a dual role; for they appear as both receptacles of content, and as active agents in networks of action. Unfortunately, in the history of sociology only one of the two roles has been regularly highlighted.

I have already noted how, in *The Discovery of Grounded Theory*, Glaser and Strauss recommended that documents should be treated as informants or interviewees. A focus on documents merely as containers of data has, of course, been well established in social science research texts from the work of Goode and Hatt (1952) onward. And, as a key source of data, it is commonly recommended that document content be screened, counted, and coded for appropriate evidence in support or refutation of relevant hypotheses (Krippendorf, 2004; Weber, 1990). In this frame, reports, letters, texts, photographs, and other images, as well as biographies and autobiographies (Angrosino, 1989; Plummer, 2001), not to mention documents containing statistical data and so forth, are most commonly regarded as a 'resource' for the researcher – that is, as sources of evidence.

Such an understanding of documents as inert carriers of content is, unsurprisingly, well reflected in standard textbook statements on the place and position of documents in social research and it is often associated with the **[p. 225 ↓]** idea that documents and humans exist in entirely separate realms. Thus, for example, in the *Handbook of Qualitative Research* (2000: 703), Hodder, the author of a chapter on documents and material culture, states:

> This chapter is concerned with the interpretation of mute evidence …
> Such evidence, unlike the spoken word, endures physically and thus
> can be separated across space and time from its author, producer and
> user.

Similarly, Bryman, in his chapter on documents in *Social Research Methods* (2004: 370), argues likewise:

> … the objects that are the focus of this chapter are simply 'out there'
> waiting to be assembled and analysed.… They are non-reactive.

Whilst May (1997: 157–8), in a suitably entitled chapter on 'Documentary Research: Excavations and Evidence', states:

> Documents as the sedimentation of social practices … tell us about the
> aspirations and intentions of the period to which they refer and describe
> places and social relationships at a time when we were simply not
> present.

There is perhaps no need to emphasize any further the notion that documents exist as a mute, inert, non-reactive, isolated source of evidence that is particularly well suited to styles of unobtrusive research (Lee, 2000). However, I bring this brief review to an end with a reference to one of the soundest of texts on the use of documents as research material, namely, the work of Scott (1990). Therein, the author structures the entire text around the notion that documents serve only as sources of social scientific evidence. Consequently, Scott argues that the key issues to be attended to in the research process concern matters of document authenticity, credibility, the degree to which a document is representative of a genre, and the meaning of its content.

Naturally, whilst the key research techniques for handling documents as 'resource' are drawn from varieties of content or thematic analysis – of various degrees of complexity – such investigations can shift into discourse analysis (Wood, 2000), and whenever that occurs there is at least a nod to the notion that documents might actually enter into the stream of interaction rather than remaining external to such interaction. For example, there is a considerable tradition within social studies of science and technology for

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examining the role of scientific rhetoric in structuring notions of 'nature' and the place of human beings (especially as scientists) within nature. The role and structure of scientific rhetoric in text (and talk) has, for example, figured in the work of Bazerman (1988), Gilbert and Mulkay (1984), Gross (1996), Kay (2000), and Myers (1990). Yet none of that work positions documents as anything other than as inert objects either constructed by or waiting patiently to be activated by scientists.

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In the tradition of the ethnomethodologists and some adherents of discourse analysis it is of course possible to argue that documents might be more fruitfully approached as 'topic' (Zimmerman and Pollner, 1971) rather than resource, in which case the focus would be on the ways in which any given document came to assume its present content and structure. (There has been a somewhat parallel concern with the nature and status of interview data in social research – e.g. Holstein and Gubrium, 1997.) In the field of documentation, these latter approaches are akin to what Foucault might have called an 'archaeology of documentation', and are well represented in studies of such things as how crime, suicide, and other statistics and associated official reports and policy documents are routinely generated – for some examples, see Prior (2003).

Naturally, the distinction between topic and resource is not always easy to hold to – especially in the hurly-burly of doing empirical research (e.g. Darnton, 1984). Putting an emphasis on 'topic', however, can open up a further dimension of research, and that concerns the ways in which documents function in the everyday world. For when we focus on function it becomes apparent that documents serve not merely as containers of content, but as active agents in episodes of interaction and schemes of social organization.

In this vein it is evident that during recent years the potential for some new approaches to the study of documents has arisen. Therein, the key research questions revolve around the ways in which documents are used and integrated into various kinds of knowledge networks, as well as with how documents are exchanged and circulate within such networks. Clearly, documents carry content – words, images, plans, ideas, patterns, and so forth – but the ways in which such material is actually called upon, manipulated, and functions cannot be determined (though it may be constrained) by

an analysis of content. Indeed, once a text or document is sent out into the world there is simply no predicting how it is going to circulate and how it is going to be activated in specific social and cultural contexts. For this reason alone, a study of what the author(s) of a given document (text) 'meant' or intended can only ever add up to limited examination of what a document 'is'. It was on such a basis that the literary theorist De Certeau (1984: 170) stated: 'Whether it is a question of newspapers or Proust, the text has a meaning only through its readers; it changes along with them; it is ordered in accordance with codes of perception that it does not control.'

In this latter regard an interest in the reception and reading of text has formed the focus for histories of knowledge that seek to examine how the 'same' documents have been received and absorbed quite differently into different cultural and geographical contexts (e.g. Burke, 2000). A parallel concern has arisen with regard to the newly emergent 'geographies of knowledge' (e.g. Livingstone, 2005). In the history of science there has been an expressed interest in the biography of scientific objects (Latour, 1988: 262), or of 'epistemic things' (Rheinberger, 2000) – tracing the history of objects **[p. 227 ↓]** independent of the 'inventors' and 'discoverers' to which such objects are conventionally attached (though this approach has not to my knowledge yet been extended to the study of documents in any direct manner).

Focus of research approach	Document as resource	Document as topic
Content	(1) Approaches that focus almost entirely on what is 'in' the document.	(2) 'Archaeological' approaches that focus on how document content comes into being.
Use and function	(3) Approaches that focus on how documents are used as a resource by human actors for purposeful ends.	(4) Approaches that focus on how documents function in, and impact on, schemes of social interaction and social organization.

In all of these cases a key consideration is how documents are positioned and manipulated by human actors in varying circumstances; issues of content are secondary. And with that in mind I shortly demonstrate how a focus on use and function,

rather than content, can open up radically new ways to the study of documentation that are not included in any of the above approaches. However, before venturing into that demonstration I offer a typology (Table 1) of the ways in which documents have come to be, and can be considered in social research.

Whilst accepting that no form of categorical classification can capture the inherent fluidity of the world, its actors and its objects, Table 1 aims to offer some understanding of the various ways in which documents have been dealt with by social researchers. Thus, approaches that fit into Cell 1 have been dominant in the history of sociology and of social science generally. Documents therein (especially as text) have been scoured and coded for what they contain in the way of descriptions, reports, images, representations, and accounts. In short, they have been scoured for evidence. Data analysis strategies concentrate almost entirely on what is in the 'text' (via various forms of content analysis, thematic analysis, or even grounded theory). This emphasis on content is carried over into Cell 2 type approaches with the key difference that analysis is concerned with how document content comes into being. The attention here is usually on the conceptual architecture and socio-technical procedures by means of which written reports, descriptions, statistical data, and so forth are generated. Various kinds of discourse analysis have been used to unravel the conceptual issues, whilst a focus on socio-technical and rule-based procedures by means of which clinical, police, and other forms of record and reports are constructed has been well represented in the work of ethnomethodologists. In contrast, and in Cell 3, the research focus is on the ways in which documents are used as a resource by various and different kinds of 'reader'. Here, a concern with document content or how a document has come into being are marginal, and the analysis concentrates on the relationship between specific documents and their use or recruitment by identifiable human actors for purposeful ends. I have already pointed to some studies of the latter **[p. 228 ↓]** kind in the above paragraphs. However, there are also many studies in a more traditional mould that examine how people use documents in everyday life. Thus, in the field of medical sociology, for example, there are various studies that focus on how medical professionals call upon and use x-rays, charts, notes, files, images, and so forth, in routine clinical settings (Prior, 2003). Finally, the approaches that fit into Cell 4 also position content as secondary. The emphasis here is on how documents as 'things' function in schemes of social activity, and with how such things can drive, rather than be driven by, human

actors – i.e. the spotlight is on the *vita activa* of documentation. In fact, my main interest herein is to highlight and to develop work of this latter kind and in the following sections I provide some specific examples as to what such an approach can look like.

Studying Documents in Action

My first example relates to the materials contained in Figure 1. The talk therein was gathered from a study of clinician/patient interaction in a cancer genetics clinic. The context in which the data were collected and a description of the wider study are available in Prior (2005). In this example a clinical geneticist (designated CG1) and a nurse-counsellor (designated NC2) are discussing their understanding of the degree to which a given patient is at risk of inheriting a certain type of cancer-related mutation. The episode begins with NC2 asking to talk about a patient (line 1), and following assent from the geneticist NC2 very quickly draws documentation into the discussion. She reads from her notes (the reason why the patient contacted the clinic; lines 3–6), she refers to a family history (or pedigree as it is called in human genetics). She asks the participants to 'look at' (line 6) the pedigree and she refers to another set of documents (not present in the clinic) that it has not proved possible to check (cancer records or cancer registry; lines 8–9). In reply, the geneticist makes reference to a computerized decision-aid that has drawn the pedigree (family history) and calculated the woman's risk of developing a cancer. In this case, the drawing has been composed by what Latour (1987) would refer to as an 'inscription device' (known here as 'Cyrillic', line 10). Cyrillic has also calculated ('given us') the numerical risk (line 12) of inheritance – an estimate that NC2 has dismissed as 'inappropriate'. In lines 15–16 CG1 again brings the pedigree into discussion with NC2 – the document (pedigree) forms the occasion for the talk, it is pointed at, and used as evidence and counter-evidence. Among other things it serves as an actor who has (by the use of complex rule-bound procedures) assessed the risk of inheriting a mutation as 'low' and that assessment has to be answered. It is answered in the following ways: it is 'ridiculously inappropriate' (line 12); 'you just ignored it' (line 13); it doesn't take account of males (lines 10–11); and it has let the males in the pedigree – referred to as 'this lot' – exert a 'dilution effect' on the estimate **[p. 229 ↓]** (lines 16–17). In lines 18–19, the human actor proposes a substitution of his own rules so as to counter Cyrillic – 'what we

usually say is …'. In lines 23–25 it is suggested that the patient will not fully understand her problems unless she sees the pedigree that Cyrillic has drawn – at which point the pedigree will be used as a 'justification' (an ally) for the concerns and analysis that the clinicians have arrived at (line 25) – re the other 'side' of the family. Finally, in line 26 we can witness how CG1 uses the pedigree as a counting device – adding up the people in the family tree of particular ages and disease states.

Figure 1: Documents as actors in episodes of interaction
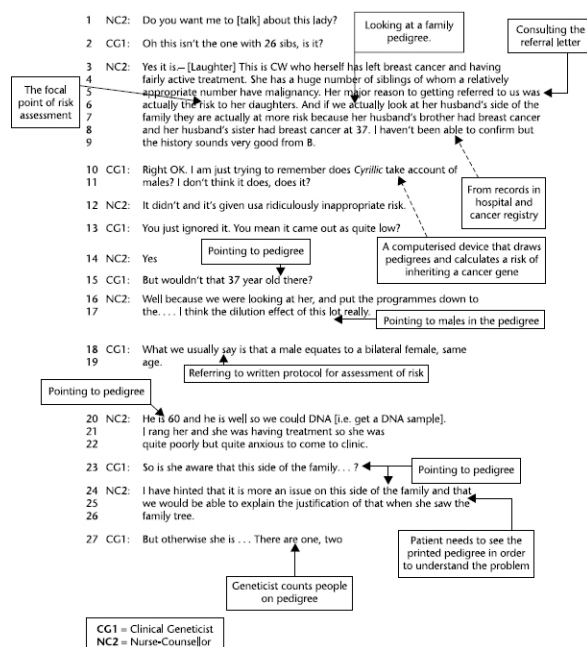
We can see then that the documents (notes, records, pedigrees) are central to the manner in which the interaction is sequenced and structured. Thus some documents (notes) are read; some documents (the Cyrillic print out) are used as the occasion for the talk; some (the pedigrees) are pointed **[p. 230 ↓]** at and used to develop good arguments and justifications. What is more, the documents are linked to the speakers in distinct ways and in clear sequences, and among other things serve to underline the ways in which the division of labour (between 'doctors' and 'nurses') is underpinned in routine interaction (lines 1–3 and 16–19 specifically).

All in all, then, it is clear that the issue of documentation cannot be adequately dealt with by focussing on document content. Rather, the entire complex of events deserves study, and in that structure documents function as props, allies, rule-makers, calculators, decision-makers, experts, and illustrators. In short, they appear as what might justifiably be called 'hybrids' (Callon and Rip, 1992), and some might argue that they function as actors. Nevertheless, whichever way the data are approached it is clear that documents play an active (and a far from passive) role in the configuration of the clinical encounter of which the extract forms a part.

Reticulating 'the Field'

I have just suggested that documents and other objects can be conceptualized as actors. The idea of conceptualizing things (non-human agents) as actors was first proposed by adherents of what is often referred to as actor-network-theory or ANT (Callon, 1986; Law and Hassard, 1999). One key plank of the ANT argument is that the traditional distinction – indeed, the asymmetry – between material and human objects be not just problematized, but overturned. In the same way, it is argued that the traditional distinction between subject and object be dispensed with. So, when studying schemes of social interaction, material objects are not to be regarded as mere (passive) resources that are important only when activated by human actors, but are seen to play a part in social configurations in their own right. That is to say, material objects can be seen to instigate and direct as well as be directed (Callon and Law, 1997: 101).

What is more, over and above the suggestion that non-human agents might be considered as actors, there is the notion that such actors or hybrids may be conceived as components of an actor-network. Thus Michel Callon (1986), for example, linked the fishermen of Saint Brieuc Bay to the scallops that supported their livelihoods – and spoke of the scallops very much as actors. Other actors or 'actants' included a group of researchers, visitors to the bay, starfish, larvae, sea currents, and so on. (The concept of an actant was developed so as to overcome the objection that 'things' do not display consciousness). The detail is not of importance here. What is important is that such a way of thinking fits into our notions of considering documents as members of networks – that is, as actors that can be recruited into schemes of organized activity and regarded by others as allies, enemies, or perhaps simply instigators of further actions – as I have

attempted to demonstrate in my first example. Once we adopt that **[p. 231 ↓]** point of view then the key research questions revolve around the ways in which documents come to be integrated into networks and how they influence the development of the network. In fact, this kind of focus has, during recent years, been linked to interesting developments in research software so as to visualize and represent what we might call the relational aspects of humans and 'things' (Mogoutov et al., 2005).

By tradition, a focus on relationships between people in a network has been associated with social network analysis. Such analysis concentrates on the number of links between specific individuals, the degree to which an individual is central or peripheral to a given network, the density of interactional or contact nodes and so forth (Scott, 1999). However, as actor-network theorists emphasize, social networks cannot be reduced to relations between humans. Consequently, what is usually needed is an analysis of relationships between humans, organizations, and 'hybrids' (such as documents, machines, germs, or whatever). Such ideas are, for example, well represented in the recent work of Alberto Cambrosio and his colleagues who have studied the nature of collaborative research networks and innovation in various fields of bio-medicine. In the context of their study of antibody reagent workshops (2004), for example, the researchers were interested in how the people in the workshop network collaborated, as well as the role of such things as antigen, antibody reagents (contained in bottles), and antibodies in the network as a whole. In the course of their work, Cambrosio et al. developed a network graph, a visualization, of the relations that linked the institutions and workshops to the antibodies. Antibodies are not documents, of course, but a network map could nevertheless illustrate how documents fit into the ensemble of social relations. In subsequent work, Cambrosio and his colleagues have sought to visualize the ways in which networks alter and configure over time and across space (Bourret et al., 2006; Cambrosio et al., 2006) – thereby suggesting how it could be the 'things' rather than the human beings that drive forward patterns of activity. And picking up on the idea that networks containing hybrids might be visualized I return to my data in Figure 1 and illustrate via Figure 2 how the relationship between various kinds of documents and humans might be represented.

In Figure 2, the size of each node is proportional to the number of references that are made to the respective entity in the episode described. A number of observations are worth highlighting. First, that the network as visualized contains both human and

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non-human or hybrid actors. In fact, the figure represents a network of associations between 'strong' and 'weak' objects. Second, the pedigree is the most frequently referred to hybrid – followed by CG and NC. Third, that CW (the patient) is referred to and positioned, and her problem defined almost entirely via the documentation. Fourth, a focus on the content of the documentation alone would fail to capture strategic and essential aspects of the associations between the relevant actors – that is, to capture 'what is going on' in the interactive episode. Naturally, one might **[p. 232 ↓]** argue that the non-human hybrids are relatively weak opponents in the face of human activity (Cyrillic cannot, for example, stop human actors from reaching contrary decisions), yet they are none the less actors. Moreover, the decision-aid known as Cyrillic does incorporate a degree of human consciousness – though it is consciousness-at-a-distance (from its designer) so to speak. Thus, it calculates a risk for 'this person'; it makes decisions, and is resistant to the changing of such decisions. Crucially, the presence of the documents as functioning agents cannot be ignored (remove them and the description loses both structure and sense). Moreover, whilst the power of the hybrids to overturn the human decisions in this episode is weak, the suggestions and conclusions of the hybrids could prove to be paramount in some later circumstance (for example, if things were deemed to have 'gone wrong' as a result of the human decision-making process).

*Figure 2: Representation of references in Figure 1 sequences*
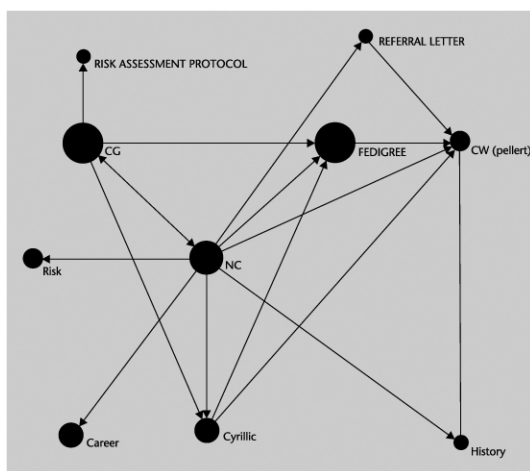
Visualizing networks is both useful and important for a number of reasons. One such reason concerns the enhanced ability to identify the 'traces' that are generated by the links that arise between documents and institutions, documents and people, documents and concepts, and documents with each other. In such a context and during recent years there has, for example, been **[p. 233 ↓]** an interesting focus on traces generated via the World Wide Web (Web). Web pages may be studied for their content or for the links that they generate to other pages and thereby to other organizations. Clearly, the capacity for tracing relations between web sites is built into such sites ordinarily, for web sites contain hyperlinks (to other web pages), and, by concentrating on the outlinks of the web pages, it becomes possible to study how internet documents relate one to another. In recent years the task of tracing the links between such sites has been facilitated by the use of web crawlers. However, Richard Rogers, who has designed one such crawler (http://www.govcom.org), refers to issue networks and issue spaces rather than web networks (Marres and Rogers, 2005). At the most basic level, an issue network is a network of pages that acknowledge each other by way of hyperlinks. Yet the existence of the links indicates something more than mere traces – namely a configuration of institutions, organizations, things, people, and concepts that has a dynamic, visible over time, that cannot be captured by a mere focus on web content. (Visualizations of a wide variety of such web networks are freely available via govcom, and illustrate how political and other forms of network take shape).

So, conceptualizing documents as traces is insufficient in itself and offers us little more than a weaker version of some form of scientometrics. What is needed is an understanding of how the relationships within the network meld together and how the components influence each other. In my next example I have visualized a nascent research network by using data from a range of published scientific papers. Figure 3 relates to some current work on the pharmacogenetics of antidepressants. Without belabouring the detail I am seeking to identify the key components of a pharmacogenetic research network. Such a network contains people, institutions, pharmacological compounds, concepts such as depression and anti-depressant, and corporations. My database included all published papers on the pharmacogenetics of antidepressants between 2000 and 2005 identified using the Ovid MEDLINE database. After analysing titles, keywords, and abstracts and linking these to authors and institutions, a list of connections between people, places, and things was obtained.

A visual representation of the results is provided in Figure 3. The diagram – derived solely from documentary evidence – illustrates how people and things can be linked together. For example, there are clear research teams built around researchers R49, R60, and R73, as well as the objects referred to as Lithium, SERT, and P450-CYP. More importantly, it is clear that by overturning the asymmetry between objects and humans it becomes possible to position 'things', or medico-scientific objects, at the heart of scientific developments, and to follow a trajectory of such things (rather than people) through the unfolding networks that emerge across time and space. Thus, if we were to take the object called *imipramine* (present in the diagram as only one of a number of 'tricyclics'), we could not only trace its singular biography, but

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Figure 3: Research networks and the pharmacogenetics of major depressive disorder
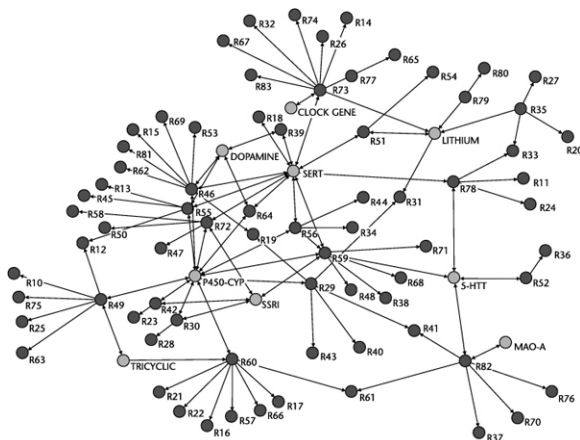
Note: R = Researcher

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also note how that biography is necessarily defined in terms other than its chemical composition. Indeed, its changing identity would have to be grasped via a study of the networks of institutions, corporations, researchers, and concepts in which it has been variously positioned. For the very same chemical compound (*imipramine*) has been

variously regarded as an antipsychotic, a 'sedative', a euphoric, an antidepressant, and nowadays a pharmacogenetic object, depending on which network it is located in. Genes, enzymes, and pharmaceutical compounds are not documents, of course, (though they are often considered as such in the rhetoric of biochemistry – just think of the 'book of life'), but the example illustrates how it could be documents rather than people that constitute the focus of the network analysis, and how it could be the 'things' rather than the human actors that are seen to both hold and to fashion the shape of the network.

All in all, then, I have argued that a focus on the functioning rather than the content of documents leads us to ask questions about what documents do rather than with what they say. Add to this re-orientation a focus on networks, and we prove able to examine the relational properties of things as documents rather than just their attributes. It also becomes viable to visualize the links between elements of a network – to reticulate 'the field' as it were. As a consequence, we would inevitably see that documents are far from being static and inert objects that become energized only at the behest and instigation of human actors. In other words there is a vitality in things as well in humans. Finally, we will begin to see how objects themselves change their nature according to the networks in terms of which they are set – in short, to discover that there is a dynamic property to things (and documents) that cannot be grasped by a focus on attributes, or content alone.

The Vitality of Things

In their consideration of documents and documentary sources in social research, sociologists as well as other social scientists have primarily emphasized the use of documents as evidence. As a result they have focussed almost entirely on what is contained within documents (document content). The key research strategies have been subsequently dominated by various forms of content or thematic analysis. For the most part, both styles of research tend to treat the text as a given object – as something to be read and understood. Another way of putting this is to say that both styles of research have positioned documents as 'resource' – wherein text and documentation exist so as to be scoured for evidence or for facts. Consideration as to how the text assumes the shape that it does or, indeed, how it functions is often

left pending. Over the years there have of course been various attempts to examine documentation as 'topic', and that effort has been well represented in the work of various ethnomethodologists, and in certain styles of discourse analysis. Yet none of what might be called **[p. 236 ↓]** traditional approaches to documentation theorize documents as anything other than 'things' created and set in motion by human actors.

During the last decade or so there has been an emphasis on the relational properties of scientific and other objects. These interests have been influenced by a number of theoretical frameworks (such as ANT), as well as developments in information technology that enable us to examine the traces that documentation generates and thereby to visualize the links within networks that exist between people, things, institutions, and concepts. Perhaps the clearest example of this trend relates to the visualization of links between web pages, which, with the use of web crawlers, can be seen to form a network. This kind of analysis has also been extensively developed in relation to the study of citation networks (e.g. Calero et al., 2006), and it can also be extended to an examination of links between email messages, as well as telephone text messages, and so forth (Newman et al., 2006: 6). However, a focus on graphs alone would leave us with little more than a scientometrics of 'things' in place of scientometrics of citations, and that is not what is being advocated here. Rather, by adopting the theoretical insights of ANT, the recommendation is that we put aside our prejudices concerning the primacy of humans and look at the world from the viewpoint of the whale as well as of the whaler: that is, to examine how documents as vital objects can drive and shape political, economic, medical and scientific activities just as much as do humans. Though it also needs to be kept in mind that, as I have demonstrated, a focus on documents as 'actors' (or even as 'actants') need not be constrained by thinking about networks, and that research into documentation can be allied to a variety of interactional approaches – once we elect to study the function rather than the content of documentation. Indeed, in that frame, documents can be seen to enter into almost all episodes of human interaction. Given such omnipresence it remains puzzling why social scientists rely so heavily on 'talk' rather than text as the key source of research data, and conceptualize only human readers as active.

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