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From Object to Mediator: The Agency of Documents

In his short but seminal paper on the nature of the document, Buckland eschews the narrow conceptualisations of those who argue that documents are limited to printed texts, opting instead for the functional and evidential definitions of Otlet and Briet. But all the competing views that Buckland describes have one thing in common: central to their conception is document as object. Whether it is Briet's physical or symbolic sign, Otlet's expressions of human thought or Schurmeyer's material basis for the extension of human knowledge, a document is a thing (Buckland 1994).

This view of document as thing does not imply or necessitate acceptance of the underlying assumption that they exist as inert and static 'receptacles of content'. As Prior argues "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" (Prior (2008, p. 822). For Prior and many others, a focus on what is 'in' the document, or how that content comes into being, is far less interesting than a focus on how documents are used "as a resource by human actors for purposeful ends" and "how documents function in and impact on, schemes of social interaction and social organisation" (Prior 2008, p. 825).

Central to the present discussion of document as object is the proposition that all documents are in some way material, but the nature of their materiality is irrelevant. For example, so-called 'electronic' documents are material objects because they are only accessible to humans via a device that has a material and external existence from the consumer of the document. Thus a screen on a computer, a page on a mobile device, a flight indicator at an airport, a give-way sign, and a museum exhibit are as much material and documentary objects as a text written on paper. The nature of this materiality – the materials from which they are made – is nevertheless irrelevant to their role as document.

The Document as Mediator

A number of contemporary social theories give mediating objects a pivotal role in human affairs.

Mediating objects can be simplistically defined as things – tools and artefacts - that allow us to do things, to perform actions, undertake activities. Certain contemporary social theories suggest that tools not only have a key mediating role to play in human activities – an assumption many, I expect, would find self-evident – but those activities cannot be examined or analysed in any meaningful way without reference to the mediating agents. Practice theory, Vygotsky's sociocultural theory and its various off-shoots of activity theory, and Actor Network Theory (ANT) all make this argument.

Mediators are not necessarily material objects: practice theory, for example, suggests that human practices are mediated in the first instance by language, as well as by tools and artefacts. Similarly, cultural historical activity theory (CHAT) defines mediating artefacts to include 'instruments, signs, language, and machines' (Conole 2009, p. 192). But material mediation is one

of the key defining characteristics of these theories: most contemporary practice theorists acknowledge materials and artefacts help constitute human sociality, for example, and that practices by definition are materially mediated webs of activity (Schatzki, Knorr Cetina & von Savigny 2001, p. 20). And when Nicolini asserts that artefacts, both material and symbolic, are a way of conveying the past into what we do and in doing so expand our practice (Nicolini 2012, p. 107), surely documents are integral to his proposition.

There is a wealth of research from the information science and organisational studies fields which provides empirical evidence of the role of textual and documentary mediators in information activities and knowledge generation. Smith argues forcefully for the exploration of textual mediation in any examination of social organisation. According to Smith, documents are much more than sources of information about organisations; they are co-ordinators of the activities of their members, integral to their practice, and evidence of their modes of consciousness (Smith 2001). This is reinforced by Yli-Kauhaluoma et al's study of the use administrators make of paper which demonstrates the central role of documents in mediating bureaucratic and administrative practice. In this study the document played the essential mediating roles of boundary object, reminder, information carrier, thinking device, guideline of past practice, material evidence and place holder for current activities (Yli-Kauhaluoma, Pantzar & Toyoki 2013).

Because of the work of scholars such as Orlikowski and Suchman on sociomateriality, mediation is well accepted in the field of organisation studies. While she does not frame her arguments in terms of mediation or documentation, much of Orlikowski's work on the sociomateriality of technology shows electronic systems to be documentary mediators fundamental to social and organisational practices (cf. Orlikowski 2000, 2010). Suchman's work on computer-aided design tools and paper-based drawings as mediators of engineering practice (Suchman 2000) and inscription devices such as whiteboards as mediators for cognitive science researchers (Suchman 1988) is explicit in its discussion of documentary mediation.

And since Brown and Duguid proposed that documents and other information artefacts are active social entities that can bring diverse groups of people together in their pivotal roles as boundary objects (Brown & Duguid 2000), the concept of mediation has been similarly well accepted in information studies. The idea has been used to good effect by McKenzie in her analysis of document use in a midwifery clinic and Davies in her analysis of a theatre production. Here texts are seen as simultaneously constructing - and being constructed by - a social setting, and revealing the organisation of that setting (Davies & McKenzie 2004; McKenzie 2006). From Gherardi & Nicolini's investigation of artefacts as intermediaries of safety knowledge (Gherardi & Nicolini 2003) to Mager's analysis of websites and search engines as mediating artefacts in peoples' search for health information (Mager 2009) a number of studies have specifically investigated the mediatory aspects of artefacts in information and knowledge work.

In sum, a wide range of social theories suggest that practice is mediated, and in the theories which deal with information practices, the document assumes its role as mediator in natural fashion. But can we legitimately make the conceptual leap from mediation to agency?

The Document as Agent

Agency is the capacity of an entity to act, to perform, to do something in the material world. Scholars argue about the degree to which human agency is fettered by structure, but most would concede that humans have agency – the capacity to act - to a greater or lesser degree.

Actor Network Theory (ANT), as formulated by Bruno Latour & Michel Callon, also attributes agency to non-human entities and some practice theorists incorporate this particular feature of ANT into their own theories. For example Pickering, whose field is the sociology of scientific knowledge, is a particular advocate of non-human agency. Pickering argues that attributing material agency makes possible a truer representation of science by acknowledging that 'instruments, devices, machines, and substances...act, perform, and do things in the material world' (Pickering 1993, p. 563). Pickering's arguments are cogent and there seems little logical reason why the capacity to direct human action could not be a property of information artefacts such as documents.

And there is indeed a small body of research that indicates scholars are examining the agential property of documents. The research indicates that documentary artefacts exhibit agency in two ways: in a generative capacity as constitutive of entities; and the document as active entity.

The Generative Capacity of Documents

Hull, in his review on the ethnography of documents, argues that documents are 'constitutive of bureaucratic rules, ideologies, knowledge, practices, subjectivities, objects, outcomes, even the organisations themselves'. He terms this the 'generative capacity' of the document (Hull 2012, p. 251). He also cites a number of studies which show that documents are essential in the constitution of entities such as disease, place, property and technology, and in reference to human actors, the construction of the subject. Frohmann describes this as the capacity of documentary practices to 'make things come into being' (Frohmann 2008, p. 166). That documents represent an objectification of the complex rules and power relations that make up the very structure of the organisation is argued very strongly by Smith, for example, who cites a number of empirical studies in support (Smith 2001). In other words, documents act to make concepts, rules and ideas into objects which are real enough for humans to collectively understand and use.

In a study of a French service firm Callon demonstrates how a company which does not sell corporeal goods makes a product which can be sold to customers by the use of documents describing it. In a second similar study he shows how elusive prospective customers become real entities - ones who can be sold goods and services to - by means of electronic customer cards. He also

shows how documents constitute entities and practices such that they effectively perform the service they describe in a manner very reminiscent of Smith's study (Callon 2002, pp. 194-9).

Dugdale uses actor-network theory to investigate the decision-making of a sub-committee of the Australia Therapeutic Goods Administration, and demonstrated that the leaflet the committee drafted about risks associated with the use of inter-uterine devices constituted the reader as an informed consumer and competent decision maker (Dugdale 1999, pp. 127-30). Similarly Jacob's study of informed consent forms in American & Israeli hospital transplant units concludes that these forms 'make people' – firstly by turning them into an official entity in the health system, but also making them an individual who can be considered, in terms of that system, to be informed, self-reliant, reflexive and – most importantly - very obedient. In Jacob's study it is unimportant to the system that the reader or the signer may or may not be particularly well informed, insofar as they may not have understood – or even read - the leaflet or the consent form in full. What is being demonstrated is that they have, by the action of taking or signing the document, turned themselves into an entity able to be designated 'a well-informed individual' for the purposes of the system (Jacob 2007).

There is a small but significant body of work which demonstrates the integral role documents play in the production of entities, making intangible concepts, ideas, processes and systems into tangible things that can be managed, dealt with, and sold to. But is it possible for documents to play a direct role in changing human conduct?

The Document as Agent of Change

Berg and Bowker effectively demonstrate the role that the medical record plays in the production of the human body. They argue that the documents which make up the medical record play an active role in the performance of the human body – they do not merely mirror it – but they do not determine it. For Berg and Bowker the documents produce the trajectory of a disease in a patient, and the diseased body of that patient, but they do not in and of themselves engender action. To attribute agency to the documents, rather than mediation of relations, would cause a conceptual descent into technological determinism (Berg & Bowker 1994, p. 514).

However, it is possible to conceive of the agency of objects without falling into determinism. One of the key features of Actor Network Theory (ANT) – as developed by Bruno Latour – is that of non-human agency. In ANT we have actors – humans – and actants: non-human actors. And both act upon the other to make some change in each – to essentially make the human/non-human combination into a third entity.

Latour famously uses the example of the citizen with a gun to demonstrate his conception of non-human agency. When a citizen takes up a gun, Latour argues, this object enables a whole range of actions that are impossible without the gun. Thus it can be said the gun is acting on the citizen

in very real ways: it can create new goals that were un-thought of before taking up the gun, and it can create different actions and outcomes that were impossible without the gun. This is not determinism – having the gun does not determine that the citizen is going to act in a particular way. But it provides both the capacity and potential for the citizen to act in a way different to the way she would act when she doesn't have a gun. And more than just providing a different capacity for action, the possibilities for action of the citizen/gun combination are sufficiently different from the possibilities of the citizen without the gun, and the gun without the citizen, that the citizen/gun combination can be conceptualised as a third entity (Latour 1994).

The agency of non-human entities is relatively easy to conceptualise in examples such as this, but what of documents? We would all accept, I think, that in some situations a document can affect our thoughts or feelings, causing us to act in certain ways. Thus, seeing a photograph of one's partner with another lover might be a direct cause of us terminating a relationship. And because of the documentary nature of the evidence – the photograph – we might be tempted to argue that this might elicit a more profound reaction than if we were merely told by a third party that they had witnessed our partner with another lover. But this is not indicative of the agency of the document – we could only argue that the document itself had agency if we could prove that seeing the photograph had a greatly different effect to seeing the situation first-hand.

For documents *qua* documents to be conceptualised as agents of change they must be shown to be active participants such that they effect the situation. There is very little research in this area, but what exists is interesting. Berg and Bowker, while eschewing any sort of determinism, nevertheless find that the medical record does play an active role in the care of the patient. 'The medical record is a distributing and collecting device...it produces the patient's history by demanding that the same measurements be made again and again' (Berg & Bowker 1994, p. 519).

We also have Dowling & Leech's case study which demonstrates how an audit support system changes auditor behaviour. This study relates to an electronic system, but the system is clearly serving a documentary purpose: a description of the system states it 'replicates traditional "paper" work-papers through screens' (Dowling & Leech 2014, p. 249). Jacob's study mentioned earlier demonstrates not only how humans are turned into an official entity in the health, they also perform the important task of 'moving people along' in their journey to make or receive an organ donation (Jacob 2007).

Conclusion

The treatment of documents as mediating objects is well accepted in fields such as organisation studies and information research. There is a wealth of empirical evidence that demonstrates documents play a key mediating role in a wide range of human endeavours. But some social theories suggest that a conceptual leap

can be profitably made from mediation to agency and that non-human objects have the capacity to act - to do or perform something - in the material world.

A small but significant body of work has demonstrated that documents have the constitutive capacity to form ideas and concepts into entities real enough to allow actions to be performed on and with them in the course of every-day human activities. In this alone documents can be said to have agency.

But there is a second, perhaps more exciting, conceptualisation of agency where the objects themselves have the capacity to perform. Here non-human entities have the ability to act upon the human participants in situations thereby affecting and changing their actions.

Studies which conceptualise or examine documents as active agents in the work and social practices of humans are few, but those which exist give us a tantalising hint that this work could be taken further. It seems possible that documents can be agents in certain activities and situations, not only by allowing ideas and concepts to be constituted as entities, but as active agents of change in human affairs.

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