

Document theory for personal and collective informatics: Bridging the social, individual and material

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Note: I would like to be considered to give a short presentation on this topic at the workshop.

In my research, I consider questions of self construction through technology, from the starting point of lived experience. I take a broad view of technology. In my dissertation, for instance, I explored the experience of visual artists as they created (painted, drawn and stained-glass) self-portraits—looking at the information sources they used, the practices they implemented, the ways they shared, the understandings they built of their work and themselves (Gorichanaz, 2018). This sort of technological self construction has ancient roots, but I see it as being of a kind with more modern methods, such as self-tracking and other topics typically studied in personal informatics. I have come to see all these phenomena under the umbrella of *self-documentation*.

In this position paper, I connect personal informatics to document theory. With roots in bibliography and information science, document theory recognizes that in any given document has social, individual and material aspects that are intertwined and co-constitutive. I argue that personal informatics can be fruitfully considered as the study of self-documentation and self-documents. The framework of document theory thus can provide a useful overarching framework for the design of sociotechnical systems in personal informatics.

As mentioned in the call for submissions, personal informatics technologies have generally been designed and studied with the individual user in mind. For example, researchers have looked at why people adopt and abandon these practices, how designs can be improved or developed for novel applications, and how people can be persuaded by tracked metrics to change behavior. Over the past several years, the social dimensions of personal informatics have become more and more salient, particularly as these technologies have become woven into many of our institutions, from education to medicine to the workplace. Lupton (2014) identified the need to study what she calls “self-tracking cultures.” In beginning this conversation, Lupton discusses the social consequences of, *inter alia*, the valorization of data. Since her work, others have contributed empirically on the question of the social dimensions of personal informatics. Such research has shone light on this previously overlooked dimension of personal informatics, but in my view the field is in need of a unifying way to consider the various dimensions of personal informatics. I suggest that document theory can be recruited in this regard.

It may seem self-evident that the artifacts of personal informatics are kinds of documents, but what does this really mean? The word *document* has roots in the Latin *docere*, meaning to teach or provide evidence, which implies that a document is something used in teaching or supplying evidence. Though we typically consider a document to be something textual, modern definitions are much broader. Indeed, as the concept has been developed in document theory, a document is anything that involves meaning, material and culture (Buckland, 2007). Such a tripartite view of the document proliferates in the literature; document theory, thus, is committed to studying how the *individual* (meaning, information, cognition), the *material* (technical, physical), and the *social* (cultural, economic, communicative) are intertwined and mutually constitutive in any given document (Lund, 2009). Document theory also emphasizes the

temporal dimension—how these dynamics shift over time (Olsen et al., 2012). These discussions have been ongoing for the past hundred years or so, and they have seen renewed vigor since the turn of the 21st century. Reviews of this literature are provided by: Lund (2009) in the *Annual Review of Information Science and Technology*; Lund and Skare (2010) in the *Encyclopedia of Library and Information Sciences*; and Shankar et al. (2016) in *The Handbook of Science and Technology Studies*. The toolkit of document theory has been applied to documents in countless domains of human life, yet it is relatively unconsidered in CSCW.

Olsen et al. (2012) provide a conceptual overview of how insights from document theory could be applied to the design of sociotechnical systems. They put forth a method of *experimental document analysis*, in which existing documents and documentary systems can be analyzed—as well as future, yet-uninvented ones. Their framework of analysis involves two dimensions. First is the individual/social/physical dimension described above. Along this dimension, researchers can consider:

- *Mental configuration*: How the individual cognitively/affectively grasps the document, how different people experience the document differently (typically studied in HCI)
- *Social connection*: How the document plays a mediating role in the relations between people, e.g., hierarchies of power (typically studied in sociology)
- *Physical construction*: How the document is technically mediated and manifest (typically studied in engineering)

Next is the processual dimension, which examines how the document came to be (or continues to come to be), along which agents, means and modes can be analyzed:

- *Agents*: Who (all) produces the document? What is their motivation? What stakeholders influence the document but aren't directly involved in its creation?
- *Means*: What technology or natural abilities are used to create the document (hardware, software, infrastructure, human bodies...)?
- *Modes*: How are the technologies used?

What would it mean to apply document theory to personal informatics? In brief, it would provide a shared framework for different parties—including engineers, managers, researchers, users and more—to collaborate in understanding and developing personal informatics systems. It would show, for instance, how self-tracking may be imposed by others just as well as it may be adopted willingly by an individual, and how the features of the system may afford and constrain different aspects of adoption. The framework can be applied speculatively, for the design of future systems, or retroactively, for the description of existing systems—always allowing a discussion of the people, information or technology involved without losing sight of the whole. It seems to me that document theory has much to contribute to the social study of personal informatics—and CSCW generally.

In my own work, I have developed context-sensitive, philosophically-informed conceptual tools for analyzing documents in lived experience (e.g., Gorichanaz & Latham, 2016), which in my current and future work I hope to apply to CSCW and personal informatics research. More specifically, I am interested in helping develop new systems to help people *live better*—more conscientiously, mindfully and wise—with digital technology. Personal informatics must play a role in that, as the field becomes blurry, ubiquitous, enmeshed. And I contend that document theory can enrich that role.

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