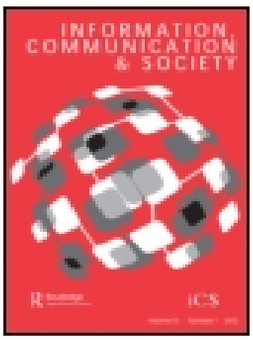

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Revisiting the concept of 'sharing' for digital spaces: an analysis of reader comments to online news

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ABSTRACT

'Sharing' as it relates to the online environment is under-conceptualized, and yet has been proposed as a means for understanding how individuals negotiate everyday privacy. To explore this possibility, we gather reader comments to online news accounts, as these offer an opportunity for observing everyday discourse. Using semantic network analysis, we map related concepts, and use these as a basis for revisiting the concept of 'sharing' as it pertains to the digital sphere. We argue that while 'sharing' continues to encompass traditional notions of communality and distribution, as practiced in digital spaces, it also takes on an added dimension of subjectivity. Consonant with Foucault's (1988) 'technologies of the self', sharing online becomes a reflexive mechanism to know and care for oneself. By considering 'sharing' in this light, we aim to further the conversation of counter-posing sharing to privacy, especially when envisioned as a boundary management process.

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Sharing; technologies of the self; self-surveillance; semantic network analysis

When attempting to explain how privacy is envisioned by individuals in today's digital milieu, publicness and privacy are frequently positioned in opposition, especially with regard to personal information that individuals create and make available. Articulated as a continuum (Ford, 2011) or dialectic (Altman, 1975; Jurgenson & Rey, 2012; Petronio, 2002), such counter-positioning of public to private has not advanced our understanding of how privacy might be accomplished in the everyday, and especially with the use of technologies such as social network sites, microblogs and photo-messaging applications. Because attempts to define this public–private tension continue to leave us dissatisfied in understanding behavior, scholars have called for other approaches to capture a more complete understanding of how privacy is understood and negotiated (e.g. Martin, 2015; van Dijck, 2013). Seizing this opportunity, this paper looks to explore the concept of 'sharing' and its relevance to digital spaces in an effort to consider whether the dichotomy of sharing and privacy presents a feasible alternative for understanding everyday privacy.

One of the most significant features of Web 2.0 is its emphasis on the sharing of user-generated content. Sharing begets feedback (Zingale, 2013) which, in the online environment, takes the form of commenting on, forwarding, and rebroadcasting user-

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generated information. van Dijck (2013) offers this form of sharing as an alternative counter-position to privacy, and argues that it is the normative practices of sharing that have evolved and continue to evolve in these new spaces, and not the understanding of privacy. She maintains that the sharing practices embedded in social media have techno-cultural and socio-economic dimensions which shape the strategies and behaviors that are used to accomplish privacy in the everyday. This subtle shift in focus acknowledges that such practices may offer indirect benefits to social media users that are only peripherally related to a specific relationship or context; these may include economic benefit such as preferential pricing on products and services or social benefit such as increased social capital resources and reduced loneliness. Importantly too, it allows for individual agency in determining privacy outcomes, instead of rendering the individual as passive, as privacy arguments often do.

Social media platform providers have emphasized sharing as a normative model of interaction and, consequently, the notion of 'sharing' has taken on new meanings (John, 2013b; van Dijck, 2013). Prior explications of the term have been limited to examining the concept as a co-present process or practice (see Belk, 2010; John, 2013a), and have not fully explored these relatively new online norms. Furthermore, previous conceptualizations have taken a theoretical stance which present perspectives shared by experts, but leave unaddressed how the concept might be informed by perspectives of ordinary individuals. Consequently, with respect to today's online information environment, 'sharing' is underconceptualized, limiting the ability to map it to other concepts such as privacy and constraining the ability to understand its contextual nature.

This study contemplates how the concept of 'sharing' might be considered in everyday contexts by ordinary individuals. Addressing the question of, 'What concepts are included in everyday discourse surrounding the topic of sharing?', we seek to identify the concepts that are associated with sharing in common discourse and look to explore ways in which the term's conceptualization might be reconsidered to reflect the new environment. To access such discourse, we leverage the intrinsic value of a traditionally deliberative space, news, as the starting point for gathering information. In particular, we focus on commenting activity related to news stories and blog posts that refer to sharing, as a digital space where individual perspectives are expressed. Commenting spaces embed 'users' viewpoints, problem definitions, or treatment recommendations within the journalistic article's context' (Springer, Engelmann, & Pfaffinger, 2015, p. 13). Accordingly, the discourse triggered by media stories is visible and readily available for study in an authentic environment (Laslo, Baram-Tsabari, & Lewenstein, 2011). Gathering the commenting activity related to articles and blog posts that refer to sharing, we use semantic network analysis to map the co-occurrence of concepts and thematically examine word clusters as a means to demonstrate some of the ways in which the contexts of 'sharing' are considered and talked about in a public space, and use this information to further contemplate its conceptualization.

'Sharing' as communion and distribution

Evolutionary biology suggests that sharing is an innately human trait and arises from our ability to understand 'we' (Grassmuck, 2012). Particularly evident in communal societies, conceptions such as ownership and self were once aggregate and collective, with self and other as 'less separate entities than they are part of a single reality' (Belk, 2010, p. 723). This

constituted a view of the self and family as an 'extended self', and sharing amongst this group was equated with sharing with oneself (Belk, 1988). Sharing, in this sense, is routinized and rarely draws attention, unlike the practices associated with gift giving, which are frequently accompanied by formal rituals and reciprocal expectations.

Elaborating on this notion of 'sharing' and the extended self, Belk (2010) distinguishes the notions of *sharing in* and *sharing out* as having larger social consequence. *Sharing in* encompasses intimate sharing, a sharing with the extended self, such as what might occur in sharing a meal or household possessions. Though sometimes encompassing individuals outside of the sphere of the self and family, this form of sharing is communal, an expansion of the circle of individuals that can enjoy the benefits of the shared resource. Alternatively, *sharing out* is regarded of as a distribution or dividing of a resource among shared economic interests, such as with a vacation time-share condominium or sharing a car in a large-scale cooperative ownership arrangement. The social distinction between these two forms of sharing lies in the implicit ability to create and maintain social bonds. Whereas *sharing in* acknowledges permeability in boundary between the self and other, enhancing and strengthening the social bonds between individuals, *sharing out* creates no such social bonds, and enables the boundaries between self and other to be maintained.

These ideas of sharing out and sharing in are consistent with historical conceptions of 'sharing' as both distributive and communicative in nature. John (2013a) explains that the conception of 'sharing' has historical roots both as a form of communion and distribution: like sharing in, communicative dimensions to 'sharing' include the sharing of a story or emotion as a gesture of openness or mutuality, and this process serves to enhance intimacy; alternatively, distributive dimensions of 'sharing' are akin to sharing out, and include dividing up a whole (such as a pie or a room) with each individual able to lay claim to a portion. Either dimension of 'sharing' can be incorporated into the sharing of material objects, emotions, and information, but it is the communal dimension of 'sharing' that becomes a form of social communication, and is central to the formation of interpersonal relationships in contemporary society (John, 2013a). This idea is closely aligned to the precepts of social penetration theory (Altman & Taylor, 1983/1973), which links relational development to self-disclosure of information about one's experiences, attitudes, ideas, thoughts and actions.

'Sharing' as distribution and/not communion

John (2013b) identifies a departure from the historical roots of the concept of 'sharing' in today's social media environment, particularly emphasized by the use of the word 'share' by social network platform sponsors. Beginning in 2007, phrases like 'Share your life!' emerged in these social spaces, and John refers to these as 'fuzzy objects of sharing' (p. 173). Whereas tangible objects are associated with sharing in a more distributive fashion, John concludes that fuzzy objects, which are more broadly defined and interpreted, prompt sharing as more of a communicative act and the demarcations of sharing as communality and sharing as distributive become blurred.

The role of social media platforms in activities of sharing is not inconsequential. Social media serve as in the capacity of both intermediary and mediator (LaTour, 2005), and this enables sharing to be both acts of distribution and exchange: as intermediaries, social media platforms are vehicles of distribution, focused on the dissemination of content;

as mediators, they also enable a form of social communication. However, despite the sophistication of algorithms and propensity for feedback, as communication media, social media have a reduced capacity for social cues. Because of this, Zingale (2013) argues that this sharing via social media is a diminished form of communality, as the recipient of sharing activity must fill in ontological gaps related to the sharing experience.

Along the same lines, Wittel (2011) argues that the digital nature of sharing today has created a fundamental shift in how 'sharing' might be understood. While the sharing of material and immaterial objects prior to the widespread use of digital media was exclusively social, and served to strengthen social bonds, social media alter the landscape: they facilitate the distributive dimensions of large-scale sharing, but stop short of ensuring that social exchange takes place. This prompts an important shift in decision-making related to sharing in this environment: 'Instead of us choosing who we share with, we get chosen by others for intellectual and affective exchanges' (Wittel, 2011, p. 7).

Online comment spaces

These distinctions between 'sharing' as distribution and communality, and arguments as to how social media might alter these dimensions, are provocative on a theoretical level. What is missing, however, is an element to how 'sharing' might be understood by individuals in a digital environment, and how this might inform alternative or expanded conceptualizations of the term. To provide some insight into how 'sharing' might be conceptualized in the everyday, we turn to the digital spaces where everyday discourse takes place. Newspapers have long been considered as platforms for public deliberation, both in coverage of news events (e.g. Simon & Xenos, 2000) and in letters to the editor (e.g. Conover & Searing, 2005). Letters to the editor, particularly, are spaces outside of the influence of formal political organizations or the political elite, so they are spaces in which individuals discuss issues and in which an understanding of individual preferences can be observed (Conover & Searing, 2005).

Reader comments to online newspaper accounts offer a similar type of discursive space, and share characteristics of the social and analytical processes associated with public discourse (Manosevitch & Walker, 2009; Springer, Engelmann, & Pfaffinger, 2015). Readers are motivated to comment online as a means of self-expression, to present their opinions and perspectives through their commenting activity (Mitchelstein, 2011; Springer, Engelmann, & Pfaffinger, 2015). Though only a small percentage of readers leave comments and read comments on newspaper articles online, these spaces encourage both debate and the sharing of like-minded opinion (Ruiz et al., 2011), and commenters frequently go beyond the information in the article to produce basic implications on their own (Laslo, Baram-Tsabari & Lewenstein, 2011). Readers who chose to comment prefer to do so in a topical and item-oriented manner (Reich, 2011; Ruiz et al., 2011). Newspaper commenting has been quite successful relative to other participatory online spaces: a Pew Internet study found that 25% of internet-using adults have commented on an online news story or blog item about news they read (Purcell, Rainie, Mitchell, Rosenstiel, & Olmstead, 2010), marking this activity as more widespread than the use of Twitter which is used by 18% of online adults (Duggan & Smith, 2013b) or Reddit which is used by 6% of online adults (Duggan & Smith, 2013a), particularly among adults in older age groups. In short, when readers comment, they feel their perspective contributes to the topic at

hand, and while not directly influencing the news-making process, comments provide insight into how the users think and relate to the topic of the story.

To address the research question, 'What concepts are included in everyday discourse surrounding the topic of sharing?', we examine comments to online news stories and blogs that concern 'sharing' and apply the techniques of semantic network analysis. Clustering analysis permits the identification of prominent themes in the discussion. We employ these themes to reconsider the notion of 'sharing' and its dimensions in the everyday, and explore ways in which the conceptualization of 'sharing' in today's environment might differ from its historical roots of communality and distribution.

Method

Semantic network analysis is a method that has been used across the social sciences to examine textual content by determining the occurrence and proximity between pairs of words within a message or group of messages. The frequency, co-occurrence, and distances among words enable the mapping of a network, with individual concepts as network nodes and relationships between concepts as edges. The network forms a basis from which meta-themes occurring within the texts can be distilled (Ryan & Bernard, 2003). Mapping the discursive activity in this way effectively permits the exploration of meaning that is embedded within the texts, as it effectively becomes a representation of how a phenomenon is discussed.

The strength of semantic network analysis lies in its ability to enable the analysis of large amounts of textual data quantitatively, while at the same time allowing for qualitative interpretation of its meaning (Carley, 1997). Like traditional forms of content analysis, semantic network analysis relies on the presence, absence, and frequency with which concepts are used; however, by capturing the relationship between concepts, information on how the concepts are cognitively linked in the author's mind provides a basis for inferring meaning.

The downside of this method, however, is that the analyst must construct dictionaries, and especially thesauri and stop lists, which is a time-consuming and demanding process (Brier & Hopp, 2011). A weakness of the method includes a lack of meaningful method for the automated disambiguation of concepts, so the analyst needs to be attentive to the presence of ambiguity when interpreting meaning. User-generated content, such as comments to news, presents additional challenges to this form of analysis, due to the use of slang, natural language, and abbreviations. Thus, careful examination of the master concept list is an important first step in the analytical process.

It is important to note that the discussion that takes place in commenting spaces reflect topicality of the news stories and blogs themselves, which concern sharing in a variety of contexts, and are not focused on sharing in isolation. Clustering is the mechanism which algorithmically distills common themes of the various discussions, and with a sufficiently wide variety and number of topics presented in the news stories and blogs, the common aspects of the underlying discussion related to 'sharing', 'online', and 'information' rise to prominence. Therefore, the comments on news stories related to sharing provide a cognitive or semantic map of how commenting readers discuss a topic, and include such discussion's important attributes and concepts.

Sample

The New York Times (*NYT*) is one of the largest US newspapers (Beaujon, 2014) and, importantly for this study, enables commenting functionality for a large proportion of the online news articles and blog posts created by its reporting staff. *NYT* moderates comments for 'personal attacks, obscenity, vulgarity, profanity (including expletives and letters followed by dashes), commercial promotion, impersonations, incoherence and SHOUTING' (*New York Times*, 2013), and either approves or rejects comments as they are posted by readers. Selection of this forum provides an Anglocentric, and particularly an American, perspective to discussion at hand and admittedly will reflect the attitudes and perspectives of NYT's online news readers; however, as conceptualization of the term 'sharing' is highly Anglocentric and the *NYT* readership large, we did not deem these to be significant limitations.

We selected our sample by searching Lexis-Nexis for *NYT* articles and blog postings published between 1 January 2013 and 31 December 2013 that contained the keywords 'share' or 'sharing', 'information' or 'data', and 'online' or 'internet'. The keywords were selected to achieve the greatest cross-section of articles that dealt with the topic of sharing, while providing a focus of the context of information online; the inclusion of the focus of information online was found to be necessary, as searches using only the stem of the word 'share' returned an overabundance of articles related to common stocks and financial markets. After elimination of duplicates and articles not containing comments, the remaining 123 news stories and blog posts contained approximately 12,984 reader comments. The subjects of these news stories varied widely, and reflected several newsworthy topics of the year, including the Edward Snowden revelations and investigation, debates surrounding the Affordable Care Act in the United States, and disclosures regarding the US National Security Agency's collection of information on citizens and non-citizens alike.

Data processing

A primary step in cleaning of the data was to develop a thesaurus of common concepts. This process entails examining the data for common pairings of words in succession (such as 'personal information' or 'data brokers'), determining a common phrase for named entities (such as 'Barack Obama'), and clarifying different ways to express the same concept (such as 'friend', 'friends', 'pals', and 'buddies'). These terms are then compiled by the researchers into a Generalization Thesaurus which enables automated word substitution within the texts to create a common vocabulary; for example, the term 'Barack_Obama' would be substituted for both 'President Obama' and 'BHO'. A drop list of words to eliminate from the texts was also created, and was composed of the most common words in the English language (articles such as 'the', 'an', and 'a'), pronouns (such as 'he', 'she', and 'I'), and 'noise' verbs (including conjugations of the verb 'to be', such as 'is', 'was', and 'are'). After researchers compiled the Generalization Thesaurus, automated substitution, drop and stemming processes were conducted using AUTOMAP software (see Carley, Columbus, & Landwehr, 2013).

After the data were cleaned, WORDij 3.0 (Danowski, 2013) was used to generate frequency counts of co-occurring concepts. Concepts appearing fewer than five times were

dropped, as were concept pairs occurring fewer than five times. Relations between concepts (edges) were determined within a window of eight words, and edge strength was calculated on a linear basis. NodeXL (Smith et al., 2010) was then used to perform a cluster analysis of the resulting network data, using the Wakita-Tsurumi cluster algorithm (Wakita & Tsurumi, 2007). A cluster is a densely connected subset of nodes more highly related to one another than to other nodes in the network. Examining the clusters of concepts provides various dimensions of meaning that may be embedded within the corpus of comments related to the articles concerning the sharing of personal information online.

Results

The resultant semantic network of the 12,984 comments on *New York Times* articles related to stories about the online sharing of personal data was quite large, with 7632 concepts and 54,254 unique edges. As a result of this large size, we filtered out concepts having fewer than 10 degrees (the number of other concepts that are related to the concept under consideration), which resulted in a network which contained 1576 concepts with 37,634 edges. The cluster analysis resulted in the identification of 27 groups with at least 10 related concepts. We discuss here the four largest clusters, each including at least 180 concepts. These clusters are notable, in that they are thematically consistent with conceptions of 'sharing' and personal information in an online environment, as well as the discussion arena itself. These four clusters are the most significant of the clusters due to their size, which is represented by the number of concepts in the cluster, and their interconnectedness, which is represented by the graph density and average geodesic distance.

The descriptive characteristics of each cluster are summarized in Table 1. Graph density is a measure of each clusters' interconnectedness; it is a ratio that compares the number of edges in the cluster with the maximum number of edges the cluster would have if all the vertices were connected to one other. Average geodesic distance describes the cluster's closeness, and is the average shortest path between every pair of vertices in the cluster. Betweenness centrality is an indication of the importance of individual nodes to the cluster; it is equal to the number of shortest paths from all vertices in a cluster to all others that pass through a specific node. The 10 terms of each cluster with the highest

Table 1. Cluster analysis descriptive data.

Cluster	Theme	# of concepts	# of edges	Terms with highest betweenness centrality	Graph density	Average geodesic distance
G1	Communality	217	1839	Religion, church, child, go, parent, book, history, day, teach, and family	0.078	2.137
G2	Surveillance	198	1553	Government, national_security_agency, regulation, private, edward_snowden, protect, spy, right, secret, and intelligence	0.080	2.059
G3	Public sphere	188	924	People, republican, vote, barack_obama, affordable_care_act, house, president, party, wrong, and congress	0.053	2.130
G4	Information distribution	180	1435	Information, corporate, call, system, computer, internet, google, read, phone, and email	0.089	2.167

betweenness centrality are listed to provide summary descriptive background for each of the clusters.

Figures 1–4 provide visual representations of each of these clusters, and have been distilled from the original displays to present vertices with betweenness centralities greater than the cluster's median. By reducing the visible number of concepts and edges to, it is easier to distinguish the important concepts of each cluster and how they are related to one another.

Figure 1 displays the largest cluster of the network. Upon visual examination, it is evident that this group of concepts is characterized by terms related to community and communality, speaking to notions of sharing in Belk (2010) and also the communal dimensions of sharing (John, 2013a, 2013b). Terms that feature central to this cluster include communal social structures, such as 'church' and 'family', and individuals commonly related to such structures such as 'parent', 'child', 'friend', and 'member'. The cluster also incorporates terms that suggest the communality of ideas, including the concepts of 'religion', 'language', 'faith', and 'history', as well as figures associated with these concepts, such as 'Jesus Christ' and 'Joseph Smith'. In addition, descriptions of various community formations, such as 'school' and 'college', are also present in the cluster. The presence and prominence of this structure are consistent with historical understandings of 'sharing' as an indication of mutuality, enabling a basis for relational intimacy (John, 2013a) and commonality of ideas.

The second cluster is displayed in Figure 2 and centers on the implications of corporate and government access to data that are shared, and the implications that these activities might hold. Prominent words in this cluster include 'surveillance', 'spy', and 'intelligence'. There are clear references to entities that might gain power with access to personal data, with terms such as 'government' and the names of various governmental agencies featuring prominently. Also present are the objects of surveillance, such as 'citizen', 'terrorist', and 'enemy'. Given the conflicted US public opinion on security and surveillance (Newport, 2013), it is not surprising that concepts such as 'freedom' and 'United States Constitution' are also present terms such as 'protect' and 'abuse'. The size and prominence of this cluster within the commenting discussion of articles on sharing and personal information clearly reflect the significance of the Edward Snowden/NSA revelations that dominated the news during the 2013 data collection period; however, the presence of this cluster also indicates an awareness by those commenting that a coupling of the sharing and personal data today enables the potential for surveillance.

Thus, from a conceptual standpoint, a dimension of the conversation on sharing includes an awareness of the potential of being an object of some form of surveillance.

The third identified cluster reflects the political speech dimensions of newspaper commenting. True to its roots as a forum for public discussion, the commenting activity represented in this cluster reflects political overtones related to public debate. Here, we see mention of political orientations, including the terms 'republican', 'democratic', 'liberal', and 'conservative'. Also present are the names of political actors such as 'barack_obama', 'representative', and 'karl_rove'. Political activities are also mentioned here, in the terms 'vote', 'support', and 'elect'. Finally, we also see here some of the topics of overarching political debate, such as 'affordable_care_act', 'legislation', and 'election'. The presence of such a political speech cluster would be expected and anticipated in any large body of

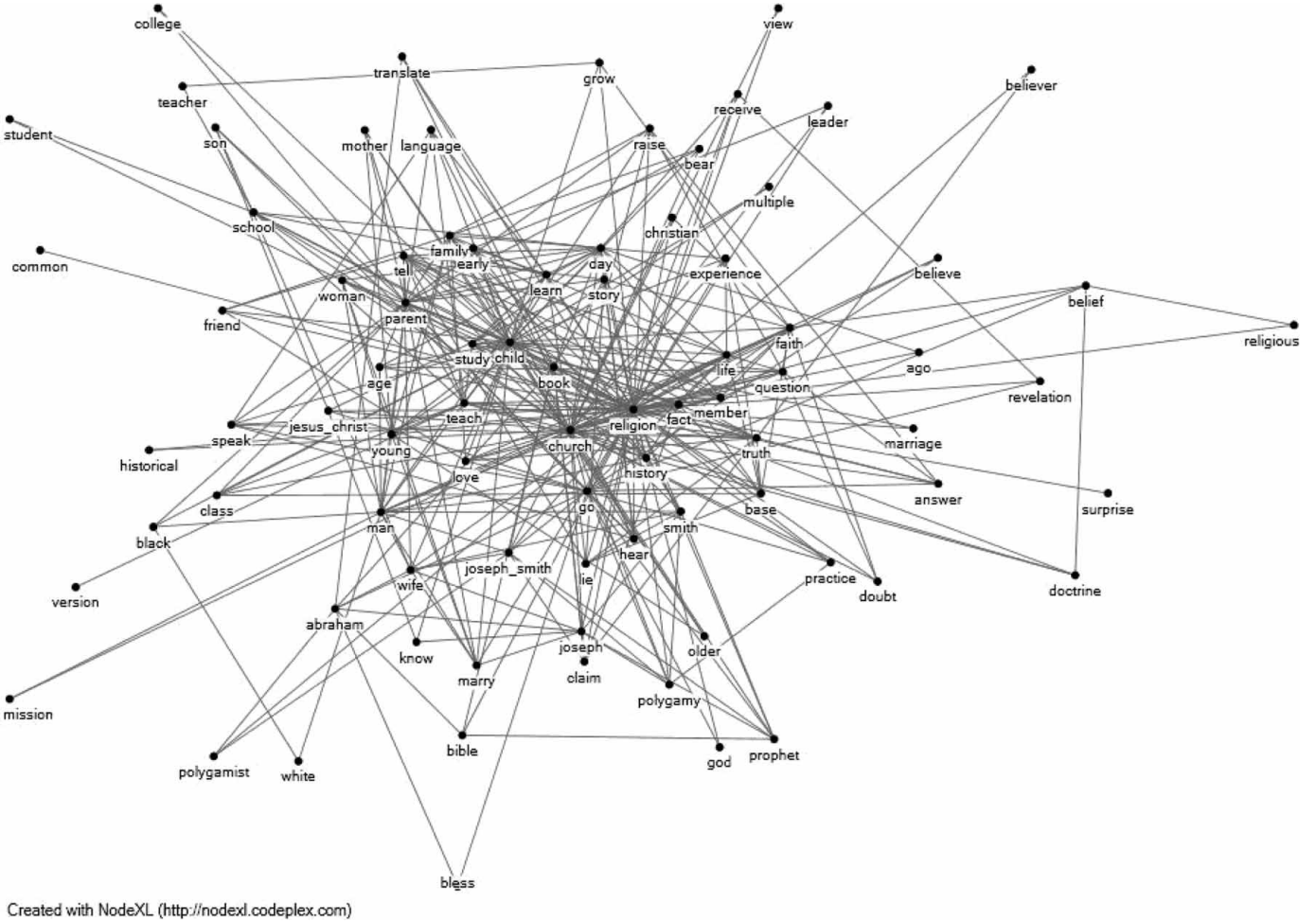

Figure 1. G1 cluster revealing a communal dimension.

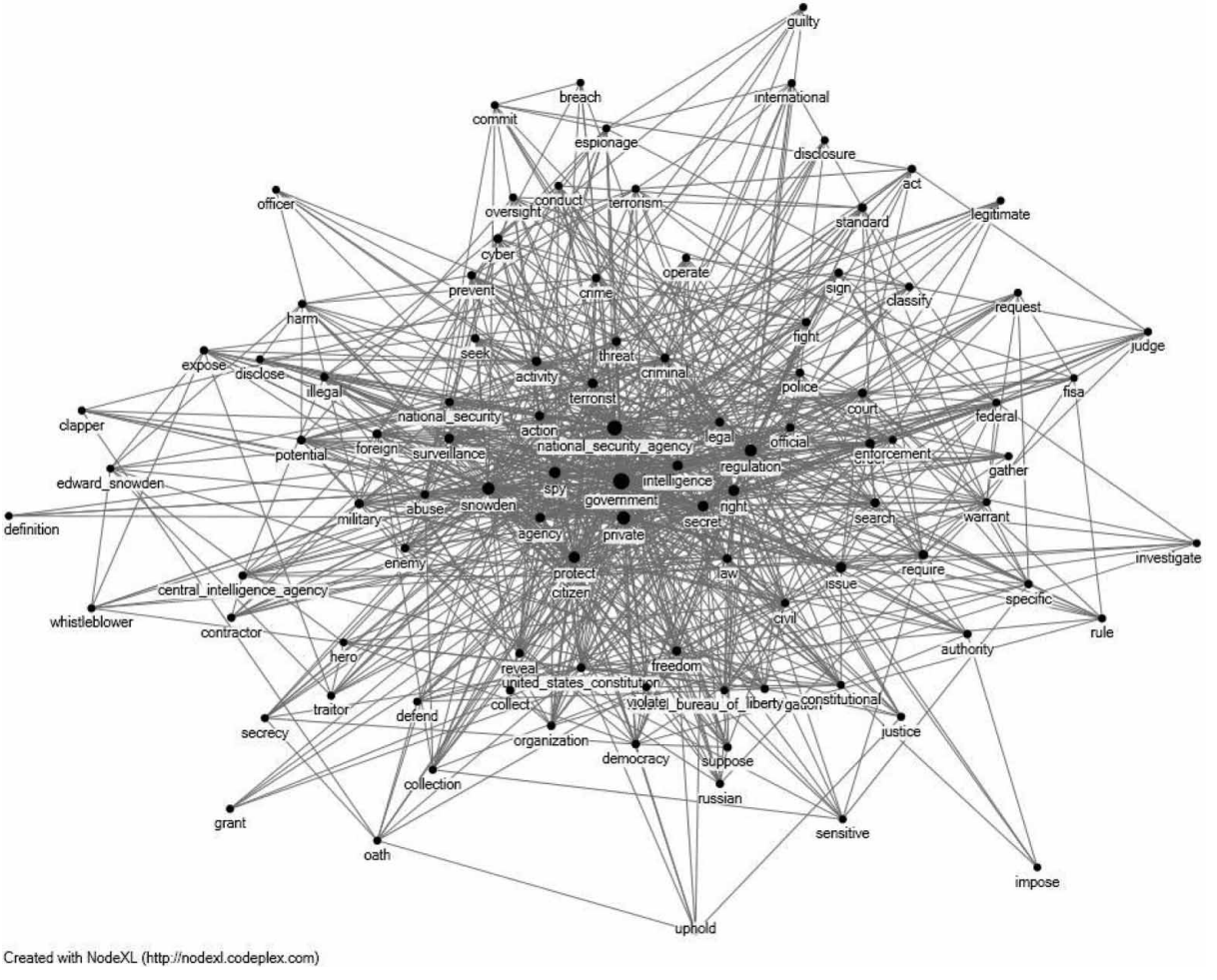

Figure 2. G2 Cluster revealing a surveillance dimension.

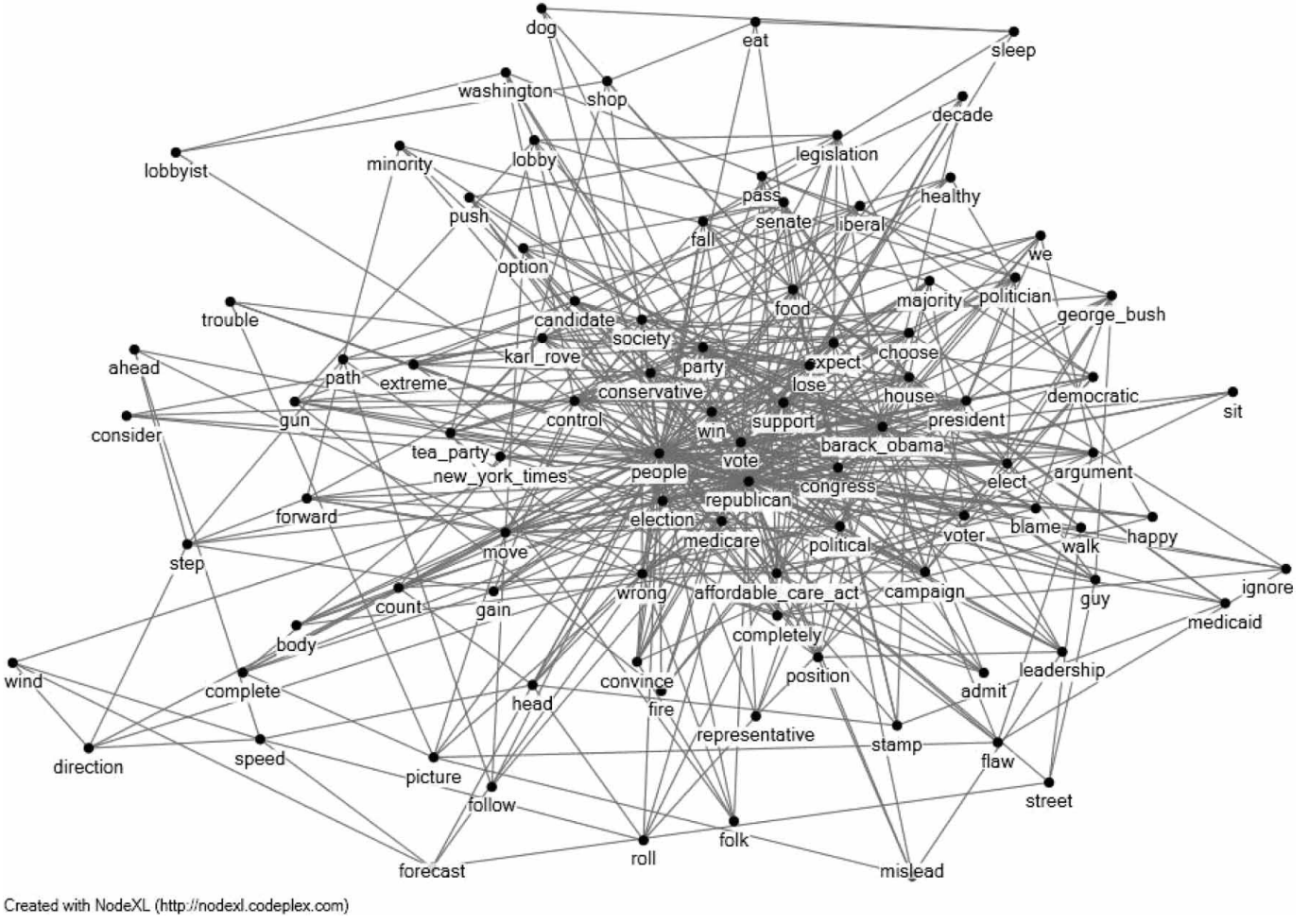

Figure 3. G3 cluster revealing a public sphere dimension.

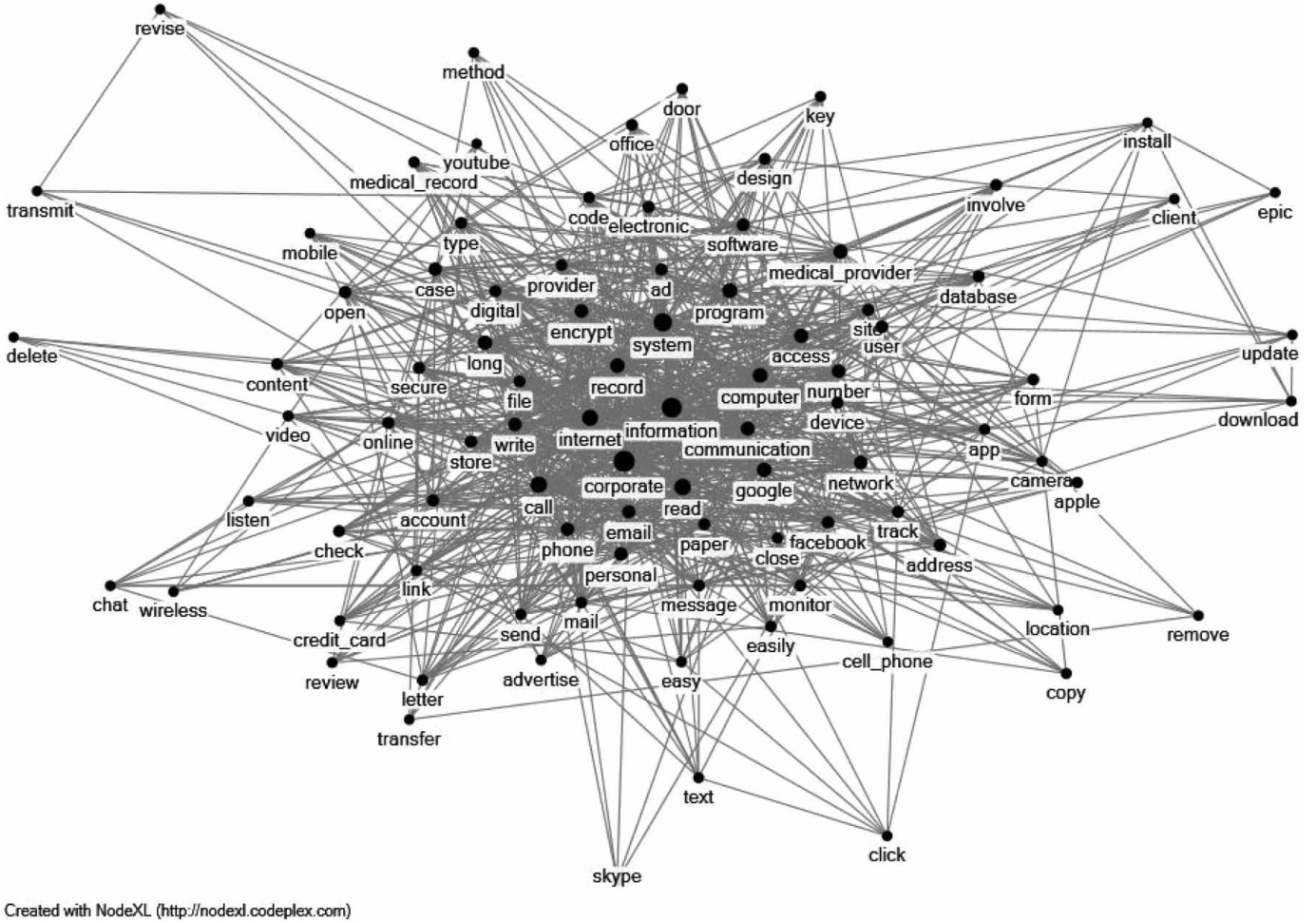

Figure 4. G4 cluster revealing a distributive dimension.

newspaper commenting activity, and need not necessarily reflect a unique thematic dimensions for the topic of sharing/information/online.

The fourth cluster, depicted in Figure 4, appears to reflect the distributive dimension of sharing and personal information, as it includes the multiple ways in which information is gathered and disseminated in the online environment. Key terms in this cluster include the processes and devices through which information is generated, such as 'record', 'write', 'computer', and 'camera', as well as the types of information that can be transmitted, such as 'medical_record', 'video', 'creditcard', and 'file'. The mechanisms for sharing information, such as 'cell_phone', 'email', and 'magazine', are also found in this cluster, and, interestingly, so are the corporate platforms associated with information distribution, including 'google', 'facebook', 'skype', and 'youtube'.

The presence of this cluster provides indication of how traditional notions of sharing's distributive dimension may have shifted slightly when considering personal information and the online environment. This distributive dimension is not one of 'dividing up', as in the apportioning of an asset or resource in a more traditional sense. Instead, it is reflective of sharing as a form of spreading or circulation, a form that is tied to the intangible nature of the shared object, an object that is not diminished when shared. This cluster is consistent with Zingale's (2013) and Wittel's (2011) understanding of how social media have promoted the distributive dimensions of 'sharing' in the digital sphere. Alternatively, as information may also be considered as a 'fuzzy object of sharing' (John, 2013b, p. 173), this cluster may demonstrate ways in which the 'sharing' dimensions of communality and distribution become conflated in digital spaces.

Discussion

The meta-themes distilled from these data present a basis to reconsider 'sharing' by providing insights into the concepts and contexts that individuals use in discussions around the topic. The prominent themes noted reflect dimensions of 'sharing' in an era of digital information availability. From the analysis, it is evident that the dimensions of sharing in and sharing out, of communality and distribution, are still present in discourse activity relating to sharing and personal information and online, and thus continue to be important factors in how the contexts and dimensions of sharing are discussed among individuals.

The largest and most prominent cluster may be characterized as one of communality. The words comprising this cluster include references to various communities and communal social structures and also to the individuals and identities related to these formations. The presence and prominence of this structure are consistent with an understanding of sharing as an indication of openness and mutuality, and suggest that 'sharing' continues to be conceived of as sharing in, or an indication of relational intimacy and a basis for relational development.

A second theme, the distributive dimension, while fourth largest in size, is also a prominent cluster in the data. Consistent with traditional understandings of sharing out, or a divisionary form of sharing, this cluster reflects the intangible and non-rival nature of information, that is, that it is an object that is not diminished when shared. Words in this cluster referred to mechanisms for capturing information, including its various forms, as well as its circulation. Its presence and prominence in the data also suggest

that the sharing of information continues to be conceptualized as a form of distribution, and may serve as a basis for social exchange, though this aspect is less clear from the data.

A third dimension of the dialog surrounding sharing/personal information/online delineates the role of newspaper commenting as platform of public discourse, and its nature as a public sphere. The presence of this cluster is expected and explainable, given the nature of the data being analyzed, and does not necessarily portend a dimension of 'sharing' that extends its conceptualization. We view this cluster as a neutral category (Jang & Barnett, 1994) and do not consider it a theme in these data, though it importantly highlights key terms of political speech, and therefore reinforces commenting space as one of public discussion.

The final dimension presented in the data is significant and somewhat unanticipated, and it is important to consider because it reflects the consequences of sharing in the digital environment. Though we characterized this cluster with a theme of surveillance, the implication of this cluster is that a discussion surrounding sharing/information/online is associated with the potential for observation by the self and others. Its presence is an acknowledgement that sharing, in its digital form, may at once be a conflation of communality and distribution and also a distancing between the self and information about the self. In other words, sharing personal information of a digital nature blurs the distinctions between self and others, not because it is a sharing in of the extended self, but rather as a practice of subjectivity, or a way in which individuals constitute themselves and their reality by placing distance between their body and information about themselves. Personal information that an individual shares online merely becomes a distanced reflection of the body and, thus, the self.

Vaz and Bruno (2003) argue that a focus on technologies in discussions on surveillance overemphasizes aspects of surveillance of 'others' upon 'the self.' Instead, they point out that, 'any practice of surveillance entails self-surveillance as its historical counterpart and it is this simultaneity that accounts for the acceptance and legitimization of power relations' (p. 273). Self-surveillance, attention given to the self, one's thoughts and actions (Vaz & Bruno, 2003), is a means to constitute and regulate the self. Alternatively cast a means of self-care, this self-constitution relies on 'normalizing judgment' (Foucault, 1977) as a means of disciplinary power by the self, on the self, and thus is considered as 'surveillance' in the same manner as surveillance by others.

As we conceptualize 'sharing' in this digital environment, the personal information that is shared and the ways in which it is shared must be considered in this same light. Information is created in the form of carefully constructed profiles for social media platforms; it is generated in the tracking and reporting of bodily performance using devices such as the Fitbit and Fuel; it is found in the geolocation information attached to posted photos and comments. User-generated content is posted in social media accounts, bodily performance information is shared with tracking apps, search engine activity is captured, and metadata are attached to email and cellphone communication. These information flows are re-aggregated into our 'data doubles', which serve the purpose of self-optimization or self-construction (Haggerty & Ericson, 2000; Rettberg, 2014; Ruckenstein, 2014).

Sharing thus enables surveillance, by the self and by others, and can be thought of as a way in which to know the reality of the self and individual. It is a form of 'subjectivation' (Foucault, as cited in Kelly, 2013), and may be considered as one of a long succession of technologies of the self (Foucault, 1988), or the varied practices that individuals have

undertaken throughout time as a means of reflexivity to analyze and know oneself. Through a progression of technologies, such as letter writing, diary writing, and even the Christian tradition of confession, an individual's ability to work on or shape oneself has been aided through writing and speech (Foucault, 1988); similar practices extend into today's digital environment through microblogging, biometric tracking, and the posting of selfies (Bakardjieva & Gaden, 2011; Rettberg, 2014; Ruckenstein, 2014).

This form of self-surveillance differs from traditional notions of disciplinary surveillance and Foucault's panopticon in a key way: this surveillance is not thrust upon us; we willingly participate in the practices of self-monitoring. Furthermore, such surveillance is not accomplished by traditional disciplinary institutions; rather, the power traditionally associated with surveillance is asserted through the internalization of values that is implicit to normalizing judgment. This is underscored by the fact that sharing activity often takes place in conjunction with friends and known others. 'Sharing' in this sense is related to the notion of 'interveillance' (Jansson, 2012), a form of mutual social monitoring between individuals; but unlike interveillance, sharing also incorporates forms of self-knowing and self-reflection.

At once subjective, because it enables knowing the self, and objective, because it employs the practice of using information about an individual to know him/her, this dimension of 'sharing' represents not merely a drawing in of others, as in the communality dimension, nor in an apportioning of oneself out to others in a distributive fashion. Rather, it is a dimension of 'sharing' that represents a constitution of the self and knowledge of the individual through inscription and detachment, a subjective/objective dimension of 'sharing' that at once is created out of intimacy and enables dispassion. This 'extended self' is, in some sense, detached from the self and observable, and thus presents a dimension of 'sharing' that is not found in prior conceptualizations. This subjective/objective dimension of 'sharing' is consistent with predominant identity theories of self-presentation and impression management in social media use which argue that shared information is carefully constructed and considered for audiences (e.g. Hogan, 2010; Pearson, 2009), but it is also consistent with how the flow of information across digital information platforms is used and interpreted by others to know an individual (e.g. Walther, Van Der Heide, Hamel, & Shulman, 2009).

Most importantly, however, this dimension highlights the permeability in the self/other boundary in the sharing of information within digital spaces, and directs us toward an understanding of 'sharing', and especially sharing of the self, that is perhaps contextual in nature, not unlike the concept of contextual privacy (Nissenbaum, 2010). It also suggests that the traditional conceptions of privacy as social boundary negotiation may not hold as much relevance in the digital arena, and therefore should not be counterposed against 'sharing' as a normative value. Sharing, when applied to personal information in a digital environment, does not map effectively to conceptions of privacy as a social boundary negotiation, as boundaries are diminished.

Future directions for study in how 'sharing' might be conceptualized and understood by individuals might include a survey and analysis of the temporal dimensions of sharing. When does sharing actually occur in the digital environment, when information is posted or captured or when it is received and interpreted? Teasing out the temporal aspects of sharing may point to ways in which social boundary management is negotiated and enacted, and may shed additional light on how 'sharing' and privacy may be related.

In addition, it is important to understand the continued social relevance of sharing in the digital environment. What are the implications of the shift in sharing's distributive dimension to one of information dissemination? The intangible and non-rival character of information may lend additional character to the conceptualization of 'sharing' that is unique to digital spaces.

Finally, a major limitation of this study lies in the abstract nature of the terms personal information and sharing. The term 'personal information' is a fuzzy object (John, 2013b), because it has the potential to be interpreted in a variety of ways, including identity information, locational information, or contextual/relational information. Likewise, the term sharing can be applied in many circumstances. News stories and blog postings offer tangibility to these abstract terms by centering on context and application, yet contain a focus that is difficult to isolate and extract from the data. In addition, the commenting activity found in *NYT* reflects the attitudes of its online reading audience, which may overrepresent individuals attracted by the organization's editorial slant or those attracted to commenting forums for expressing critique or dissent. Thus, the identified concepts may have limited application to discussions of a more general population. Moreover, comments on such stories and posts may digress from the topic at hand, though we relied on commenting moderation to minimize divergent discussion. We therefore can only look to the meta-themes presented in a large dataset of commenting activity as interpretable for the purposes of reconsidering 'sharing's' conceptualization.

Conclusion

Examination of these data permits an exploration of the concept of 'sharing' that extends beyond its distributive and communal roots. When viewed as a technology of the self, the sharing of personal information online also includes a dimension of subjectivation, or a means to constitute the self as a path to reflexivity that at the same time enables surveillance by others. Though others have argued that media have been used reflexively (e.g. to bolster identity (boyd, 2007), these arguments have tended to center on the *creation* of the self, rather than *reflection* of the self. The reflexivity generated through sharing (through or outside of technology) may not be purposeful, but it is an important component of this activity. This dimension of subjectivity suggests permeability to social boundaries between self and other when sharing is applied to personal information in a digital space. This creates tension when counter-posing 'sharing' with privacy, which is often conceived as a process of social boundary negotiation. By bringing this tension to light, we hope to further the conversation on 'sharing' as a counter-position to privacy, and reconsider privacy as a process of social boundary management.

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