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Sociable knowledge sharing online: philosophy, patterns and intervention

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Abstract

Purpose: This paper outlines a social epistemological and ethical warrant for engaging in knowledge exchange on the social web, and emphasises socio-cognitive and emotional factors behind motivation and credibility in communities supported by social software. An attempt is made to identify positive and negative patterns of interaction from this perspective and to argue for more positive intervention on the part of the information profession.

Approach: The paper outlines social epistemological and related theory, cognitive and social drivers of behaviour and then draws together evidence to justify the definition of patterns that will be important to the project.

Research Implications: A programme of evaluating online knowledge exchange behaviour using a social epistemological framework is needed. In order to do this, methodological development coupling formal epistemological with interpretive techniques for examining belief formation are also necessary.

Practical Implications: Considerations for the design and deployment of knowledge platforms and for engagement with existing communities are outlined.

Social Implications: The ideas presented attempt to define an important role for the information profession within a new paradigm of participation and social interaction online.

Originality: The connection between social epistemology theory and LIS has been long appreciated, but social epistemology is rarely applied to practice or to online social platforms and communities.

Article Type: Viewpoint

Keywords: Epistemology, social, online, communities, knowledge, information profession

Preface: an allegory

A group of friends is gathered around a loud and persuasive man in a pub, who is holding forth on a recent science-related news story. The group are, with one exception, nodding agreement with his views. At the edge of the group, a quiet man sits. He has several examples that contradict the loud man's views. The quiet man is hesitant to speak up, as he doesn't know some members of the group that well. He is also unaccustomed to the environment and is not confident that he can present his view in an engaging way. So he remains silent. What the man doesn't know is that he is actually quite well respected by some of the group, as he clearly cares a great deal about getting his facts right, though they don't always understand his arguments. If he had spoken up, his points would have favourably influenced several of the group.

Introduction

With the rise of Web2.0 and social media, the importance of socialisation to online knowledge acquisition and sharing has once again been foregrounded. The learning communities and networks that many engage with today display many features that have long been associated with people's inherent preference for sociable knowledge seeking, and the comparable weight given to a friendly, supportive community as to exhaustive, precise and authoritative information. Interfaces and interaction patterns are better coming to reflect human preferences for discussion, argument and personal narrative as well as the frequent need for "quick answers" .

At the same time, the need to remain relevant and active in the knowledge-making process in today's information milieu calls for a more proactive approach on the part of the information professional – hence the creation of new roles such as the "embedded librarian" or knowledge advisor (Weddell , 2008) and calls for academic librarians to "exert a dynamic influence on the teaching and learning agenda" (Peacock , 2002).

If we grant that an accepted, traditional role of the information professional has been to organise and search knowledge corpora, perhaps a greater effort is needed – if we are to engage with the online public sphere – to appreciate at a socio-cognitive level the users' motivation to seek knowledge, and the user's willingness to make credibility judgements given a range of more or less reliable social evidence. Taking this even further, given that we are "armed with good knowledge", the challenge is to understand how to use socio-technical affordances to make positive interventions, while recognising and mitigating negative ones. In this regard the problem can be cast as one of catalysing good socio-technical design, with interventions possible through software configuration, community structure and participation and content curation.

This article will argue that a normative social epistemological philosophy, in foregrounding the social aspects of knowledge making, provides a good foundation for this effort. While formal social epistemology as some have construed it may be too rationalist-objectivist to carry through usefully into LIS practice, a hermeneutic/phenomenological flavour, as outlined by information scientists, may be more apt in describing the online experience of the user in a sociable environment, who is forming beliefs based on mediated, informational and socio-emotional interpretations of what he experiences. After establishing this foundation, we look at socially-oriented views of motivation

(both to seek and to share knowledge), then at factors influencing credibility in social contexts. The final sections document emerging patterns which may help or hinder the social epistemological goal of maximising knowledge acquisition in the online environment.

Underpinnings

While librarians and the wider information science community have often not felt it necessary for the field to be (explicitly) informed by theory and philosophy, those that have sought such linkages have largely addressed the ontological project of information classification and collection building (Hjorland , 1998, Cornelius , 2004). To some extent, the socially situated nature of information and its contribution to knowledge building has been neglected (Cornelius , 2004). Similarly, the scope for influencing in the service provider's role has been seen as limited, given the common dynamic of being captured by user needs.

For those who have sought a more proactive and normative philosophical foundation for LIS, social epistemology has provided attractive justificatory and explanatory power (Fallis , 2006, Budd , 2001). The acquisition of knowledge by the individual may be the end, but the quality and dynamics of her social environment is often the means. Here, the project is articulated as the optimisation of systems of knowledge acquisition through an appreciation of social strategies and motivations. For the philosopher Alvin Goldman, the aim should be to evaluate social practices for their propensity to maximise truth discovery (Goldman , 1999). Goldman distinguishes between instrumental and fundamental veritistic values – the process of choosing the methods through which we may arrive at true belief should itself be under scrutiny. The author likens this approach to consequentialist ethics, where our choice of action is to be guided by the societal value of the outcome.

Goldman's conception of social epistemology may be seen on some levels as different to that proposed by the original users of the term from the library science community, Jesse Shera and Margaret Egan (Zandonade , 2004), where the focus was more on the textual artefact - bibliographics and documentation. In addition to media, Goldman's model foregrounds truth, testimony, argumentation and *interest*, concepts which situate the individual in a network of actors. As syntheses such as Fallis's show, however, texts themselves can be construed as subjective, social objects and thus made relevant to epistemology as well as ontology (Fallis , 2006).

Perhaps one criticism of Goldman's view of the social communication of knowledge is that he seems to tend towards toward a superficial, Shannon-esc model of information; the implication is that the receiver can learn the truth if he just manages to receive a message from the possessor of that truth. Unfortunately, this philosophy when taken into information systems practice may underlie some of the more technocentric, poorly adopted design of recent decades. The technocentrist's error has often been that if the information is there and available, the user cannot help but take advantage of it . Fortunately, more enlightened, user-centred design approaches, informed by hermeneutics and phenomenology have emerged to reaffirm the importance of individual sensemaking and experience (Butler and Murphy, 2007). Although Goldman's descriptive success approach to truth works for simpler declarative knowledge it may fare less well on any issue where there is a spectrum of opinion, or those related to personal values and ethics.

Despite a clear need to boost the social in socio-technical systems, with the advent of social computing, many have argued that social practices are now **all** that matters – that people behave

online in the same way they would face to face. This is similar to the popular discourse that “it’s not about the technology, it’s about the people” (Rao , 2008). This, however, seems to ignore the enormous importance of the shaping power of tools and their role in extending consciousness (Ong , 1982) and may actually be retrograde in shutting out new possibilities (Hung and Der-Thanq, 2001)

McLuhan's best known proposition that the medium is the message is also his most misunderstood observation. Intended to show how the adoption of novel means of communication may profound societal impacts beyond what people themselves do with the medium, it is often criticized as crass technological determinism (Levinson, 2001: 63). The fundamental meaning of this insight, that the use of communications media has a far greater impact than any particular content that the media may convey, is as relevant to Web 2.0 as it was to telecommunications.

McLuhan’s observation of how we relate to particular media is also instructive in our context (McLuhan , 1964). Drawing attention to the sensuous attributes of particular media, he claims that hot media which are loud, bright, clear and fixed, evoke less involvement from perceivers than cool media whose presentations are soft, shadowy, blurred and changeable. Hot media demand full attention and prescribe behavioural outcomes, but the cold medium opens its world only after the user has made a significant intellectual and imaginative investment (Levinson , 2001). The modern reworking of this distinction is between high and low definition media, whereby the latter is less behaviourally prescriptive and we are obliged and seduced to get more hermeneutically involved in making the interpretive leaps and pursuing the different possibilities of the less complete media. Originally associated with the text, cool media have expanded dramatically with the advent of digital communications and now quietly ventilate culture, attitudes and interpersonal behaviour in the shape of a new competence offered by ICT networking technology. Recent studies of youth information practices demonstrate the extent and possibility of the use of digital technology to architect novel spaces for interaction (Boyd , 2008; Green and Hannon, 2007).

Media that are more interactive and democratic are strongly associated with the development of the so-called ‘network society’, a term coined by many authors to describe the consequences of a structural change in the economy, society and the workplace whereby traditional forms of hierarchy, authority, power and legitimation are undergoing transformation (eg. Castells ,2000; Giddens , 1991, Wellman , 2005). The transformation concerns the relationship between structure and agency in economic relations whereby new modes of interaction place individuals in circuits or networks where rules, norms and expectations are contestable. Therefore the ‘spirit of informationalism’ (Castells , 2000) involves a powerful ethical imperative, even if this is not apparent to its proponents.

Shirky (2008) has argued that hierarchical and formal forms of organization are unnecessary and dysfunctional for establishing digital formations, and the professional can no longer assume the role of gatekeeper, but must adopt the role of custodian of a practice. Beyond having ethical obligations to the determinate Other and the institution, the professional must adopt a moral stance toward something more ephemeral: the idea of librarianship in the online world. The ongoing mutual construction of architectural and literary public spaces through contemporary technologies implies that an ethics of the here-and-now shared presents is no longer adequate. Ethical deliberation must include the shape of potential futures (Adam , 2004), and be judged by its ability to build and maintain a world fit for human use and enjoyment, to actualize our capacity for freedom, and to endow our existence with meaning (Arendt , 1998).

Ethics is still shaped by moral space outlined by the Greeks whereby face-to-face interaction, rhetoric and actions, antecedents and consequences can be deliberated upon in something akin to the public square – nowadays the professional association or ethics committee. This is clearly inadequate for technology assessment where distance in time and space is a given and actions will be irreversible, but will architect or shape the living environment. The point of departure for this type of analysis will be Hans Jonas' seminal critique of this space as an adequate platform for theorizing contemporary moral dilemmas (Jonas, 1984).

According to Jonas, the expansion of human power through the collective practice of technology has created an ethical vacuum. And "novel powers to act require novel ethical rules and perhaps even a new ethics". Jonas summarizes the new duties corresponding to our new powers in his theory of responsibility. The changed socio-technical conditions of contemporary industrial societies thus present new ethical challenges that are rooted in the gap between the power to act and the capacity to know, and are primarily centered on the imperative of responsibility. For Jonas, the power to act that has been granted through technology has now disengaged from the ability to foretell: there is a gap between technical knowledge and predictive knowledge that has created a moral vacuum. Because of the capacity to create futures that outlast and out-reach the life spans of the originators, Adam (Adam, 2004) argues that the contemporary ethical arena includes a technologically produced, long-term future. In this context, she maintains we need to challenge some of our traditional moral habits of mind; in our context particularly individualized responsibility, immediacy and eschatology (a doctrine or discourse of completion, last words, or finality). This context for responsibility is new: the foundations for responsibility have shifted from an individual to a collective base, from the present to the future, from the local to the time-space distantiated realm of impacts.

If we adopt an ethically responsible, social-epistemological lens to the participation of information specialists in the online community, the purpose becomes that of providing authoritative and balancing theory and testimony at the point of need, leading to the discovery of truth (in a broad sense). The intervention becomes necessary in order to counteract antagonistic practices. The mission is that of serving not only experts but Shutz's well-informed citizen, who:

"neither is, nor aims at being, possessed of expert knowledge ... he does not acquiesce in the fundamental vagueness of a mere recipe knowledge or in the irrationality of his unclarified passions and sentiments. To be well informed means to him to arrive at *reasonably founded* opinions in fields which as he knows are at least mediately of concern to him" (Shutz, 1964)

It is here that we need to learn from individuals, communities and platforms that already do, or have potential to intervene in this way; these that may be drawn from LIS but also from online education and more populist knowledge exchange and social information filtering services.

Motivation: Lay epistemics, demand and social capital

A consideration of why people seek and share knowledge in online social contexts is fundamental to an understanding of emergent patterns and practices on the web. In this section we will therefore discuss personal motivation, information demand and reasons to share knowledge.

Kruglanski provides a useful synthesis of epistemic (knowledge-seeking) motivation from a socio-cognitive perspective (Kruglanski, 1990). People's behaviour is often motivated by the need to

obtain (or to avoid) specific or non-specific epistemic closure. The former describes situations where a specific answer is sought (for self-affirmation or esteem), the latter where conclusive knowledge is sought on a topic, though the preferred content of this knowledge is not predetermined. In either case, the urgency of the need for closure will determine a number of characteristics of ensuing behaviour: consultation of similarly or dissimilarly minded individuals, falling back on pre-existing assumptions and stereotypes, and the tendency to accept as true information encountered earlier or later in the inquiry process. Importantly, these motivational states are closely linked to affect – emotional states - and the tendency toward cognitive bias according to the consistency of the information received (Kruglanski , 1990). In terms of information literacy and interaction with the web ecosystem we can assume that urgency for closure is often high (as the user is making the effort to seek knowledge, and as he often has educational or work-related constraints to meet), and hence the risks of negative experiences and poor epistemic outcomes are also high. As we shall go on to explore, system credibility and a system's tendency to foster positive or negative patterns may be better managed through mitigation of these risks.

If Kruglanski's analysis mostly covers individual motivation, other studies have looked at the social dynamics in information seeking and used interpretive methods to understand how information needs are identified and acted on. Veinot (Veinot , 2009) shows how individuals may rely on trusted friends to supply, or intermediate, professionally supplied information on HIV/AIDS. Also in the health domain, studies of professional groups reveal the process of tailoring and presenting pre-existing knowledge to a practice community ("science-push") and the way information deemed relevant is filtered and combined with tacit, practical knowledge ("demand-pull") (McWilliam, Kothari et al., 2009). Such studies highlight the importance of the personal social network to how new knowledge is combined and how knowledge providers are trusted.

The need for epistemic closure and the phenomenon of demand-pull may characterise aspects of seeking – what about aspects of sharing? Huysman and Wulf show how a social capital approach helps us to understand knowledge sharing in sociotechnical. They state that in addition to a technological infrastructure and an "info-structure" (formalised knowledge sharing rules) there is a need to understand the "info-culture" or the implicit knowledge represented by the network of social actors and their relationships. This equates well to the "opportunity, ability, motivation" conditions of other social capital analyses (Huysman and Wulf, 2006). The motivational aspects include development of agreed norms for interaction, reciprocity, trust and mutual respect.

The tendency of self-organised, burgeoning groups to establish quite complex group rules or norms for online participation has been highlighted by Shirky, who contrasts this complexity with the relative simplicity of the technology in many cases (Shirky , 2008). The fact that these norms are established slowly and negotiated between participants contribute to the stimulus to take part. Notably, such norms are often about politeness, respect and ways of adding value to the community.

Reciprocity is a commonly occurring theme underlying motivation to engage in knowledge sharing, and has been linked to social exchange and expectancy theory (Watson and Hewett, 2006). Contributions are made in order to compensate for information sought. The expectation is also that a community will at some point prove useful, even if it has not yet done so.

Many have found support for Wenger's characterisation of the dynamics within communities of practice in understanding how trust develops in online communities and how new participants become absorbed into the centre (Silva, Goel et al., 2009). In addition to reaffirming the importance of norms and warrants for participation discussed above, the model seems to fit observed online behaviour well, particularly concerning the mingling of novices and experts, the establishment of trust and the building and making explicit of reputation. This latter aspect will be discussed further in regard to credibility.

A further aspect well observed by Silva is the existence of light-touch moderation. While the existence of strong moderation may be less important – or even a deterrent – in participative systems (Huysman and Wulf, 2006), by the very encouragement of responding to well thought out contributions and effectively snubbing others, Silva notes how there can be implicit moderation by more experienced community members (Silva, Goel et al., 2009).

What can we learn from this analysis of motivation to seek and share knowledge? One of the key take homes, perhaps, is to “go where the action is”, to participate in the same way as other users and to cater to the established norms of the particular communities. This may be uncomfortable, particularly when a continuing desire is to create and manage new spaces. Through community engagement, better warrants and better examples of well-informed postings we can seek to further the social epistemic agenda. Following Kruglanski's analysis, we also need to become adept at recognising and diffusing frustration associated with the relative novice discovering complexity and contradiction when being driven by the urgency for epistemic closure, a pressure only further exacerbated by the immediacy of the online medium. In this way, knowledge seekers can be “managed up” the chain in their own personal epistemology.

Credibility: Authority and socio-emotional weighting

Credibility has been widely studied, but perhaps only now are analyses of credibility constituents starting to reaffirm the social. In an in-depth cross disciplinary study, Rieh & Danielson conclude that credibility can be fluid in nature and that social norms may determine the way in which evaluation of information in a domain will occur (Rieh and Danielson, 2007). These authors also note the importance of markers to social identity and the cognitive authority of online information providers. Now a commonplace Web 2.0 feature, user profiles are seen as important for their “humanising” effect (Bell, 2009),

In addition to information providing “answers” to an epistemic need, Rieh & Danielson note the importance attached to exposing the explanation and reasoning behind an answer in increasing credibility in the online environment (Rieh and Danielson, 2007). This observation has been lent further weight by recent work on the general knowledge exchange site Yahoo Answers. Kim and Oh looked at reasons given by question posers for accepting a proffered answer. 23 selection criteria were identified and grouped into content, cognitive, utility, information source, extrinsic and socio-emotional (Kim and Oh, 2009). Many of these were in common with factors known to be true of credibility in print sources, but the presence of the socio-emotional category is highly significant and mirrors offline studies that have found close relationships between emotional support and use of information (Veinot, 2009). Online, the attributed attitude, helpfulness and support of the answerer is lent some weight in the overall credibility evaluation. Also using Yahoo Answers, Adamic

et al showed how length of response can be a predictor for answer acceptance, but that the type of category – specific and technical or more open - influenced both the length of exchanges and the degree to which question posers are also responders. (Adamic, Zhang et al., 2008)

Findings such as these should be highly encouraging to information specialists already adept at putting together carefully worded and balanced answers. If anything, the message with online is to provide even more evidence of your bedside manner as the nonverbal cues are lacking, and (to switch from medical to mathematical metaphors), to show even more of your working.

Sociable patterns

So evidence from a number of fields is informing us about underlying motivations and reasons to lend credence to certain beliefs and not others. We will now turn to how these factors might come together to form recognisable online behaviours.

The idea of patterns originated in architecture but was adopted by computer scientists and later, to describe common interface design elements (Crumlish and Malone, 2009). A pattern should describe a recurring problem and its context, the forces at play and a solution to the problem. The concept of patterns allows a common vocabulary and shared understanding of these conditions and solutions, allowing them to be understood and debated (Arvola , 2006).

Here, we will use a quite broad concept of patterns to include not only interface elements but also social interaction patterns that may have a positive or negative effect on the quality of knowledge exchanged in an online setting. Applying a social epistemological lens, patterns may be analysed for their propensity to deliver high “veritistic” – tending toward truth – value to the end user.

Reputation indicators

A key challenge in social knowledge exchanges is making a judgement on the authority and credibility of fellow users. This applies particularly in situations where we don't actually know the people we are engaging with. A number of interface features are today recognised as contributing forms of evidence to user credibility to fill this gap. Common examples include reputation scores (awarded to those answering queries well, answering a certain number of queries, or having their answer accepted as the best offered) , reputation labels and levels (newbie through to fanatic) and leader boards (best performers overall or by category) (Crumlish and Malone, 2009). Unfortunately, these features have been found in practice to sometimes have unintended and perverse outcomes, and these will be discussed below. There is evidence, however, that users are now adept at using such signs to the credibility of socially proffered information, especially now that such patterns are becoming familiar across a number of platforms.

Crafting knowledge: threading and braiding

An established pattern from online learning and knowledge management, threading refers to a moderation activity, whereby points made by a variety of users are summarised and captured in a single post (Preston , 2008, Salmon , 2000). This has evolved as a solution to a problem of information overload, when users need to see the status of ongoing debate or social learning in one place. The threaded summary captures the richness of discussion and range of opinion of the active

users, while providing a single focal point for other users to refer to. The quality of the work obviously is contingent on the skill of the moderator and takes some experience (Salmon , 2000).

Done well, threading has high epistemic value in distilling and objectively contrasting what may be conflicting beliefs. Good threading work will preserve hyperlinks to original posts thereby allowing the reader to follow up items of interest and assess validity of arguments. Importantly, threading can take learning into action within communities of practice by enabling them to arrive at sufficiently well-informed states of knowledge sufficient to begin influencing national and international agendas (Preston , 2008)

Conversation and argumentation

A huge benefit of online social media is their support for conversation and argument, the natural human facility for exchange of ideas. Argumentation is meant here more in the positive, philosophical sense defined by Goldman where propositions are supported by premises (Goldman , 1999). More provocative, emotive argument may have its place, but is more often associated with negative social patterns (as described below).

Exposure to a number of sides of a debate is generally thought to have desirable epistemological consequences (Ong , 1982) and may mean that collocation of disparate opinion within traditional libraries should be considered (Fallis , 2006). In the online space, where the interface provides for a conversational opening or context and subsequent threaded discussion (Crumlish and Malone, 2009), good conversation can follow where there is a critical mass of participation and motivation.

It is here that a key advantage of online exchange over face-to-face is evident: the longevity of the conversational artefact and the opportunity for vicarious learning by non-participants – perhaps especially from more novice users - is seen as a valuable feature of such communities (Silva, Goel et al., 2009). Subsequent information retrieval activities are enriched by the range of possible solutions available to choose from (Kim and Oh, 2009).

Narrative and personal testimony

Narrative plays an important part in making sense of experience and interpreting the world (Ziegler, Paulus et al., 2006). For capturing and communicating lessons learned, storytelling has been recognised within organisations as a powerful tool (Patriotta , 2003). Indeed, the use of personal stories may explain the preference for longer narrative answers in knowledge sharing fora (Adamic, Zhang et al., 2008) and explain the draw of online communities rich in such content, such as those associated with medical information (Frost and Massagli, 2008, Maloney-Krichmar and Preece, 2002)

Whatever the precise mechanism through which we make educated guesses as to the credibility of testimony (and there are competing candidate theories, see (Goldman , 1999)), accounts that appear closest to “foundational” knowledge seem to carry particular weight. In the medium of talk radio, for instance, first-hand testimony has been shown to have enhanced epistemic power (Hutchby , 2001). Evidence such as this points to the importance of autobiographical narrative to the credibility of an informational resource, and the need to involve domain-experienced community members as contributors.

Collaborative filtering

Collaborative filtering – where users vote or rate content and the combined rating serves to get it promoted or made visible in an information system – and recommendations have been lauded as a solution to information overload and time pressure and when combined with trust measures may heighten the epistemic value of the filtered information by prioritising higher quality content (Crumlish and Malone, 2009) and favouring recommendations coming from trusted connections (Simon, 2008). This pattern is implicit in social networks and microblogging platforms as online “friends” tend to be lent greater credibility, through leveraging sustained on- or off-line relationship.

While the value of collaborative filtering has been proven through the popularity of sites such as Digg and Metafilter, these communities have also been criticised for some of the less desirable outcomes of collaborative filtering discussed below.

Repackaging

One pattern typified by a particular type of blog is to take a current affairs or political story and republish it, often with a personal opinion or interpretation added (Goldman, 2007). Importantly, the original source is usually linked, lending transparency and accountability to the message (Weinberger, 2009). This is one type of repackaging, but many other approaches exist. Structured abstracts, for instance, are another way that the same messages may be re-presented. There is certainly great epistemic value in repackaging when time and resources have been devoted to information gathering and new audiences may be reached through communicating through new and different channels. There is now a growing awareness of this, particularly in the area of the public understanding of science, and skills are needed in taking scientific messages to less informed audiences without over-diluting the message or neglecting associated caveats. (Weinberger, 2009)

Unsociable patterns

The “anti-pattern” was coined to describe inherently bad solutions to design problems, or routes out of unfavourable situations (Crumlish and Malone, 2009). Here, however, we will consider the anti-pattern more to describe perverse consequences or damaging behaviours within otherwise reputable or well-established systems.

Echo chambers, ego boosting and regression to the norm

A well-documented pitfall of the blogging community (and perhaps the extreme end of repackaging) is that the same news gets passed around and lazily republished, creating an echo chamber effect. This anti-pattern can be seen as unhealthy: new news and ideas may be slower to enter a community, and repackaging no longer adds value.

In terms of the risks associated with collaborative filtering, where this is associated with reputation enhancement, some have noted the desire of users to lead the board, or get front page stories published **at all costs**, leading to unethical activity such as voting within cliques. It is here that reciprocity may cross the boundary from encouraging participation to distortion of the community value of particular information resources. More generally, some have criticised the tendency for already popular resources to be voted up, leading to a kind of group think, and devaluing the very minority interest (long tail) content that social sites have been lauded for.

Persuasion and influence

While the length and apparent care with which answers are put together in social knowledge exchange systems may be an indication of their relevance and correctness, believability may be less due to the truth value of the content, but more due to the pure persuasiveness of the originator. Miller and Cryss Brunner have shown how influential posters tend to exaggerate and show high assertiveness in addition to posting longer and more regular messages (Miller and Cryss Brunner, 2008).

If an overbearing manner may be taken as influential by online observers, even when the content is of questionable quality, this is clearly a matter for concern and one that would need countering if the community is striving toward knowledge exchange. The extent to which reputation indicators can counteract such behaviour perhaps need to be further explored, as do “cold start” options for newly formed or short-lived communities.

Sophistry

The practice of “trolling” or deliberately drawing online participants into an argument for sport is quite widespread on web discussion sites, particularly so on controversial or marginal interest topics. The behaviour and outlook of these trolls has been likened to that of the early Greek sophists (Morin and Claudel, 2009). While generally considered antisocial and unconstructive, in practice the boundaries between trolls and normal users may be blurred and the resulting effect may not be wholly damaging, as it may lead participants to seek greater justification for their positions and fully explore argument premises that they don’t agree with (Morin and Claudel, 2009).

Homophily

Large-scale studies of popular social networks reveal the tendency for people to form links with those with a very similar age, ethnic and religious profile to their own (Thelwall, 2009), meaning that any subsequent interaction is limited to within one social group. This pattern is a strong concern of Goldman about the social epistemological power of the web. Goldman has questioned the discourse of the blogosphere as enabling a free market for information. Instead, where views are only shared within a like-minded peer group, there is less opportunity for unjustified beliefs to be rejected or contrasted with better ones (Goldman, 2007).

Interestingly, the more detailed identity profiling enabled by social networks provides the very mechanism by which similar people can recognise each other. Where identity can be masked or anonymity is supported, opportunities may arise for mixing of social groups not normally exposed to each other and a franker exchange of opinions (Murray, 1995).

A design research question for knowledge exchanges therefore becomes whether foregrounding social network features is advisable, or if it is more important to organise groups around practices, events and functions than around personal characteristics.

Conclusions

Many of today’s online social exchange platform designs have evolved from, or remain very close to, the original bulletin board model, with its advantages and inherent limitations for supporting productive knowledge exchange. Those that have evolved more, and tend to be bracketed with the

web 2.0 label, have been informed by designers who understand some of the problems of information overload and online credibility and identity. While a number of studies have looked at online social behaviour on these platforms in relation to knowledge seeking and belief, it is our view that there remains a great deal of research that can be done using a social epistemological philosophy and its methods, combined with interpretive techniques that help clarify why certain online patterns and cues become persuasive and therefore epistemically valuable.

In this article, we have also tried to establish a case for the information professional, as part of formal and informal knowledge networks, to really get to grips with social behaviour online in order to link the knowledge base with the sites and communities where the discussion is taking place. The focus on sociability has shown that in presenting evidence and information, the manner, language and structures used are as important as the content in impacting on pervasive belief.

In urging the LIS community to harness social patterns toward advancement, we are in essence advocating epistemic “ethical hacking”, with hacking defined in the original (legal!) sense of “A person who enjoys learning the details of computer systems and how to stretch their capabilities”(Palmer , 2001). We are all aware of the powerful influence of online socialisation, which has shown it’s propensity to amplify the spread of ill-informed opinion, in a manner identified by Shutz some time before the advent of the internet:-

“[The man in the pub’s*] opinion, which is public opinion as it is understood nowadays, becomes more and more socially approved at the expense of informed opinion and therefore imposes itself as relevant upon the better informed members of the community.”

(Shutz , 1964) - * I substitute “street” with “pub”

It is against this type of dynamic that information professionals should be rallying. The quiet man needs to speak up, win friends and influence people.

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