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Abstract

With the advent of Web 2.0 tools such as Weblogs (blogs), lay people can more easily share knowledge with the public and have far greater reach and impact. At the same time a literature review reveals that experts have been criticised on many fronts. This paper explores key criticisms of experts using 1) a literature review and 2) an interpretive study of lay blogger perceptions of experts. The paper provides important insights into lay blogger criticisms of experts. Findings indicate that a major lay blogger criticism of experts is class-based and power-based. Experts are perceived as elitists who wish to control the flow of knowledge. Interestingly, many of the lay bloggers studied held mixed feelings about experts and the value of lay knowledge on the internet. Implications for theory and practice are discussed.

Keywords

Blogs, bloggers, Web 2.0, experts, amateurs, knowledge

INTRODUCTION

With the advent of Web 2.0 tools and the widespread use of Weblogs (blogs) (Technorati 2008; Universal McCann 2008), the collective knowledge of lay people ("amateurs") has transformed the web (Kolbitsch and Maurer, 2006). Today's amateurs have far greater reach and impact than ever before. In what many regard as exciting parallel developments, new participatory approaches to knowledge production and dissemination, based on amateur knowledge and the power of Web 2.0, have emerged. Such approaches are well-supported by convenient information access tools. For example, a blog search tool enables knowledge seekers to tap into the collected opinions of bloggers (both amateur and expert) on any given topic (Thelwall 2007). While many researchers applaud the plethora of amateur knowledge on the web, some argue that the bulk of the knowledge is low quality and will eventually crowd out valuable expert knowledge (Keen 2007). In his recent bestselling book The Cult of the Amateur, Keen cautions that the inevitable result of burgeoning amateur knowledge on the web is the decline of experts and the dumbing down of public knowledge (Keen 2007). Some other researchers reason similarly (e.g. Trewavas, 2008). However an opposing stream of thinking promotes the value of amateur knowledge, particularly when pooled (Frederiksen 2003; Gibbons et al. 1994; Nowotny et al 2001; Nowotny 2003).

Is the transformation of the Web from a source of expert knowledge to a source of amateur knowledge captured and disseminated to information seekers via Web 2.0 tools an undesirable trend, as Keen (2007) and some (e.g Trewavas, 2008) argue? Or is there a case for sidelining experts and their expertise, and promoting collective amateur knowledge online and new participatory knowledge sharing and dissemination approaches? Clearly these are important questions for educators, information systems researchers, Web 2.0 developers, publishers and the wider public. To answer such questions it will be helpful to identify the key rationale that underpin criticism of experts. So far there has been scant systematic research on this important subject. Further, there has been very little research on the perceptions of amateurs sharing knowledge on the web, regarding their views of experts.

This paper aims to identify key criticisms of experts in the era of Web 2.0. It achieves this by way of 1) a literature review, and 2) a study of the perceptions of lay bloggers as revealed by blog entries. The paper proceeds by reviewing relevant literature and synthesising a set of criticisms of experts. Next the research design for the study of lay blogger perceptions of experts is described. The study of blogs is then discussed and key findings delivered including an analysis of amateur blogger criticisms of experts. Implications for theory and practice are discussed and the paper concludes with final remarks.

LITERATURE REVIEW

Traditional Conceptions of an Expert

In the past an expert has been conceived in markedly similar ways. In one popular conception an expert is a person with evaluative skills in his or her domain of expertise, who can apply an evaluation to a domain topic (Weiss and Shanteau 2003). Examples of topical expertise include expressing an evaluation as a judgement, projecting from an evaluation to make a prediction, communicating an evaluation to others, and executing an evaluation as a performance (Weiss and Shanteau 2003). The specialised skills and knowledge of experts are derived from a combination of training and experience (Shanteau and Stewart 1992). According to Ericsson, Krampe and Tesch-Romer (1993), it takes practice, and a willingness to learn, in order to develop expertise and become an expert. From an extensive literature review and synthesis, Sternberg (1997) identified eight types of expertise: general-process, quantity of knowledge, organisation of knowledge, analytical ability, creative ability, automaticity, practical ability, and labeling. He proposed a ninth synthetic view where a person is a greater expert to the extent that he or she possesses more of these eight characteristics.

Researchers have also identified several stages in the development of an expert. For example, Anderson (1995) nominated three steps – a cognitive stage involving the acquisition of facts, an associate stage involving the application of that knowledge, and an autonomous stage where the knowledge and its application are effortlessly and immediately applied. More recently, learning theories have focused on the development of experts by an instructional design that accounts for the information structures of the domain of expertise and resulting impact on cognitive load (Paas, Renkl and Sweller 2004).

Criticisms of Traditional Conceptions of Experts – a View from the Literature

In recent decades experts have been the subject of increasing criticism (Table 1).

Table 1: Criticisms of Experts (synthesised from a literature review)

No.	Criticism of Experts
1	Experts frequently disagree
2	Experts make subjective decisions
3	Public doubt in scientific methods
4	Value of innate cognitive abilities vs. practice/experience
5	Unreliable use of information by experts
6	Experts are elitists, or represent elitists

First, the public disapproves of the uncertainty of expert opinions. The public expects experts to provide certainty of advice, solutions, judgements and so on (Shanteau 2001). However in practice experts often disagree. Indeed, Shanteau argues that different advice from different experts is reasonable rather than a sign of expert incompetence.

Second, experts may bring personal ideologies (Sternberg 1996) and other subjectivity (Finkelstein 2007) to their judgements. Ideologies may be embedded in the scientific form employed by experts while subjectivity can result from immersion in an expert domain as experts are impassioned about their subject (Finkelstein 2007).

Third, some scholars argue specifically against scientific expertise, remarking that: "normal-scientific research is directed to the articulation of the phenomena and theories that the paradigm already supplies" (Kuhn 1970, p. 24). Traditional scientific models of knowledge production are mainly based on long-established scientific research methods. However there is a lack of agreement among scientific experts as to the "best" scientific method that will lead to "truth" and "certainty" (Frederiksen et al. 2003). Further, Fredriksen and colleagues (2003) argue that science has produced many debatable environmental and social outcomes such as toxic waste dumps, genetically modified organisms, and new technologies that are able to clone humans and animals. Indeed, credentialed experts may lack the social and local knowledge essential to making good decisions (Fischer 2000). In addition, many lay people distrust science (Beck 1986) or have little understanding of scientific expertise (Miller 2004). Clearly, this third criticism pertains only to <u>scientific</u> experts.

Fourth, there has been considerable debate as to whether accumulated practical experience or innate cognitive ability leads to superior expert performance. Some research suggests that greater experience does not yield superior expert performance and that experience is not, therefore, a strong indicator of expertise (Bradley et al. 2006). Rather, experts exhibiting superior performance think holistically and conceptually (Bradley et al. 2006) suggesting that the cognitive ability to structure experience well is important (Bradley et al. 2006). However other research suggests that expertise can be developed with practice. According to Ross, evidence suggests that experts are made rather than born (Ross 2006). Other theories appear to acknowledge difficulties with the concept of expertise acquisition and believe that the activity of knowing should be the focus (Hicks et al., 2009).

Fifth, experts' use of information for decision-making purposes has been questioned by researchers. According to Shanteau, experts use limited information to make judgements with some experts selecting irrelevant information as input (Shanteau 1992). Shanteau (1992) goes on to suggest that a superior expert will use more relevant information than other experts.

Sixth, experts have been deemed elitists. Habermas (1970) claimed that the privileging of experts prohibits democratic discussion and that experts leverage their expert privileges to maintain power. Scientific rules may be devised to privilege people afforded the status of "expert" who can then use their status to control others, for example by withholding information or sharing incorrect information knowingly (Gaventa & Cornwall 2001). Chan and Goldthorpe (2004) show that status order (rather than class structure) is developed from tiers of occupations in the UK with "higher professionals" (traditional experts in their fields) such as medical practitioners, chartered accountants and solicitors possessing the highest status. Fischer (2000) reviews extensive research that suggest experts are self-absorbed and represent the views of higher elites who supervise, control or monitor clients instead of serving their interests.

The above discussion highlights how experts have been critiqued by contemporary researchers and recent studies of public opinion. In response to such critiques, social theories of expertise have emerged.

Social conceptions of expertise

Some scholars believe knowledge is a social construct (c.f. Nowotny et al., 2001). Collins and Evans (2002; 2007) describe a social theory of individual expertise where knowledge is socially constructed and relative to a social group. They explain that as knowledge is associated with social groups, expertise is the result of successful socialisation within a group or other human structure. Collins and Evans believe people need a certain amount of expertise relating to a group in order to learn the language of the group, research its domain, and ascertain what is true - or not true - in that domain. The researchers divide expertise into "contributory expertise" and "interactional expertise". A person with contributory expertise can contribute knowledge in conversation and also use tacit knowledge to apply that knowledge in practice whereas a person with interactional expertise can 'talk the talk' but not 'walk the walk'. The researchers further distinguish between substantive- and meta-expertise. Substantive expertise is domain expertise, whereas meta-expertise is the critical ability of an information consumer to determine whether an expert is credible.

Emerging social approaches to expertise are often participatory and draw on the collective intelligence of lay people. According to Gibbons (1999), expertise emerges from the bringing together of many knowledge sources, with the authority of the expertise linked to the pattern of self-organising connection of sources. New knowledge emerges from interactions between knowledge sources. Nowotny et al (2001) propose a modern application of this concept where scientific knowledge claims are debated with the marketplace, potentially improving outcomes.

Clearly social media can provide important support for social conceptions of expertise. Using social media, lay people and experts alike can share thoughts and opinions with other internet users. One popular social media tool is a publicly accessible blog used for knowledge sharing and knowledge dissemination to the public, as discussed next.

Public Blogs and Amateur Knowledge Sharing and Dissemination

A blog is a set of dynamic web pages with dated entries organised in reverse chronological order (Herring et al 2004). Blogs facilitate regular or casual publishing of personal or topical information. A set of blogs dealing with a particular subject can be linked explicitly or by search, and represents the collective intelligence of the bloggers. The entire network of blogs on the internet is referred to as "the blogosphere".

In this paper we are interested in exploring opinions posted on publicly accessible amateur blogs (that is, blogs accessible by a public audience rather than an organisation's internal audience) intended for sharing and disseminating amateur knowledge with members of the public. Public blogs ('blogs') are pervasive and comprise an important part of many internet users' lives (Technorati 2008). According to a significant study of social media in 2008, more than seventy per cent of active internet users worldwide were reading blogs by March 2008 (Universal McCann, 2008). Clearly a blog is an important source of information and knowledge for members of the public. While the focus of this paper is on the use of blogs by amateurs to share and disseminate knowledge with members of the public, it is acknowledged that there are also many bloggers who are experts in their field (Balog et al., 2008). Key motivational influences for bloggers include self expression, recognition, social contact, introspection, sharing and gaining of knowledge and interests, documentation, and artistic activity (Jones & Alony 2008).

When amateur bloggers share explicit knowledge via their blogs, information consumers face an important challenge. How can they know whether the shared knowledge is of high quality? Information credibility is one important perceived indicator of information quality for information consumers (Lankes, 2008). According to Rieh and Danielson (2007), information consumers routinely assess source, media and message credibility. However online information consumers are beginning to employ reliability- and reputation-based approaches to assess information credibility (Lankes 2008). Other researchers suggest that information consumer trust must be gained in the quality of online information (Kelton et al. 2008). Maratea (2008) notes that a blog's ability to develop and exhibit trust and credibility in the blogosphere may help promote a blogger to elite status, where the blogger is perceived as an expert. It could also be argued that bloggers might expect to be assessed on the merits of their arguments.

Clearly it is important for information consumers to be able to identify expertise in blogs and other social media as there is an increasing amount of amateur content on the web, potentially posing a new threat to experts.

Will Amateurs Crowd Out Experts on the Web?

According to Keen (2007), 'democratization is undermining truth, souring civic discourse and belittling expertise, experience and talent'' (p. 45). Keen views the democratisation of the web, enabled by social media, as a threat to cultural institutions. He argues that amateurs will take over the management of knowledge and that the "truth" will become elusive. In his worldview, blogs, social networking sites and other social media are creating a culture that does not value knowledge, talent, training or skills. Keen further argues that the availability and usability of self-broadcasting tools and the ability to produce user-generated Web 2.0 content will eventually eliminate the financial rewards that traditionally compensate traditional experts for sharing knowledge. Keen refers to a decline of recording contracts and music sales as evidence of his point. Keen's book publication drew a heated reaction from diverse audiences including bloggers. However Keen's thesis has attracted some support in diverse fields such as global food security (Trewavas, 2008) with Trewavas observing, " If scientific knowledge is not the foundation of [agricultural] policy, then ignorance will directly lead the way to starvation, as indeed has already begun to happen." Recently, Keen warned of an emerging oligarchy where "rather than creating more equality, it [the internet] has actually generated massive accumulations of power amongst a tiny new elite of attention-economy aristocrats" (Keen 2009). Indeed in a recent study by Park (2009), a few blogs were repeatedly cited as if they were the key blogs of note while other blogs were cited only once and clearly viewed as less authoritative

The above literature review has 1) identified important criticisms of experts (Table 1), 2) introduced new social models of expertise enabled by Web 2.0, 3) introduced the challenges for information consumers attempting to assess blogger expertise, and 4) reviewed the threat to expert knowledge from the proliferation of amateur content on the web. Next the paper describes the research methodology employed to study this topic.

METHODOLOGY

The research project aimed to identify criticisms of experts in the era of Web 2.0. An initial literature review enabled the identification of six key academic criticisms (Table 1). In order to explore criticisms of experts further, the views of key stakeholders were sought. An interpretive approach was selected in order to understand a socially constructed problem from the voices of stakeholders. Clearly bloggers who were amateurs with respect to their blog topic, might be critical of traditional experts.

Thus blogger views on experts were captured. In June 2007 Keen's book criticising amateur content on the Web, and focusing on Web 2.0 content, was published. Commencing in mid July 2007, the researcher conducted a

Google Blog Search with the search keywords "Keen" and "The Cult of the Amateur", with many blog entries returned in the search results (the number of entries returned was not recorded). This result suggested that amateur blogs could provide a useful source of research data to understand the views of a key stakeholder group relating to the research topic – amateurs who regularly share knowledge online with the public via blogs. Similarly other researchers are beginning to recognise the value of blog entries as research data sources (Jones & Alony 2008).

Between 15 July 2007 and 15 November 2007 the researcher collected relevant blog articles and website addresses by conducting monthly blog searches using Google's Blog Search tool and the keywords, "Keen" and "The Cult of the Amateur". The researcher copied a blog entry into the research database provided that it indeed discussed ideas in the book by Keen (2007). At the end of the period of data collection, 317 blog entries and website addresses had been collected. The blog entries in the database and blogs themselves were then reviewed by the researcher as follows. Blog entries authored by experts, professionals or institutions were eliminated from the research database, along with their website addresses. After this review process, 241 blog entries and corresponding blog addresses remained. The researcher then reviewed each blog entry in order to ascertain whether the blogger had clearly commented, favourably or otherwise, on experts. All blog entries which did not include such content were culled. At the conclusion of this review process, 165 blog entries remained. In March 2009, the researcher checked each blog's active/inactive status on the web. If the blog was no longer active, the relevant blog entry was culled from the database as the blogger was considered uncommitted to sharing knowledge by blog. 122 blog entries and website addresses comprised the final data set.

The researcher employed qualitative content analysis (Mayring 2000) to analyse the blog entries. Each blog entry was analysed for themes respresenting criticisms of experts, using deductive and inductive qualitative content analysis as follows. First, two columns were added to Table 1. Column 3 stored a counter for the number of times a particular criticism was identified in the dataset of blog entries. Column 4 captured relevant text from the blog entry. For each blog entry, the text was analysed and if a phrase was interpreted as an expert criticism, the extended table was consulted to determine whether the criticism was already present. If the criticism was already in the table, the relevant counter (in column 3) was incremented and the phrase was stored in the fourth column of that row. If it was a new criticism, a new row was added to the table and columns 3 and 4 completed. A summary version of the final table is presented in this paper (Table 2), showing the number of occurrences of each criticism.

FINDINGS

This section first discusses key findings on criticisms of experts by 122 lay bloggers (summarised in Table 2). The first six rows of the table list the literature-based set of criticisms from Table 1 while the remaining four rows list four new criticisms identified from the analysis of blog entries. The discussion below is illustrated with quotes from the blog entries to properly convey the tone of bloggers.

By far the most common criticism of experts was that they are elitists, or represent elitists. More than fifty per cent of the blog entries which commented on experts expressed this viewpoint. The sub-theme of control featured strongly in this category, with bloggers expressing the view that experts were trying to subjugate lay people:

> "*Evidently, Keen is an elitist who argues that only 'experts' should manage the news, create art, and, I guess, control the rest of us*".

In particular, there was a feeling that information was regarded by experts as theirs to control, monitor and dispense as they saw fit:

> "*internet-born free market forces have burst the elitists' monopoly on information*"
> and
> "*It's the typical argument of a certain type of schools administrator or teacher who just doesn't think that mere mortals should be given the opportunity to say what they think, unvetted, not quality controlled and verified by 'them', the powers that be*".

Some bloggers felt that lay people were silenced if they were not recognised experts. These bloggers felt that they were regarded as lower status than experts:

> "*talking is best left to those self-selected elite whilst the rest of us pig farmers should keep quiet - a sort of* 'Stop all that chattering! I'm talking' *approach*".

Other comments related directly to a perceived class issue where experts were accorded higher intellectual status:

> "*So it's a closed garden for experts, then? Well, of course. One possibly could not imagine that the great unwashed might have a brain*".

The second largest category of blogger criticism was that experts could not be trusted, with around 19 percent of blog entries sharing this perspective. Some did not accord experts any more trust than lay people:

> "*But why trust the people who wrote Encyclopedia Britannica? Why, just because they cost a pile of money and come in printed form, do people want to trust them more - perhaps to feel better about their investment?*"

Some comments on trust were linked to other criticisms such as the elitist argument:

> "*As a nation [USA], we do not trust elites and experts are an elite class*."

As the third largest category of criticism – and a new criticism added to the original set in Table 1 - around 18 per cent of the bloggers perceived that experts lacked independence and could not, therefore, give an honest opinion:

> "*[web 2.0 allows] independent expertise on countless specific points to flourish*"

The fact that experts rely on customers for income is one cited example of expert dependence:

> "*Their [experts'] content is becoming lost in a sea of free publicly created content, much of which is more honest and straightforward than anything they create because there is no need to worry about offending the customer.*"

The tendency of experts to herd together and adhere to a consensus view is often called groupthink (Janus 1982) and is another example of a lack of independence:

> "*The worst kind of groupthink is when a bunch of experts get together*."

Finally, the fact that experts are associated with ego led some bloggers to believe that experts can be influenced accordingly:

> "*Small groups of experts can be 'gamed', often without realising it. Experts can be bought, often just for the price of a little ego-stroking.*"

The fourth largest group was the 17 percent of bloggers who felt that experts are not the only people with valuable knowledge. Their statements were sometimes also tinged with criticisms of expert elitism:

> "*There are many among our society who are educated enough to see through the vanity and see work that's insightful and meaningful, art that is practiced and unique, voices that have been well-thought out enough to deserve being heard.*"

The fifth largest group of criticisms, with only 8 occurrences, lauded the value of practical experience compared with recognised expert qualities such as cognitive ability:

> "*He [Keen] thinks he is smarter than the average human that might actually of witnessed or been a part of an event in history*".

Table 2: Blogger Criticisms of Experts

Criticism of Experts	Blog Entry Occurrences	Criticism No. from Table 1
Experts frequently disagree	0	1

Experts make subjective decisions	0	2
Public doubt in scientific methods	0	3
Value of innate cognitive abilities vs. practice/experience	8	4
Unreliable use of information by experts	0	5
Experts are elitists, or represent elitists	67	6
Experts cannot be trusted (new)	23	N/A
Experts are not the only people with valuable knowledge (new)	11	N/A
Experts are a failed "institution" (new)	5	N/A
Experts are not independent (new)	21	N/A

Finally, a small number of bloggers (5 in all) felt that experts were a failed institution which should be discarded:

"We've had the Cult of The Expert for centuries now. And we've seen how and why it breaks down, why it fails."

Interestingly, the remaining four criticism types in the table were not identified in any of the blogger entries: experts frequently disagree; experts make subjective decisions; public doubt in scientific methods; unreliable use of information by experts.

Other important insights were gleaned from the blog entries. In addition to the criticisms discussed above, some bloggers had mixed feelings about the thesis that amateurs were flooding the Web with amateur knowledge. They saw a trend towards low quality content and were concerned. For example, one blogger wrote:

"The internet is shifting towards a medium where it's becoming increasingly filled with narcissistic rants. But it hasn't gotten to a stage yet where this type of content - personal blogs etc - is over-powering the really useful content on the web. The day when i use google and the first page are all results from personal blogs - that's the stage i don't want to get to"

while others identified underlying problems with Web 2.0 such as:

"Web 2.0 can ... be a game that people learn to play in an attention seeking economy. Global village idiocy, banalisation, hive mind, self censorship and chasing popularity are all real problems."

Some bloggers looked past the issue of experts versus amateurs to higher ideals such as liberation of the people:

"What seems at stake, besides professionalism and expertise, is the nature of our democracy, whether political and familial power controls the flow of information, or whether the liberating attempt to give the flow of information to the individual succeeds."

Others looked past even the flow of information towards a transfer of power from experts to the common marketplace:

"Yes, I'm sure that some artists will suffer from the opening up of the means of expression. They will not adapt, but then I'm sure many will benefit. The crowd will be the arbiter, not Keen and his fellow 'old guard'. Unless, of course, the crowd choose them to be so."

DISCUSSION

The findings from the empirical study, set out above, suggest that some lay bloggers may have negative perceptions of experts and that these perceptions may positively affect blogging motivation and commitment. The lay blogger criticisms of experts as identified in the study (Table 2) also support and extend previously identified criticisms of experts (Table 1).

The main finding from the study was that lay bloggers view experts as elitists who attempt to control information and restrict the knowledge flow from and to lay people. It is quite possible that this belief may strengthen lay blogger commitment. Interestingly, although the elite issue was the major criticism of experts and perhaps a key motivation to blog, none of the blog entries indicated that the bloggers thought of themselves as a new elite, even though recent research by Maratea (2008) and Keen (2007) suggest the rise of highly popular and influential bloggers as a new elite. The lack of reference by bloggers to themselves as any kind of new elite might be because lay bloggers are not aiming for elite status or because they are unaware of potential elevation to elite status. It also appeared, from the comments about expert elitism, that lay bloggers consider that the internet, particularly through Web 2.0 tools, is an important means of liberating themselves from domination by experts.

The findings also suggest that many lay bloggers appreciate quite different aspects of knowledge compared with traditional expertise. For example, bloggers referred to the value of having witnessed events in person, the value of having local knowledge, and the value of being a trustworthy person. They also did not view expertise as a zero-sum game where only expert knowledge mattered. Thus to be trustworthy was considered equally (if not more) valuable to the expertise of a traditional credentialled expert. There was no sense in the data or findings of weighing up whose knowledge was more important but rather a sense that all contributions mattered, provided that they were from a trustworthy, non-elitist source. In other words, bloggers took a social view of the value of knowledge.

Further to this point, not all theoretical criticisms of experts (Table 1) emerged as important to the lay bloggers studied. The four criticisms not identified (Table 2) were: experts frequently disagree; experts make subjective decisions; public doubt in scientific methods; unreliable use of information by experts. This suggests that bloggers do not especially doubt expert knowledge, but rather mistrust experts as people, assigning them various traits such as elitism, controllers, untrustworthy, group thinkers, lacking independence, insitutionalised, and so on.

CONCLUSION

This paper has provided an exploration of criticisms of experts from a literature review and an analysis of lay blogger perceptions as indicated by blog entries. Key findings suggest that some bloggers hold strong negative socially-based opinions of experts as elitists who cannot be trusted to be honest in their opinions and who serve to control information and knowledge flow. The paper identified ten criticisms of experts (Table 2), which provide a foundation for further research on this topic. Clearly, the findings from the research are limited. For example, there was no attempt to distinguish between different types of experts such as scientists, teachers, gardeners, etc.   Further research is needed to explore the set of ten criticisms, perhaps by interviews with bloggers, experts, and other Web 2.0 stakeholders.

This paper has made an important contribution to current understandings of the changing use of knowledge in society, theory on experts, and theory on blogs. First, literature has previously neglected negative attitudes to experts while focusing on social theories such as social networks and their value for sharing knowledge. However this paper provides a possible explanation as to why social networks and other social infrastructure in organisations might have such great significance for knowledge sharing. Perhaps employees also find internal and external experts elitist, untrustworthy, group thinkers, and so on, and therefore prefer to tap into the knowledge of non-expert colleagues. This question could be researched in organisational settings. Second, expert theory has also neglected to systematically study negative perceptions of experts. This paper provides a set of ten criticisms (Table 2) which contributes to an emerging stream of knowledge in expert literature. Future research should aim to identify appropriate roles for experts in the Web 2.0 era. Third, the paper has provided new insights into blogger motivation and commitment and attitudes toward experts thereby enriching understandings of blogs and blogging. The paper has also contributed knowledge to the debate about the role of amateur knowledge on the Web in the era of Web 2.0.

Ther are also some practical implications suggested by the paper. Organisations which work with and manage experts could educate them as part of professional development to better understand their role in the new Web 2.0 environment. Experts and amateurs should be brought together in different settings to learn one another's strengths and weaknesses, which could help break down the barriers identified in this paper. New Web 2.0 tools

could find ways to link amateurs and experts collaboratively - ways that do not threaten egos, and do not permit power imbalances. To conclude, unless this issue is faced and addressed, Keen's (2007) prediction of the decline of experts on the Web may gather momentum and head towards reality.

REFERENCES

Anderson, J.R. 1995. *Cognitive Psychology and its Implications*. Fourth Edition, New York: W.H. Freeman and Company.

Balog, K., de Rijke, M., and Weerkamp, W. 2008. "Bloggers as Experts", In Proceedings of SIGIR'08, 2008.

Beck, U. 1986. *Risk Society: Towards a New Modernity*. London: Sage.

Bradley, J.H., Paul, R. and Seeman, E. 2006. "Analysing the Structure of Expert Knowledge", *Information & Management*, (43:1), pp 77-91.

Chan, T. W., and Goldthorpe, J.H.. 2004. "Is There a Status Order in Contemporary British Society? Evidence from the Occupational Structure of Friendship." *European Sociological Review,* (20:5), pp 383–401.

Collins, H. and Evans, R. 2007. *Rethinking Expertise*.The University of Chicago Press.

Collins, H.M. and Evans, R. 2002. "The Third Wave of Science Studies: Studies of Expertise and Experience," *Social Studies of Sciences*, (32:2), pp 235-96.

Ericsson, K.A., Krampe, R.T and Tesch-Romer, C. 1993 "The role of deliberate practice in the acquisition of expert performance", *Psychological Review,* 100, pp 363-406.

Finkelstein, S. (2007) Personal post, in *Knowledge Access as a Public Good* (Danah Boyd), 27 June, *Encylopedia Brittanica Blog*, Retrieved April 21 2009 from:
http://blogs.britannica.com/blog/main/2007/06/knowledge-access-as-a-public-good/

Fischer, F. 2000 *Citizens, Experts, and the Environment: The Politics of Local Knowledge.*

Frederiksen, F., Hansson, F. and Wenneberg, S. 2003. "The Agora and the Role of Research Evaluation", *Evaluation*, (9:2), pp 149-172.

Gaventa, J., and Cornwall, A. 2001. "Power and knowledge". In P. Reason & H. Bradbury (Eds.), *Handbook of Action Research.* Thousand Oaks, CA: Sage.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P. and Trow, M. 1994. *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. Sage, London.

Gibbons, M. 1999. "Science's New Social Contract with Society", *Nature,* 402, pp 11-18.

Habermas, J. 1970. *Towards a Rational Society*. Boston: Beacon.

Hicks, J., Nair, P. and Wilderom, C.P.M. 2009. "What if We Shifted the Basis of Consulting from Knowledge to Knowing?" *Management Learning*, (40:3), pp 289-310.

Hsu, C-L. and Lin, J.C-C. 2008. "Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation"**,** *Information & Management*, (45:1), pp 65-74.

Janis, I.L. 1982. *Groupthink: Psychological Studies of Policy Decisions and Fiascoes*. Houghton Mifflin Company.

Jones, M and Alony, I. 2008. "Blogs - the new source of data analysis", *Journal of Issues in Informing Science and Information Technology*, 5, pp 433-446.

Keen, A. 2007. *The Cult of the Amateur*. New York: Doubleday.

Keen, A. 2009. *The Great Seduction*, Blog, June 6, Retrieved October 8 2009 from http://andrewkeen.typepad.com/.

Kelton, K., Fleischmann, K. R., and Wallace, W. A. 2008. "Trust in digital information". *Journal of the American Society for Information Science and Technology*, 59, pp 363-374.

Kolbitsch, J., and Maurer, H. 2006. "The Transformation of the Web: How Emerging Communities Shape the Information We Consume", *Journal of Universal Computer Science*, (12:2), pp. 187-213.

Kuhn, T.S. 1970. *The Structure of Scientific Revolutions*. (2nd. ed), Chicago: University of Chicago Press.

Lankes, R.D. 2008. "Trusting the Internet: New Approaches to Credibility Tools", in *Digital Media, Youth, and Credibility*, (Miriam Metzger & Andrew Flanagin, eds.), Cambridge, MA: The MIT Press.

Maratea, R. 2008. The e-rise and fall of social problems: The blogosphere as a public arena. *Social Problems*, (55), pp 139-160.

Mayring, P. 2000. "Qualitative Content Analysis", *Qualitative Social Research Forum,* (1:2), Retrieved 8 October 2009 from: http://www.qualitative-research.net/fqs-texte/2-00/2-00mayring-e.htm

Miller, J. 2004. "Public understanding of science at the crossroads", *Public Understanding of Science,* 13, pp 273–294.

Nowotny, H., Gibbon, P. and Scott, M. 2001. *Re-thinking Science. Knowledge and the Public in an Age of Uncertainty*. Cambridge: Polity Press.

Nowotny, H. 2003. *The Potential of Transdisciplinarity: Rethinking Interdisciplinarity*, paper available at http://www.interdisciplines.org/interdisciplinarity/papers/5

Park, D.W. 2009. "Blogging with Authority: Strategic Positioning in Political Blogs", *International Journal of Communication*, (3), Rerieved 8 November 2009 from: http://ijoc.org/ojs/index.php/ijoc/article/view/355/278

Ross, P.E. 2006. "The Expert Mind", *Scientific American*, August, pp 64-71.

Paas, F., Renkl, A. and Sweller, J. 2004. "Cognitive Load Theory: Instructional Implications of the Interaction between Information Structures and Cognitive Architecture", *Instructional Science,* (32:1-2), pp 1-8.

Rieh, S.Y. and Danielson, D.R. 2007. "Credibility: a Multidisciplinary Framework", *Annual Review of Information Science and Technology,* (41), pp 307-364.

Shanteau, J. 2001. "What Does it Mean When Experts Disagree?" In E. Salas & G. Klein (Eds.), *Linking Expertise and Naturalistic Decision Making*, pp. 229–244.

Shanteau, J. 1992. "How Much Information Does an Expert Use? Is It Relevant?" *Acta Psychologica,* (81), pp 75-86.

Sternberg, R.J. 1996. "The Costs of Expertise", in Ericsson, K.A. (ed.) *The Road To Excellence: the Acquisition of Expert Performance in the Arts and Sciences, Sports, and Games*. Lawrence Erlbaum.

Sternberg, R.J. 1997. "Cognitive conceptions of expertise", in P.J. Feltovich, K.M. Ford, & R.R. Hoffman, *Expertise in Context. Human and Machine* , pp149-162, Menlo Park, CA: The MIT Press.

Thelwall, M. 2007. "Blog searching: The first general-purpose source of retrospective public opinion in the social sciences?" *Online Information Review,* (31:3), pp 277-289.

Trewavas, A. (2008) "The cult of the amateur in agriculture threatens food security", *Trends in Biotechnology*, (26:9), pp 475-478.

Thelwall, M. and Stuart, D. 2007. "RUOK? Blogging Communication Technologies During Crises", *Journal of Computer-Mediated Communication*, (12:2), pp 523-548.

Technorati 2008. *Technorati's State of the Blogosphere 2008*, Retrieved 7 October 2009 from: http://technorati.com/blogging/state-of-the-blogosphere//

UniversalMcCann 2008. *Wave 3 – Power to the People Social Media Tracker*, Retrieved 7 October 2009 from: www.universalmccann.com/Assets/wave_3_20080403093750.pdf

Weiss, D.J. and Shanteau, J. 2003. "Empirical Assessment of Expertise", *Human Factors*, 45, pp 104-114.

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