User engagement with political ‘facts’ in the context of the fake news phenomenon: an exploration of information behaviour.

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Abstract

Purpose. The purpose of this paper is to present the results of a study that explored human behaviour in response to political ‘facts’ presented online by political parties in Scotland.

Design/methodology approach. The study consisted of interactive online interviews with 23 citizens in North-East Scotland, in the run-up to the 2017 UK General Election.

Findings. Participants demonstrated cognitive and critical responses to facts but little affective reaction. They judged facts swiftly and largely intuitively, providing evidence that facts are frequently consumed, accepted or rejected without further verification processes. Users demonstrated varying levels of engagement with the information they consume, and subject knowledge may influence the extent to which respondents trust facts, in previously unanticipated ways. Users tended to notice facts with which they disagreed and, in terms of prominence, particularly noted and responded to facts which painted extremely negative or positive pictures. Most acknowledged limitations in capacity to interrogate facts, but some were delusionally confident.

Originality/value. Relatively little empirical research has been conducted exploring the perceived credibility of political or government information online. It is believed that this, and a companion study, are the first to have specifically investigated the Scottish political arena. This paper presents a new, exploratory Fact Interrogation Model, alongside an expanded Information Quality Awareness Model.

Keywords

Information behaviour, Credibility, Fake news, Political parties, Scotland, Alternative facts
Introduction

In the last two years the world has woken up to the extent to which fake news and flawed facts may be influencing the political decision making process. This paper aims to contribute to knowledge of human behaviour in response to the presentation of facts, in order to understand how and at what points users typically draw upon classic information tools and strategies to assist in the process of engaging with ‘facts’, as well as elucidating the barriers that exist to users doing so. In a world where disputed facts and fake news form part of daily discourse in the public sphere, the research is considered to be highly timely. The research was designed to:

i. Build understanding of cognitive, affective and critical response to apparent facts;

ii. Investigate typical approaches to testing the ‘facts’;

iii. Draw conclusions and develop theory as to user capacity to recognise, test and use facts.

This paper describes the second stage of a project which took place during the 2017 election in the U.K., where the first component of the research took the form of an online survey that sought data around user response to a set of posts which contained apparent facts which has been published separately (see Baxter et al. 2019). The second stage took the form of a set of 23 interviews exploring engagement with allegedly factual political statements. The population interviewed consisted predominantly of older, well-educated individuals and future research will widen these parameters to explore the experience of other societal groups.
The current research is exploratory but built upon a constructivist understanding of the world of information and knowledge that has accrued over several decades around human information behaviour. The research takes an unabashedly information science perspective on the research problem but has been influenced by research in politics, political communication and epistemology, in recognition of the extent to which the post-truth politics and fake news themes have been adopted in a wide range of disciplinary contexts. However, the authors ultimately believe that the topic is one to which information and library science has a very great deal to offer.

**Literature review**

The authors (Baxter *et al.*, 2019) recently reviewed the full literature around facts, information and politics in a companion paper. The current paper therefore focuses on how facts might be evaluated. To begin, the authors explored two definitions to underpin their understanding of a fact.

The epistemological explanation of a fact is rooted in an acknowledgement of the complexity of how we know things: ‘Three popular views about the nature of facts can be distinguished: A fact is just a true truth-bearer; A fact is just an obtaining state of affairs; A fact is just a sui generis type of entity in which objects exemplify properties or stand in relations’ (Mulligan and Correia, 2017). This definition emphasises that the fact in itself is not fixed, but is rather contended and capable of variable understandings.
In a highly influential paper, Guthrie (1946, p.1) a psychologist gave his view that: ‘a fact is an event so described that any observer will agree to the description. There are, of course, no facts that meet this too general requirement. We are satisfied—we have established our fact if any observer within the circle of persons with whom we discuss events will agree.’ This latter explanation, while acknowledging that all facts can be contended, is more helpful from an information science perspective in that it acknowledges that, while there might be dubiety about whether anything might universally be regarded as a fact, there are ways in which we can rationally and analytically explore the extent to which a fact might be deemed to be verifiably a fact, in particular through confirmation of user response with that of others.

And how would we as information scientists describe our understanding of a fact? The authors would suggest that we would go further than Guthrie in our belief that the quality of informational material is capable of being tested, confirmed, contextualised, modified or rejected. Indeed for many in the professions associated with information science, at the heart of their vocation rests a belief in and commitment to information quality as a concept. We would also recognise the authority of the creator or publisher of a fact as significant to its reliability.

Fritch and Cromwell draw on Wilson’s (1983) definition of cognitive authority: “cognitive authority is influence on one’s thoughts that one would consciously recognize as proper.” He further clarifies the meaning of cognitive authority by stating that cognitive authority is related to credibility, and that credibility has two main components: competence and trustworthiness. Wilson eventually links the cognitive authority of a work directly to the cognitive authority of its author(s).’ (Fritch
and Cromwell, 2001, p. 499). Interestingly, Wilson (1983, p.34) noted that ‘the different bases for judging cognitive authority are all accident-prone, highly fallible guides, but we cannot do without them’.

Metzger (2007, p. 2078) defines information credibility as ‘the believability of some information and/or its source’, citing Hovland, Janis, and Kelley (1953). Rieh (2002, p. 3) sets out the following operational definitions that relate to two characteristics of quality as it relates to a fact: ‘information quality is identified as the extent to which users think that the information is useful, good, current, and accurate. Cognitive authority is operationalized as to the extent to which users think that they can trust the information’. The credibility of the fact subsumes these other evaluative criteria that LIS would recognise as important.

The literature around evaluating factual sources of information has had a somewhat choppy history from a library and information science perspective. In the period between the late 1960s and early twentieth century a number of publications appeared that set out in a constructivist manner the kinds of criteria that could and should be used and illustrated how these criteria might be tested. Early amongst these was Katz (1969) whose work on library reference services set out criteria which might be used by librarians in evaluating reference materials for selection and inclusion in a collection. The situation was much exacerbated by the growing prospect of universal availability of seemingly limitless sources of factual information through the internet. Auer’s (1997) bibliography brings together an extensive set of work on evaluating web information sources.
Wilkinson *et al.* (1997, p. 52-3) argued that ‘when the primary sources for learning were textbooks and library materials, teachers and students could be relatively confident of the quality of the learning resources available … this is not the case for electronic information sources.’ Their criteria, illustrative of many applied in LIS practice, were:

(i) site access and usability;
(ii) resource identification and documentation;
(iii) author identification;
(iv) authority of author;
(v) information structure and design;
(vi) relevance and scope of content;
(vii) validity of content;
(viii) accuracy and balance of content;
(ix) navigation within the document;
(x) quality of the links; and
(xi) aesthetic and affective qualities.

In a second paper the authors (Oliver *et al.*, 1997) proposed these criteria should be used by those creating and designing internet sites. McMurdo (1998) concurred, arguing that methods for critically evaluating the content and design of existing Internet document might usefully inform the production of new web documents: however, this is a proposition that has been little heeded by content producers to date.
These papers suggest that listings of criteria could be assembled into a master list for guides to electronic sources of information, a concept based on the classificatory approach to information, whereby the user is guided through good guides to the best information. This is an approach still commonly applied in, for example, academic libraries. A number of LIS researchers have proposed such sets of criteria (see, for example, Stoker and Cooke, 1995, and Smith, 1997). An interesting and little further researched criterion identified by Stoker and Cooke (p. 350) is that of the ‘genealogy’ of an internet site as an information source, by which they meant ‘the history of the information source, how long a particular file has been available and where it came from’. This has some relevance to the present authors’ conceptualisation of the journey of the fact, as presented in other papers (Baxter et al., 2019).

Sadly the internet in all its chaotic richness has somewhat turned the gateway notion on its head and rather than using guides, users typically access information direct without consideration of mediation, except through a search tool. So the notion of a set of super guides to subjects through which searchers would be guided (as in a library) to carefully selected, evaluated and curated resources no longer holds much prospect of value. We are in a world now where people believe themselves capable of going straight to the information without help. We cannot turn back time to a point where people have to gain the right to access information and accept guidance as to where to find it. In a one-click world they will not go to one resource merely to be told to go to these other high quality resources – unless, that is, this function is seamlessly performed by search engines. And have search engines taken on this selecting and evaluating role? Far from taking on the role of guardian of information
quality, search engines have indulged the free-for-all - and of course grown rich in doing so.

In a review of the models, checklists and skills that Internet users need to assess the credibility of online information, Metzger (2007) regrets that ‘information posted on the Web may not be subject to filtering through professional gatekeepers’ and bemoans the lack of ‘traditional authority indicators such as author identity or established reputation’ (Metzger, 2007, p.2079). She concludes that ‘the Internet has made the need to critically evaluate information more important than ever before while also shifting the burden of credibility assessment and quality control from professional gatekeepers onto individual information seekers’ (Metzger, 2007, p.2079). Metzger reinforces concerns that the use of evaluative criteria require significant user effort ‘from simple visual inspection of a Web site to more laborious information verification and triangulation efforts’ (2007, p.2079-80)- effort that most studies suggest users will not undertake. Metzger notes ‘one problem with the foregoing models of credibility evaluation is that none has been tested using actual Internet users as they seek information online’, an issue that the current paper seeks to address.

In a study of search for and use of health information, Eysenbach and Köhler (2002, p.576) found that ‘few participants took notice and later remembered from which websites they retrieved information or who stood behind the sites’. Nor did they check the authority of the creators of content. The authors noted both user application of criteria that reflected those set out by Katz (1969), alongside suboptimal search and testing techniques adopted. Rice (2006) in a review of
several large scale studies noted the quality dangers associated with online use of health information as ‘lack of peer review, inaccurate or misleading information, risk-promoting messages, online reinforcement of pathologies, addiction’ (p.3). Rice reports the extent to which most sites were rated low against traditional expert criteria and indeed that the expert ratings themselves were conflicted: ‘not that experts’ ratings of health-related Internet sites are necessarily consistent or reliable either’ (p.6). If the experts cannot apply criteria evaluation consistently, what chance do non-expert users have? Rice notes that ‘one quarter say they check the source, date and privacy policy most of the time; and half say they hardly ever or never check these’, although, significantly, those that are ‘less vigilant … report the lowest levels of improvement’ (p.7) in their health conditions.

Amongst what is a rich mix of literature on information quality, six key theoretical frameworks of credibility evaluation have been identified:

1. Fritch and Cromwell’s model (2001, 2002) construes cognitive authority as incorporating both credibility and quality; it is what people evaluate “to know what credence and impact to impart to any specific body of information” (2002, p. 243), critiquing criteria-based lists as based on faulty premises, in assuming that it will be possible to ascertain authorship, conflicts of interest, agendas in play, understanding organisational structures and affiliations and knowing where true expertise lies. They propose an iterative model whereby assessments of authority and credibility are made by the information seeker at the levels of author, document, institution, and affiliations, which then are integrated into a global judgment of online information credibility.
2. Wathen and Burkell’s (2002) model conceptualised credibility evaluation as an iterative process, in three stages: 1) credibility of the medium and “surface” characteristics, e.g. website structure and appearance; 2) application of evaluative criteria to source (trustworthiness and expertise) and message (relevance, currency, etc.); and 3) “content evaluation” of the message content with user’s existing knowledge or its applicability to their personal situation.

3. Fogg’s (2002) Prominence-Interpretation (P-I) Theory, isolates two aspects of online credibility assessments: 1) the user notices an element or feature of the website (Prominence); and 2) the user then makes a judgement about it (Interpretation). Users quickly note and evaluate website elements in an iterative and subconscious process, which is repeated until they are satisfied or until they encounter a constraint, e.g. lack of time or evaluative skills. Prominence is affected by: user involvement, website type, task, experience, and individual cognitive differences. Interpretation is affected by user assumptions, skills and knowledge, and by search context. Fogg et al. (2003, p.5) found that the user emphasis was largely on the professional presentation and ease of navigation of websites and much less on who produced the information, how it was generated and its accuracy.

4. Metzger’s (2007) dual processing model, suggests online information scrutiny depends on user ability to evaluate information and motivation or purpose for information seeking. Highly motivated users will take a rigorous, systematic approach, less motivated users will rely on “surface” characteristics or heuristics.

5. Sundar’s (2008) four affordances - Modality (M), Agency (A), Interactivity (I), and Navigability (N) - cue cognitive heuristics pertaining to credibility assessments. Modality relates to the structure and sophistication of the technologies, inciting
“bells-and-whistles”, “coolness”, or “novelty” heuristic responses. Agency relates to the source of the information, prompting “authority”, “bandwagon”, or “machine” heuristics. Interactivity can cue heuristics such as “responsiveness”, “choice” and “control”, while Navigability can trigger “browsing”, “scaffolding” or “play” heuristics.

6. Hilligoss and Rieh’s (2008) “unifying framework” of credibility assessment includes “heuristics”, “construct” and “interaction”. Construct encompasses the ways in which individuals construct, conceptualise or define credibility. Heuristics may be: media-related, source-related, endorsement-based, or aesthetics-based. Interactions are with: message content cues; peripheral source cues, e.g. author affiliation, reputation, qualifications; peripheral presentational object cues, e.g. language or advertisements.

Meola (2004) argues that we should eschew notions that publics are gullible and easily misled: ‘students [or users in our case] may be more skilled in evaluating information than many librarians think’ (p.344) and ‘simple transference of traditional library criteria to the evaluation of Web sites is not a complete solution, especially in the more problematic cases where evaluation is most needed’ (2004, p.345). This would suggest that research is needed into user information behaviour in the context of assessing information credibility. The current study aims to shed further light on this research problem from the perspective of users, in line with both Rieh (2002) and Metzger’s call for ‘studies of information evaluation using a greater variety of research methods, on a greater variety of Internet users, performing a greater variety of search tasks than has been done to date’ (Metzger, 2007, p. 2086).
Research methodology

In April 2017, electronically-assisted interviews were carried out with 23 citizens in Aberdeenshire, in the North-East of Scotland, alongside an online survey (Baxter et al., 2019). This is an approach that has been extensively used and tested by the researchers previously. The interviews were conducted at a public library and a church community centre cafe, in the final weeks before the local authority elections and the General Election which had been called quite suddenly. As the research was already planned, the authors were able to take advantage of the unexpected opportunity to broaden its scope. This qualitative component of the research was designed to elicit relatively freeform data from citizens in response to their being presented with apparently factual content provided by the major parties on a range of topics that had been identified as significant in the current media campaign discourse. The interviewers had available an electronic matrix of links to these topic statements arranged by political party. Table 1 below sets out the kinds of content available and the sources primarily selected by participants, which focussed on education, health, the economy and security. Unsurprisingly, in the context of a Scotland where the Scottish National Party (SNP) have been in government for more than a decade, that party’s pages were most frequently selected.

Take in Table 1
The interview was semi-structured and participants were asked at the outset for demographic details about themselves before the interview moved on to their being asked to choose at least one factual statement to look at. For each unit of content examined interviewees were asked for their response to that content and then probed to elicit views on its trustworthiness, reliability, factual accuracy and so on: the researchers also encouraged the users to undertake further fact checking. The interview concluded with questions designed to get users to self-assess their capacity to establish the reliability of the facts with which they had been presented by the campaigners. Perhaps because the interviews were carried out by more than one researcher, the exploration of one question was inconsistent and that question related to whether or not the interviewee would go on to check the factual reliability of the content with which they were presented: some interviewees took the question simply as a hypothetical question around how they might check factual accuracy rather than whether or not they would actually go to the effort of doing so. This inconsistency is acknowledged in the findings.

Encouraging citizens to participate in the interview process was somewhat challenging and typically required reassurance that the interviewers were not party campaigners themselves. It was important that all potential interviewees were at the outset clear about the independent status of the researchers, that there were no ‘correct’ answers and that the whole exercise was being undertaken in an entirely non-judgmental and non-partisan manner. Once they had agreed to participate and any initial awkwardness was overcome, the participants were remarkably free and open in their discourse and spoke quite revealingly about their interaction with politics, campaigns and political discourse and disputation. Twenty-three individuals
participated, with on three occasions interviewees choosing to be interviewed at the same time as a partner or friend.

Of the 23 respondents, 13 were female and 10 male. The participants tended to be older and many were retired, perhaps as a result of the fact that the interviews were carried out during the day in a rural community. Eleven interviewees were over 60, with four in their 50s and only four were under 50. Four individuals refused to reveal their age. Around half of the respondents had a university degree. They invariably described computers and the internet as very easy to use. While acknowledging that there are limitations associated with a predominantly older, educated and relatively affluent (in that they expressed no sense of deprivation) research study population, it is believed that these characteristics of the study population do not diminish the capacity of the data to be useful in an early exploration of the research problem where future research will widen the demographic of participants. There is a rich information behaviour literature which explores the impact of age difference or generation on information seeking and use (see, for example, Rowlands et al., 2008) and the current study makes no claims to have made discoveries that apply to all age groups: however, conversely neither do the authors discount the possibility that the findings may apply to other age groups.

Throughout interviewers remained neutral and very careful not to introduce any suggestion of their own political stance. The participants were assured of their anonymity which has been carefully preserved throughout. The interviews were recorded, transcribed and analysed into nine broad predetermined themes. These themes were dictated by the interview design which set out to explore a set of areas
which had evolved from the literature review and previous research by the authors. Within each theme data from interviews were coded in an interpretative manner. The themes were:

i. Involvement in political activity;
ii. Prior information behaviour in a political decision making context;
iii. Response to facts – cognitive, affective, critical;
iv. Fact checking by the user;
v. Testing the fact, tools and techniques;
vi. The quality criteria used to evaluate facts;
vii. Awareness of false or ‘alternative’ facts and the ‘fake news’ discourse;
viii. Willingness to give an example of being misled by flawed facts; and
ix. Self-assessment of the ability to determine the reliability of facts.

These themes are explored in the findings which follow.

Research results

Involvement in political activity

When asked whether they would describe themselves as politically active 11 respondents explained that they were not party members nor did they canvass or campaign for particular parties. Small numbers talked about campaigning on specific issues (3 cases), distributing leaflets (2), party membership (2), party treasurer (1) and subscribing to a party’s magazine (1). Others interpreted the concept of
politically active in differing ways, in terms of being interested in and informed about campaigns and policies: ‘a wee bitty more active in seeking things out that are important – whereas previously I’ve been happy enough just reading the information that comes through the door’. Overwhelmingly the majority did not regard themselves as politically active, although they could be described as actively interested.

**Prior information behaviour in a political decision making context**

In order to further explore the extent of their being actively interested, the next set of questions asked respondents to talk about an occasion when they had required political (undefined by researchers) information. While some said they had never sought such information or could not call an example to mind, otherwise a range of examples were provided. Topics on which information was sought included: health, education, numbers of teachers and training policies, government spending, recycling, euthanasia, details of candidates for office, campaign manifestos and promises, and local and national government policies. Not unexpectedly many had relied on the Internet or Google to provide the information but were unable to specify which particular sources they had used: in this context one participant characterised their approach as ‘not very sophisticated’ while another explained ‘I just Googled it and followed everything that I found’.

Some participants spoke at greater length about extended efforts to find information, utilising on one occasion Freedom of Information legislation to frame a request to the Scottish Government because the participant believed that ‘they’re very good at
hiding, at not telling you the facts’. Another described using Facebook where the respondent felt politicians were ‘more active in their communication of any information they put out’. In the context of the Brexit vote in the UK about membership of the EU, one participant described searching the internet to find out ‘exactly what it means to remain and what are the implications of leaving’, without success. A small number had communicated directly with their elected members on specific topics, either through mail or by attending surgeries; on one notable occasion an elected member had visited the participant at home to provide more information about their party’s stance on recycling (this happened around 40 years ago).

There was little evidence of habitual verification of facts amongst participants. In terms of the authors’ (Baxter and Marcella, 2017) previously presented characterisation of searchers, the present participants largely fell into the *haphazard searcher* and the *proactive searcher* categories where a searcher is sufficiently interested in the subject to engage in active searching for information, but more often than not with very limited sources or poorly articulated search strategies. None of the participants could be regarded as *indifferent* or resistant to information, but a small number were predominantly *reactive searchers*, who simply consumed what they were presented with through their normal channels, predominantly television, newspapers and Facebook.

**Response to facts – cognitive, affective, critical**
In this section participants’ immediate response to being presented with apparently factual information is discussed based around Bronstein’s (2013) characteristics of political campaign messages built on ‘the Aristotelian language of persuasion used to convince audiences. This consists of three elements: first, ethos: an ethical appeal meant to convince an audience of the author’s credibility; second, pathos: an emotional appeal meant to create fear or to invoke sympathy; and third, logos: an appeal to reason or logic’. The responses are considered in so far as they illustrate a response to their cognitive (logos), critical (ethos) or affective (pathos) appeal.

Typically participants responded on at least two levels.

(i) Cognitive response (logos) – Often the first response is to try to make sense of the fact and to relate it to an existing knowledge base. Experience, often professional, would be drawn on to confirm or reject a fact: ‘if it’s a topic I know a bit about’. The experience might not be personal but that of friends and family. Most participants engaged in some form of sense making in this manner. They often chose a policy area to examine based on personal and professional experience and knowledge. They would provide examples of information from their existing knowledge base to demonstrate or further evidence the accuracy or inaccuracy of the fact. At times respondents took what might be described as a rational, common sense approach: ‘it all sounds too good to be true to me’ and ‘that’s just not possible’. These responses illustrate cognitive conflict with participants’ own views of the world and participants mentioned knowledge absent (deliberately it was hypothesised) from the message: ‘that I don’t believe’ and ‘it’s also quite important that they haven’t mentioned the fall in the value of oil and gas’.
Where they had personal knowledge or expertise on which to draw, participants considered some facts to be a ‘very superficial statement’ which required much further defence in terms of the data that underpinned the stated fact. Facts that lacked specificity also tended to be disbelieved: ‘rather than being specific, it’s all a bit general and nondescript’. Interestingly one respondent made the point that they would be more likely to trust a fact on a topic they knew something about and that their immediate reaction to a fact on a topic about which they had no knowledge would be disbelief. Conversely another felt that ‘somebody who wasn’t too switched on might think oh that’s wonderful but it’s not’. These findings illustrate epistemological hypotheses, the exploration of which is beyond the bounds of the present research paper but which might richly repay further research.

(ii) Critical response (ethos) – It was equally common for participants to reflect on the persuasiveness (or converse) of the source. Content creators were described as ‘fairly honest’ or as someone who ‘shouts a lot’. One participant, for example, felt that ‘someone has done some research and they’re fairly honest folk and are putting up facts to the best of their ability’. Parties were considered to be reliable and honest or not. Many value laden statements were made with little attempt to explain why a particular author might be honest or not. Statistics tended to lend credibility merely by virtue of the fact that they were statistics: ‘I’m assuming these statistics are correct’. Alternatively, they were disbelieved simply because ‘statistics can say anything’. Frequently participants were unfamiliar with authors cited – ‘I’ve never heard of them’ – but when prompted to find out more about these
agencies, were much more persuaded by the facts, if these prove to emanate from non-party affiliated or independent sources.

(iii) Affective response (pathos) – Interviewees responded on an emotional level on, perhaps surprisingly, few occasions. It might be hypothesised that the frequency of such responses would be greater in an informal and more relaxed context, without the constraint of researcher presence. However on occasion respondents referred to facts – mainly when they disagreed with them – in a way that demonstrated feelings of disquiet. They talked of their amazement - ‘that would surprise me’ - and disbelief was expressed and sometimes more extreme reactions of outrage: ‘I can already vomit – just the headline. This is totally fake.’ Respondents also expressed disquiet at important subjects being treated as political ammunition, where this practice offended participant values: ‘I don’t think education should be a political topic’. Rather more sedately many expressed scepticism and disbelief – ‘that’s a lie’.

Overall respondents tended to pick up on and talk about facts that they thought incorrect – and that may be a quite intrinsic or learned form of human reaction. Less frequently but on occasion they would accede that a fact was correct but often somewhat reluctantly. At such points they would often add that while correct, this was selective presentation of facts or merely one of many perspectives: ‘that fact would probably be accurate but there will be other facts that will likely contradict that but they’ve been excluded’. The sense of multiple perspectives was keenly felt by some, as was party agenda and spin: ‘you’ll get what they want you to hear for a start and they obfuscate’.
Fact checking by the user

The next section of the interview explored whether and by what means users would check or verify the factual content with which they had been presented. The researchers were interested in the extent to which users typically went on to check facts they had deemed to be less than wholly reliable or whether they would accept or reflect upon the facts without recourse to any further information seeking behaviour. However not all of the interviewees interpreted the question in this manner and most answered in a more hypothetical ‘here’s how I could check the fact’ manner, without it being clear whether or not they would actually ever do so. In total only five stated clearly that they would go on to check a fact: ‘I don’t take anything at face value’ and ‘we do try to triangulate it, so we would be looking for other pieces of information as well’. Conversely five stated unequivocally that they would not check further: ‘I wouldn’t instinctively go and question every figure here – I think I’d have a degree of trust in that naturally but that’s not to say they’re right’ and ‘I would just trust that because you have to trust something’ and ‘I tend to think people are saying something that they can back up’. For all other interviewees there was no evidence to suggest that they would act to check the fact, even where they had spent some time discussing it and acknowledging its significance.

This is an important question in many respects, because it ultimately illuminates the extent to which flawed facts are consumed, accepted or rejected without any further process of verification being involved. In a world where people are exposed to more
‘facts’ at greater speed than ever before, this swift and largely intuitive acceptance or rejection is potentially highly dangerous. Most people gave no clear indication that they would do any more than accept or reject a fact even when they were concurrently expressing serious reservations about it and indicating by the time and attention they accorded that the fact was a significant one. The authors feel that this is a research problem that requires further exploration.

**Testing the fact: tools and techniques**

Three broad user strategies for fact checking were identified: (i) people they know; (ii) expert agencies or people; and (iii) the media.

Typically in assessing the reliability of data participants referenced and drew on the knowledge and experience of their family, friends and acquaintances in addition to their own: ‘our family are in teaching and that’s not what they see’. Equally when asked how they would check a fact they talked about seeking information from those on the ground, ‘at the coal face’ and ‘my friends who are actually on the coal face would probably have a bigger influence on what I was thinking’, and whose opinions they would therefore regard as influential. Such views were regarded as more trustworthy: ‘I’m listening to people who are there and sometimes what the government say and what the people on the ground are saying is different and you know I’m more liable to go with the people on the ground because the government seems to spin a lot of information’.
Specialists with expert knowledge were identified very occasionally, as in ‘talking with principal examiners or examiners in a particular subject to ask has the process changed in recent years and what the reasons are for that’. This comment was made in relation to a statistic that the participant felt used the wrong measure of attainment. However for most participants there was little evidence that they would be able to identify, far less approach, experts that might give a view.

Respondents spoke of agencies both governmental and non-governmental. Government departments, such as the Department of Education, were mentioned but relatively infrequently. Indeed one respondent said ‘I don’t know if there’s government statistics available as well as education statistics’, revealing very significant gaps in people’s understanding of the resources that exist (see also points below re expert agencies). In the latter context many were influenced by the extent to which agencies were independent and might challenge official perspectives: ‘looking at inspection reports and the Care Commission’.

There was some recognition amongst participants of agencies that were likely to be expert and therefore authoritative on subjects, for example, Audit Scotland and the Office for National Statistics (ONS): it is worth noting though that the majority of respondents had no knowledge of a variety of agencies they encountered during their online search, including the ONS, the ISDS (The Information Services Division, NHS Scotland), Audit Scotland and so on. One participant illustrates this challenge: ‘Oh statistics from the Scottish Tribunal Service – so yeah would I go and check that – no I wouldn’t. Do I trust it? [pause] No I think they’ll take all those statistics and massage it to make it look worse than it actually is’. Another respondent spoke of
going to ‘one of the charities that works with the most disadvantaged, maybe CPAG [Child Poverty Action Group]’. Similarly another interviewee came across the Federation of Small Business of whom they had never heard and said ‘I would take it as someone’s done some initial research but I don’t know who they are’. There is a clear lesson here for such agencies in terms of their need to promote wider awareness of who they are, what they do and how and why their information should be trusted.

Inevitably, a number of participants spoke simply of certain types of media: ‘yeah you’d start digging around on the internet and not stop until you’d backed it up with cross-references’. Another interviewee would ‘go online on the internet – Google it – yes’ but was unable to explain the kinds of sources that would be sought there. One said ‘I’d probably look at newspapers and things’, although it’s worth noting that the print and broadcast media were mentioned very infrequently in comparison with all previous research undertaken by the authors.

**The quality criteria used to evaluate facts**

The interview data was analysed to reveal all references to what might be deemed evaluative criteria and these are set out briefly below:

*Credibility* – in terms of how reasonable the fact seemed and the extent to which it chimed with their own experience or that of their friends and family.
Specificity – whether the data confirmed the specific factual claim made: ‘it’s saying stuff like much has been achieved, it’s all a bit general and nondescript’.

Authority – of the creators of the content and the extent to which these seemed trustworthy to the user: ‘I’d say again there’s no references to state where the figures have been generated from’.

Lack of bias – independence, objectivity or the degree to which the content creators were non-partisan, apolitical and not associated with government.

Accuracy – the extent to which the fact could be verified, was proven to have been verified, could demonstrably be linked to evidence.

Meaningfulness – the relevance of the data that had been presented to the message that was being conveyed, the extent to which the appropriate units of measurement were being used.

Relevance – whether the fact presented was relevant to the message being conveyed or was what the user needed to know in order to make a political decision or form a view about a policy.

Currency – how old the data was on which the fact was based, whether it remained relevant and if its date influenced the value of the fact in terms of the message being conveyed.
Selectivity/comprehensiveness – whether only part of the whole picture was presented, whether the data were complete or the message only used some of the data available: ‘some of them have been a bit picky about where their facts are generated from and what's in and what's out’.

Confirmation – whether the facts were supported by references indicating by whom the data had been originally collected and providing confirmation from other sources.

Limitations acknowledged – were any limitations in the scope or validity or date of the data clearly conveyed and any margins of error acknowledged.

Robustness – whether the data on which the facts were based were valid, whether they were based on estimations or speculative or seeking to project ahead without any evidential assurance.

Quality of presentation – whether the fact was conveyed in a professional, correct, grammatical, readable, ideally brief, visually attractive and comprehensible manner: ‘I mean how reliable is that if you can’t even get the apostrophe in the right place’.

Comprehensibility – were the participants able to understand the fact and the way it was presented. Participants often expressed a lack of understanding of what something meant, about figures in tables, about acronyms, about organisations mentioned etc.
Accessibility – this criterion was not actually tested in the conventional sense of how easy was the fact to find; however, participants did talk about the layout and the ability to pick facts out clearly in content.

Each of these criteria was referenced by more than one participant throughout the interviewees (although not necessarily explicitly using these terms) and often participants found fault with facts on multiple grounds. They did so unsystematically though and had often already decided that they did not believe a fact to be true before they found rationalising reasons based on these criteria for rejecting them.

Awareness of ‘alternative’ facts or the ‘fake news’ discourse

The interviews also explored in the penultimate questions the extent to which participants were aware of the fake news discourse. All respondents understood what was meant when asked to give an example of a ‘fake news’ story. A significant group, although acknowledging awareness of the prevalence of these, were unable to give specific examples. Many of the usual examples were given, including Donald Trump’s history with facts (‘he’s not brilliant at truth’), the 2016 presidential election in the U.S., the (non-existent) Bowling Green bombing and the Scottish Referendum and the predicted value placed on future oil and gas revenue. Interviewees cited the ‘Brexit bus’ (during the UK’s referendum on EU membership) and the fact that £350m a week would be available to spend on the NHS instead. Some less well known examples were also cited where interviewees had checked a fact and found it unreliable: a statement by Gordon Brown that there was no shortage of nurses and therefore no need to bring in nurses from overseas; the ‘fact’ that sewers in London
were being paid for by Scottish taxpayers; and Russian statements about their activities in Syria.

As in previous and associated research (Baxter and Marcella, 2017; Baxter et al., 2019), participants are typically somewhat reluctant to identify examples of having been misled by facts, and around half claimed never to have been misled by a fact later found to be incorrect. This is an unacceptably high level of complacency and suggests that the converse may well be the case, that these are simply people who have never retrospectively questioned facts that they had taken at face value. Examples that were given included Theresa May promising that there would be no imminent election then quickly reversing the stance, the true costs of Brexit having never been acknowledged (so an absent fact) and inevitably the bus again, the fact that Iraq had Weapons of Mass Destruction (WMD) being cited as a rationale for the Iraq War and bird and swine flu scares.

There is some scope here for research to understand better what people see as facts, how these relate to promises, estimates and opinions, and in what circumstances people become aware that a fact has been corrected. Other research (see, for example, Berinsky, 2017 and Lewandowsky et al., 2012) has shown that people remain convinced of the accuracy of facts which have subsequently been found to be incorrect and corrected, and that there is greater public engagement with the original fact than with its subsequent correction. Equally, there is the suggestion that awareness of the debate around facts and their prominent contestation has resulted in a greater tendency for people to reject all facts: this appears to be
confirmed by the extent to which this study’s participants spoke significantly more about facts they questioned than those they trusted.

**Self-assessment of the ability to determine the reliability of facts**

In light of the high levels of confidence that people display, believing that they are adept information users and capable of evaluating facts, the research concluded with a question to interviewees that asked them to rate their personal capacity to test facts. Respondents rated themselves in what might be regarded as four groups: (i) did not know (4 interviewees); (ii) not good (0); (iii) ‘goodish’ with reservations (10); and (iv) good (5).

(i) The four participants who did not know how good they were at testing facts were highly reflective and self-critical in their comments. One thought that ultimately ‘I've no way of knowing if I'm being conned or not … I'm not in a position to challenge the scientists’. Another said they would like to think they are sharp but ‘I'm not saying things can’t slip through the net that I don’t understand enough of – the whole thing’s a nightmare’. The final two participant assessments were: ‘I don’t know … I guess you take what you read widely then you try to apply it to the facts and figures’ and ‘it's increasingly difficult … they’ll maybe tell you certain things but they’ll withhold other information’.

(ii) No one rated their capacity to test facts as poor. This is an interesting nil return – does no one recognise how difficult it often is to genuinely test facts?
The ‘don’t knows’ came closest to articulating the dilemma of testing facts with expertise.

(iii) The single largest group, describing themselves as ‘fairly good’, ‘goodish’ and ‘okayish’, were tentative in their assessment and spoke of having reservations in their confidence in testing facts. Most self-appraisals included reservations or limits to capacity: ‘so own ability plus information gathering – but the problem is that even the information that you find you have to really be careful that it’s reliable’; ‘you have to interpret what’s being said and discern what has been left unsaid, or whether the impression that’s been given is a false impression’. Most spoke of having a questioning approach to everything they encountered and asking ‘is that really true?’ - of being sceptical, pragmatic or cynical. One made the interesting comment that ‘I’ve not really thought about it until now. I’d probably go a lot on instinct whether that’s right or not … fairly confident but it has made me think about it’. Another made a similar point about having to learn to make decisions in ‘the right way’. One or two respondents cited their professional experience and expertise in assessing data as evidence of their capacity to test facts. One interviewee made the telling point that ‘if I was prepared to do a load of research and actually go and look at newspaper archives and things like national statistical research or similar I could get information [against which to test the fact] but that would be very time consuming’. This is time which the current research findings suggest few people would actually commit to checking facts, even when related to a serious and significant decision.

(iv) Five participants described themselves as good and rated their capacity high. They expressed variants of ‘I don’t take things at face value’ and ‘I take
everything with a pinch of salt’. Others spoke of their political awareness and capacity to make ‘judgement calls’. Typically these respondents gave fairly general responses without talking in any detail about their particular skills or areas of expertise.

Ultimately this data is interesting not so much in terms of how the individuals rated themselves, as in terms of their capacity to recognise what they are good at and what not and their sense of their own limitations. With a small number of exceptions (usually those who rated their abilities highly), almost everyone felt they had strengths and weaknesses and acknowledged their weaker areas in responses. It was interesting that the exercise of being interviewed had made some people question themselves more than they had previously.

**Discussion and conclusions**

The previous theories discussed earlier in this paper have largely been applied to the assessment of websites rather than to human interaction with individual nuggets of information or facts. The current study has enabled the observation of users engaged in interrogating facts in an exploratory way. The findings confirm that previous constructivist theory bears little relation to what in reality users do and that while it is possible to observe some components of existing theory in user behaviour, there is little sign that these align with models as previously construed. Fogg’s (2002) P-I theory is supported in that users must notice the fact and be sufficiently interested to begin to interrogate it or interact with it. Overall, however, the present
research would suggest that typically users move from noticing a fact to its acceptance or dismissal with immediacy and little evidence of unprompted checking.

The research has created a further pool of data confirming the authors’ previously discussed model of a 5-point scale of engagement in the information seeking process (Baxter and Marcella, 2017):

- The indifferent searcher (who may not in fact consciously search for information);
- The reactive searcher;
- The haphazard searcher;
- The proactive searcher;
- The engaged searcher.

None of the participants in the current study were indifferent searchers but it is highly unlikely that those genuinely indifferent could have been recruited to participate in a 30 minute interview. Most clustered in the haphazard and proactive searcher categories, with the latter group describing use of a range of approaches to information seeking and use.

Participants demonstrated cognitive and critical responses to single facts. In terms of cognitive findings, areas worthy of further reflection include whether previous knowledge of a subject might incline respondents to trust or not trust the information. There was also some evidence that people tend to focus on challenging a fact with which they disagree (c.f. Berinsky, 2017) and that in terms of prominence (c.f. Fogg, 2002) they particularly took note of and responded to (whether trusting or distrusting)
those facts which painted extremely negative or positive pictures. Users did talk about the persuasiveness and credibility of the creators or original sources of information, both individuals and agencies. Some of their views about these they found difficult to explain or rationalise, even when very strongly held. Emotional responses were relatively rare and related more to politicians and politics in general, rather than to the substantive factual content.

Participants judged the facts with which they were presented swiftly and largely intuitively providing evidence that facts are frequently consumed, accepted or rejected without any further process of verification or testing.

Friends and family dominated when it came to fact checking as a first resort. Participants struggled to identify actual agencies of experts whom they would consider reliable and consult to check a fact. Overall participant knowledge of authoritative agencies was slim and imprecise. Typically they would Google the fact to check it and were, therefore, actually looking for the fact itself: this is a strategy that will inevitably return the fact to them in variant forms rather than address the question from a ‘what is known about this topic’ perspective or by looking for a source of expertise on the subject. This is a highly significant finding and merits much more in depth exploration as an information behaviour phenomenon.

Similarly evaluative criteria were applied unsystematically and often only after probing by the researchers. They were typically articulated only after a decision had been made about the reliability of a fact, suggesting a post hoc rationalisation rather than a systematic consideration before acceptance or rejection.
Take in Figure 1

In the above model the influences on acceptance/rejection have yet to be fully explored: from the findings it is clear that some of these influences are subconscious, some relate to political allegiance and attitudes to content creators, some relate to experience and existing knowledge and some to the views of friends and family. Equally, it is the factors that incite articulation or reappraisal that are most significant for research into how to enhance user capacity to verify facts.

Public use of and reference to the traditional broadcast and print media seems to be rapidly diminishing even amongst a mature user group. Participants recognise the ‘fake news’ concept and are able to provide examples in a political context: however, as with previous research by the authors, they are reluctant to give examples of having been personally misled by a flawed fact and demonstrate some complacency in describing themselves as never having been misled by a flawed fact. It might be hypothesised that: (a) they have never been disabused of their belief in a fact that has been instrumental in their decision making (prominence theory may be significant here); (b) that they were unwilling to admit to having been deceived (self-reflective capacity low); (c) that they have never sought to test facts retrospectively (satisficing); and (d) that they have rejected facts or corrections of facts that they are unwilling to accept (cognitive dissonance).
These findings are highly significant when considered alongside the Library and Information Science emphasis on information, digital and media literacy – and indeed metaliteracy, as Cooke (2017, p.219) argues ‘the acquisition and implementation of metaliteracy skills is a long term and integral part of addressing the reach and influence of fake news and non-political misinformation and disinformation’. However, literacy programmes are absolutely a long term solution and will be a challenge to implement, for the evidence suggests that information seekers do not recognise the need for upskilling and are unlikely to expend time and effort on the acquisition of skills.

The authors regard it as highly unlikely that these participants have never made a decision based on a fact later proven to be incorrect: while self-reporting is known to be flawed, if people have no reason to doubt their capacity then their overconfidence will continue. Mechanisms are needed to alert people to their exposure to flawed facts, for at present even when prompted they seem resistant to internalising the issue. The need for further research into response to flawed facts is a high priority.

In terms of participants’ self-reflection on their critical or evaluative information skills these fell into four categories:

(i) Those who acknowledged that they could not assess their capacity;
(ii) Those who rated themselves as poor (from this research none interestingly);
(iii) Those who felt that they were fairly good at assessing facts but with some reservations;
(iv) Those who rated their capacity as high.
These results help to modify and expand the authors’ exploratory model of information quality awareness set out in Figure 2, with the majority of participants firmly located at the interstices of awareness of quality concerns and capacity to judge information quality. However there were none in this population who were highly aware and insecure, most sat somewhere in the middle (AI and AC) with a significant number that were somewhat unaware yet confident.

**Take in Figure 2**

The majority acknowledged some limitations in capacity to interrogate facts, but there were those that were delusionally confident. However, while most people acknowledged strengths and weaknesses in their capacity to evaluate facts, this appeared unlikely in the view of the researchers to moderate or influence their future behaviour in terms of consumption of facts.

None of the study participants referred to or expressed awareness of the role that libraries and fact checking agencies might play in assisting in the verification of facts. And so while LIS practitioners and researchers have much to contribute to this issue, there is a pressing need for librarians and information service providers to work with researchers to demonstrate and promote the potential contribution our discipline might make to overcoming a critical challenge facing societies today. We need to demonstrate our relevance in this context.
Limitations

Participants in the current research were typically older, professional and well educated. Further studies should explore the findings with other demographic groups. There should also be a clearer focus on investigating actual behaviour in terms of verifying facts, rather than relying on hypothetical descriptions by users of the steps they might take. A future study is planned which will utilise proven flawed facts as vehicles to explore user response.

References

Auer, N. (1997), *Bibliography on Evaluating Internet Resources*, Virginia Polytechnic Institute and State University, Blacksberg, VA.


Figure 1: Fact Interrogation Model
<table>
<thead>
<tr>
<th>AI (Aware and Insecure)</th>
<th>AC (Aware and Confident)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware that information may be unreliable. Lacking confidence/insecure in own ability to judge reliability. Greater tendency to question facts but less likely to test them. There may be fewer people who self-identify in this category.</td>
<td>Aware that information may be unreliable. Confident in own ability to judge reliability. Greater tendency to question facts and test them further.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UI (Unaware and Insecure)</th>
<th>UC (Unaware and Confident)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unaware that information may be unreliable. Lacking confidence in own ability to judge reliability. Less likely to question and test facts. Least likely group to self-identify.</td>
<td>Unaware that information may be unreliable. Confident in own ability to judge reliability. Likely to accept/reject intuitively. Very low likelihood of testing further.</td>
</tr>
</tbody>
</table>

*Figure 2. Information Quality Awareness Model*
<table>
<thead>
<tr>
<th>Party</th>
<th>Page Title</th>
<th>No. of interviewees</th>
</tr>
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<tbody>
<tr>
<td>SNP</td>
<td>7 ways we’ve acted to improve our schools</td>
<td>13</td>
</tr>
<tr>
<td>SNP</td>
<td>13 facts about the health service under the SNP</td>
<td>5</td>
</tr>
<tr>
<td>SNP</td>
<td>Scotland’s strong export performance: get the facts</td>
<td>4</td>
</tr>
<tr>
<td>Scottish Conservatives</td>
<td>Stats reveal health board where 1 in 5 operations are cancelled</td>
<td>3</td>
</tr>
<tr>
<td>Scottish Labour</td>
<td>We’ll trust teachers, not the SNP, on the future of our schools</td>
<td>3</td>
</tr>
<tr>
<td>Scottish Conservatives</td>
<td>SNP letting down hundreds of youngsters with mental health problems each year</td>
<td>2</td>
</tr>
<tr>
<td>Scottish Labour</td>
<td>Expert report reveals staggering levels of SNP mismanagement of the NHS</td>
<td>2</td>
</tr>
<tr>
<td>Scottish Labour</td>
<td>The Tories’ £2 billion cuts bombshell for Scotland</td>
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</tr>
<tr>
<td>SNP</td>
<td>We’re delivering a safer Scotland – here’s how</td>
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