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Scottish citizens' perceptions of the credibility of online political 'facts' in the 'fake news' era: an exploratory study.

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Scottish citizens' perceptions of the credibility of online political "facts" in the "fake news" era: an exploratory study

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Abstract

Purpose. The purpose of this paper is to present the results of a study that explored public perceptions of the credibility of "facts and figures" contained within five social media posts produced by political parties in Scotland.

Design/methodology approach. The study consisted of an online survey conducted in spring 2017 ($n=538$). Respondents were asked to gauge the reliability of "facts" contained within the posts, to provide reasons for their answers, and to indicate how they might go about confirming or debunking the figures.

Findings. Less than half the sample believed the posts' content would be reliable. Credibility perceptions were influenced by various factors, including: a lack of cited sources; concerns about bias or spin; a lack of detail, definitions, or contextual information; personal political allegiance and trust; negative campaign techniques; personal experience of policy issues; and more intuitive judgements. Only small numbers admitted that they would not know how to find out more about the issues, or would be disinclined to look further. The majority appeared confident in their own abilities to find further information, yet were vague in describing their search strategies.

Originality/value. Relatively little empirical research has been conducted exploring the perceived credibility of political or government information online. It is believed that this is the first such study to have specifically investigated the Scottish political arena.

Keywords

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

Introduction

In November 2016, Oxford Dictionaries announced “post-truth” as its international word of the year, defining it as an adjective “relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief”. Oxford noted that it had become associated with a particular phrase, “post-truth politics”, and that much of its use in 2016 had been related to the UK’s European Union membership referendum (“Brexit”), or to the US presidential campaign (Oxford Dictionaries, 2016). Twelve months later, Collins Dictionary named “fake news” as its 2017 word of the year. Defined as “false, often sensational, information disseminated under the guise of news reporting”, Collins also highlighted the word’s relationship with the 2016 US election, and subsequent allegations about President Trump’s links with Russia (Collins Dictionary, 2017). Internationally, then, concerns about the provision of false and unreliable information have become a major part of the political and media discourse in recent years. In the UK, one consequence has been an 18-month public inquiry into disinformation and “fake news”, conducted by the House of Commons Digital, Culture, Media and Sport (DCMS) Committee, whose final report concluded that “fake news” poses a real threat to “the very fabric of our democracy” (DCMS Committee, 2019, p.5).

In Scotland, on 18 September 2014, the Scottish independence referendum took place, where the electorate was asked the dichotomous Yes/No question, “Should Scotland be an independent country?” Although not as prominent as during the 2016 Brexit and US presidential campaigns, accusations of deliberate misinformation and post-truth politicking *were* raised throughout and after the 2014 Scottish

independence campaign, and aimed at both sides of the debate (e.g., Torrance, 2012; Maxwell, 2014; Settle, 2015). Furthermore, a study of Scottish voters' online information behaviour, conducted by the current authors in the weeks immediately preceding the Scottish referendum (Baxter and Marcella, 2017), found an overwhelming need to obtain reliable "facts" from authoritative and expert voices; yet some uncertainty amongst participants as to their personal capacity to evaluate the reliability of information provided by political actors. With these points in mind, and given the discourse around "fake news" and "alternative facts", the current authors decided to build upon that previous research and further explore citizens' perceptions of the reliability of information presented online as "facts" by Scottish political actors during the 2017 local and general election campaigns in the UK. This paper reports on one element of this research – an online survey of over 500 members of the public. A companion paper (Marcella *et al.*, 2019) discusses a series of 23 electronically-assisted interviews also conducted as part of the study.

Theoretical underpinning

In the mid-1990s, when the World Wide Web became increasingly available to the masses, the information science community began to question the veracity of some of the information available on the Internet, and consider how the public at large might best evaluate online information. Key concerns here revolved around the lack of bibliographic structure, editorial control, or peer review of web-based information (e.g., Brandt, 1996). Some early observers suggested that the criteria used to evaluate traditional, printed sources (i.e., authority, accuracy, objectivity, currency,

and coverage) could equally be applied to websites (e.g., Rettig, 1996; Hahn, 1997). Others believed that additional criteria, related specifically to the new online environment (e.g., levels of interactivity, the existence of a search engine, additional software/hardware requirements, and page loading speeds), should also be considered (e.g., Gurn, 1995; Stoker and Cooke, 1995; Collins, 1996).

These checklist models, however, were not without their critics. In 2004, for example, Meola argued that evaluative checklists were difficult to implement in practice, and that such mechanistic approaches were at odds with critical thinking. Indeed, drawing on the communication, psychology, and human-computer interaction disciplines, a significant body of literature emerged in the early years of the 21st century that focused instead on the cognitive aspects of evaluating the credibility of online information (for more extensive reviews of the literature, see Rieh and Danielson, 2007, and Choi and Stvilia, 2015).

From this body of work, it is perhaps fair to say that six theoretical frameworks have become recognised as most influential, although these have largely been applied to the assessment of entire websites, rather than to individual facts or snippets of information. First, chronologically, Fritch and Cromwell (2001) drew on Wilson's (1983) concept of cognitive authority to propose an iterative model, whereby the credibility of a given body of online information is judged using four distinct "classes" or "filters" (document, author, institution, and affiliations), which then combine to form an overall assessment of authority.

Wathen and Burkell's (2002) model (itself based on a synthesis of literature) also conceptualised credibility evaluation as an iterative process, where the user first rates the credibility of the medium, based primarily on "surface" characteristics such as a website's structure and appearance. The second stage then involves the user applying more traditional evaluative criteria to both the source (in terms of its trustworthiness and expertise) and the message (in terms of its relevance, currency, etc.). A third, "content evaluation" stage involves an assessment of the interaction of the message's presentation and content with the user's cognitive state; where, for example, the user considers the match between the information obtained and their existing knowledge, or where they appraise the ease with which they might apply the information to their own personal situation.

The third key theory is Fogg's (2002) Prominence-Interpretation (P-I) Theory, which posits that two things happen when online credibility assessments are made: 1) the user notices an element or feature of the website (Prominence); and 2) the user then makes a judgement about it (Interpretation). Fogg believes that users quickly notice and evaluate website elements in an iterative and subconscious process, which is repeated until they are satisfied with their overall credibility assessment or until they encounter a constraint, such as a lack of time or evaluative skills. Prominence, Fogg argues, is affected by at least five factors: user involvement; website type; task; experience; and individual cognitive differences. Interpretation, meanwhile, is affected by the user's assumptions, skills and knowledge, and by the context in which the search and evaluation is taking place.

The fourth key framework is Metzger's (2007) dual processing model, which suggests that the degree to which online information will be scrutinised for its credibility will depend on the user's ability to evaluate information, and their motivation or purpose for seeking the information. Metzger asserts that highly motivated users will take a rigorous, systematic approach to credibility assessment, while users who are less motivated to find high quality information may not assess credibility at all, or will simply consider "surface" characteristics or heuristics, such as the website's design and graphics.

Heuristics are also prominent in Sundar's MAIN model (2008). He suggests that digital media typically contain four main "affordances" — Modality (M), Agency (A), Interactivity (I), and Navigability (N) — that cue various cognitive heuristics pertaining to credibility assessments. The Modality affordance is closely related to the structure of the digital medium, where, for example, the inclusion of new, more sophisticated technologies might cue what Sundar terms "bells-and-whistles", "coolness", or "novelty" heuristics. The Agency affordance relates to the source of the information and will prompt the likes of "authority", "bandwagon", or "machine" heuristics. The Interactivity affordance relates to the opportunities for interaction and activity provided by the medium, and can cue heuristics such as "responsiveness", "choice" and "control". While the Navigability affordance largely concerns interface features and can trigger the likes of "browsing", "scaffolding", and "play" heuristics.

"Heuristics" is also one of three levels of credibility judgement presented by Hilligoss and Rieh (2008) in their "unifying framework" of credibility assessment; the others being "construct" and "interaction". The construct level, they posit, is the most

abstract, and relates to the ways in which individuals construct, conceptualise or define credibility. The heuristics level is comprised of general rules of thumb that individuals employ when judging credibility. Here, Hilligoss and Rieh categorise four types of heuristic: media-related, source-related, endorsement-based, and aesthetics-based. In the third and final level of judgement, three types of interactions are identified: interactions with content cues, which are related directly to the credibility of the message itself; interactions with peripheral source cues, which might relate to the author's affiliation, reputation, educational background, etc.; and interactions with peripheral information object cues, which concern the presentation or appearance of the information, such as the language used, or the presence of advertisements on the website.

While scholars, including the theorists above, have paid considerable attention to the credibility of web-based information in general, and online health-related information in particular (see Eysenbach *et al.*, 2002, and Zhang *et al.*, 2015, for reviews of work in the healthcare field), relatively little empirical research has been conducted into the perceived credibility of political or government information online. Since the late 1990s, Johnson and Kaye have conducted large-scale quantitative studies of "politically interested" US citizens, that have investigated: the credibility of candidate information (Johnson and Kaye, 1998, 2002); political information on chat rooms and bulletin boards (Kaye and Johnson, 2004); political blogs (Johnson and Kaye, 2004, 2010, 2013; Johnson *et al.*, 2008); and political information on social media (Johnson and Kaye, 2014, 2015). Other studies have explored citizens' perceptions of the credibility of *fictitious* or *manipulated* political news articles, websites, or social media accounts (e.g., Grimmelikhuijsen, 2011; Housholder and LaMarre, 2014; Ault *et al.*,

2017). Meanwhile, drawing on the fields of anthropology and social psychology, Kahan and Braman (2006) have argued that a citizen's cultural worldview is a more powerful heuristic than their political affiliation when dealing with information on government policy issues, in a set of processes they call "cultural cognition". Their second National Risk and Culture Study (Kahan *et al.*, 2007) included various online surveys and experiments that gauged US citizens' perceptions of a range of policy issues, including gun control, nuclear power and national security.

The current discourse around "fake news" has, however, given rise to increased academic and professional debate around the credibility of online political information. In claims reminiscent of those in the 1990s, many argue that the library and information science profession is ideally placed to assist the bewildered citizen in discerning between online fact and fiction, largely through the promotion and development of information and media literacy skills (e.g., Banks, 2016; Alvarez, 2017; Cooke, 2017). Others, though, are less convinced. Sullivan (2018, p.8), for example, is critical that "LIS researchers can only frame the problem in terms of a lack of education or critical literacy skills", and argues that these solutions "are offered in the absence of a full understanding of the real danger of misinformation, which is not just that misinformation is out there, but what misinformation does to our mind". In many respects, Sullivan echoes the comments of the cognitive psychologists, Lewandowsky *et al.* (2017), who advocate an interdisciplinary approach to coping with misinformation, proposing the combination of emerging technological solutions (see Conroy *et al.*, 2015 for examples of "deception detection" technologies) and cognitive research programmes. The aim of this "technocognition", they argue, is to design "better information architectures that can

build bridges between the socially-defined epistemic islands that define the post-truth era” (Lewandowsky *et al.*, 2017, p.362).

With this and the companion paper (Marcella *et al.*, 2019), we seek to provide a better understanding of citizens’ cognitive, affective and critical responses to information presented online by ‘real’ political actors in Scotland, thus making an important and timely contribution to the post-truth discourse.

Material and methods

The research reported in this paper consisted of an online survey of the general public, where respondents were asked to gauge the reliability of “facts and figures” contained within five social media posts made by the main political parties in Scotland in late 2016 and early 2017. Respondents were asked to provide reasons for their answers, and to indicate how they might find out more about the information presented. They were also asked to give examples of political “facts” subsequently exposed as falsehoods; and to relate any incidences where they personally had been misled by information presented as a “fact”.

The online survey was constructed on *SurveyMonkey* (www.surveymonkey.co.uk) and opened on 3 April 2017, in the build-up to the Scottish local government elections on 4 May 2017. The survey was promoted widely, via press releases and the authors’ personal and institutional social networks. The original plan was to have

the survey live for around two weeks only. However, on 18 April 2017, the UK Prime Minister, Theresa May, unexpectedly called a snap general election. With a view to attracting more interest in the research, it was therefore decided to keep the survey open until the general election polling day, 8 June 2017. It should be emphasised that the survey was initially designed at a point when only Scottish local authorities were involved in any election campaign, therefore the content selected for inclusion had a strong Scottish focus. Had the study been intended for the electorate at a UK-wide general election, other content would have been chosen.

The five social media posts, around which the survey was based, can be seen as Figures 1-5, and were as follows:

Figure 1 was posted by the Scottish National Party (SNP) on Facebook, on 10 March 2017. For readers unfamiliar with the political situation in Scotland, the SNP has been the governing party in Scotland since 2007, although it lost its overall majority in 2016. Perhaps unsurprisingly, then, many of the party's social media posts promote, or defend, its achievements in government; including this one, which talks of its record in enabling school leavers to move on to a "positive initial destination". This was the only one of the five posts to contain a direct link to other information; in this case allowing users to "read more" about the SNP Government's "action to tackle the educational attainment gap".

Figure 2 was posted by the Scottish Conservatives on Twitter on 21 March 2017. In 2016, the Conservatives became the second largest party in the Scottish Parliament, displacing Scottish Labour as the official opposition. This tweet attacked the SNP

Government's 10-year record on the number of further education college places available in Scotland.

Figure 3 was posted by Scottish Labour, on Twitter on 9 March 2017, but contains a quote from, and an image of, an SNP politician, John Swinney. This post also attacked the SNP Government, this time on oil and gas revenue forecasts, which had formed a major part of the 2014 Scottish independence debate. The 'KD' at the beginning of the tweet, and the '#FMQs' hashtag, indicate that this was a statement made by the then Scottish Labour Party leader, Kezia Dugdale, during First Minister's Questions in the Scottish Parliament.

Figure 4 was posted on Twitter on 17 December 2016 by the Scottish Greens, who were pro-independence allies of the SNP during the 2014 referendum campaign. This post was one of many made in response to the SNP Government's budget announcement, made two days earlier, and was more of a veiled attack on the Government, on high childcare costs in Scotland. Subsequently, the SNP Government only succeeded in having its budget voted through after striking a deal with the Greens (e.g., Carrell, 2017).

Figure 5, from another opposition party, the Scottish Liberal Democrats, was posted on Twitter on a number of occasions throughout February and March 2017, and criticised the SNP Government's record with schools. The image within this post contained the Liberal Democrats' website address, although not in the form of an active hyperlink.

Take in Figure 1

Take in Figure 2

Take in Figure 3

Take in Figure 4

Take in Figure 5

The five posts were chosen deliberately, as none gave any indication of the source(s) of the facts and figures contained within. This, the researchers hypothesised, would prompt the respondents to give real, critical thought as to the figures' likely reliability. It should be emphasised, though, that these five posts were not unusual in containing no explicit references to sources: countless posts with no references (or, at best, providing only the name of an organisational source) could be found across the five parties' social media feeds.

A total of 538 individuals participated in the survey; although the number of responses decreased incrementally as participants progressed through the five posts, perhaps because of a perceived repetitiveness in the line of questioning and the extent of effort required in critically reviewing the content presented. As a result, only 420 responded to the fifth and final social media post. This did still equate, however, to a total of 2,327 responses to the five posts. The survey data was analysed using SPSS v.21, with significant relationships between variables identified using the chi-square test and (with smaller subsections of the sample) Fisher's exact test.

Sample demographics

Not all of the online survey participants provided demographic details, which were requested at the end of the survey. However, Table 1 summarises what is known about those who provided at least some personal information. As can be seen, almost two-thirds of those who revealed their gender were women; and around two-thirds of those who revealed their residence lived in Scotland. The latter is perhaps unsurprising, given the Scottish focus of the survey content. There was a reasonable spread of political allegiances in the sample, although when compared with the main parties' share of the vote at the 2016 Scottish Parliament election (see Hawkins, 2016), there appeared to be an over-representation of Labour, Liberal Democrat and Green supporters, and an under-representation of SNP and Conservative supporters. There was also a reasonable spread of age groups in the sample, although the relatively poor participation by 16-24 year old respondents was disappointing, given the very significant use made of social media by this group. Overall, though, because these demographic figures are far from comprehensive they must be treated with caution.

Take in Table 1

Results and discussion

Reliability of the 'facts and figures' presented in the five social media posts

The survey began by gauging respondents' perceptions of the reliability of the information contained within the five social media posts. Figure 6 presents a cross-party comparison of the proportions of the sample who believed that the information presented in the posts would be "very" or "quite" reliable. As can be seen, the Scottish Greens' post on childcare costs was regarded most positively, with 47% regarding it as very or quite reliable. This was followed closely (at 45%) by the SNP's post on school leavers' destinations. The Conservatives' post on college place numbers was regarded least favourably, with only 25.3% regarding it as reliable.

The participants' political allegiance appeared to play a role in the responses here ($p < 0.05$), most notably from the SNP and Green Party supporters. For example, of the 52 respondents who explicitly indicated that they were SNP supporters, 39 (75%) believed the SNP post to be very or quite reliable (cf. 45% of the entire sample); while 32 (62.7%) of the 51 respondents with an allegiance to the Greens felt that the Scottish Greens' post would be reliable (cf. 47% of sample). These results are similar to many of the previous studies, largely in the US, that have explored the impact of political affiliation on online credibility judgements (e.g., Johnson and Kaye, 2004; Johnson *et al.*, 2008; Housholder and LaMarre, 2014); but are perhaps at odds with the work of Kahan *et al.* (2007) which suggests that cultural outlook (i.e. hierarchical and egalitarian, individualistic and communitarian) is a stronger predictor of credibility judgements than political ideology or party affiliation.

Take in Figure 6

The response to the five posts is illustrated alternatively in Table 2. Here, it can be seen that only small proportions (from 3.1% to 6.5%) of the sample regarded the posts as “very” reliable. It is also worthwhile noting that a relatively small but significant proportion of the sample (around one-fifth in each case) felt unable to judge the reliability of the information presented by the parties. However, given that sources for the facts presented were not identified, it could be argued that these figures might legitimately have been very much higher. The numbers who responded “don’t know” perhaps suggest that people make an immediate, arguably bipolar decision to reject or accept a fact, even when they are expressing its reliability in cautious terms.

Take in Table 2

Factors affecting perceptions of the reliability of the facts and figures

By means of open questions, the survey then proceeded to explore the factors affecting respondents’ perceptions of the reliability of the information contained within the five posts. A wide range of factors was cited, and these are summarised in Table 3.

Take in Table 3

Trust (or mistrust) in political parties and politicians

For a number of respondents, trust (or mistrust) in the political party behind the post was a key factor. In terms of *trust*, the SNP and the Scottish Greens were regarded more favourably than the other three parties, with the general ethos of the Greens apparently adding to their perceived trustworthiness:

“I trust the SNP and until the day I do find them lying I always will.”

“Because it’s from the SNP, and I think they’re pretty trustworthy.”

“Because the Greens tend to be more ethical in their behaviour than other parties.”

“I trust the Greens, they have principles.”

Again, party allegiance was significant here ($p < 0.05$), but only in relation to the SNP and Green Party posts. Here, 19 (36.5%) of the 52 SNP supporters mentioned trust in the party when discussing Figure 1 (cf. 18.2% of entire sample). While 12 (23.5%) of the 51 Green Party supporters spoke of their trust in the Greens when responding to Figure 4 (cf. 12.2% of sample). Interestingly, when discussing Figure 4, over one-quarter (26.9%) of the SNP supporters indicated a level of trust in the Green Party, perhaps reflecting the two parties’ pro-independence alliance.

In terms of *mistrust*, Table 3 shows that the Scottish Conservatives fared significantly worse than the other parties, with 14.7% of those who responded to Figure 2 proclaiming a lack of trust in the party:

“I’m less inclined to trust Conservatives because I have a low opinion of them.”

“I don't trust anything said by The Scottish Tories or Tories in general.”

This perhaps reflects the “toxic” identity associated with the Conservatives in Scotland since Margaret Thatcher came to power in 1979 (e.g., Hassan, 2014); an association that has only recently shown signs of being transformed (e.g., Riddoch, 2016). Here, too, our respondents’ party allegiance was a significant factor ($p < 0.05$), most notably amongst those who aligned with either the SNP or Greens: 32.7% of the SNP supporters signalled a distrust of the Conservatives, as did 29.4% of the Scottish Green Party supporters. Meanwhile, in an almost reciprocal gesture, over one-fifth (21.4%) of the Conservative supporters in the sample signalled a mistrust of the SNP, with 14.3% expressing a lack of trust in the Greens.

Table 3 also indicates that small proportions of the sample (ranging from 1.6% to 5.8%) expressed a mistrust in politicians and political parties generally. These tended to be respondents who had no affiliation with a specific party:

“I never trust political parties with statistics.”

“I don't trust anything politicians say.”

The lack of trust in political actors expressed by some of the respondents is perhaps unsurprising, given that UK politicians have featured regularly at the bottom of Ipsos MORI's annual veracity index, which measures public perceptions of the trustworthiness of various professions (e.g., Blewett, 2016).

Mistrust of negative campaigning

As was noted earlier, the social media posts appearing as Figures 2, 3 and 5 contained explicit attacks on the SNP's record in government (Figure 4, from the Green Party, contained more of a veiled attack on the SNP), and this was reflected in the responses to these posts. With each of the three posts, a relatively small proportion of the sample (16.1%, 7.3% and 12.6%, respectively) noted that their perceptions of the credibility of the information had been affected negatively by the manner in which it had been presented.

“I find and take any negative comments from one party against another with a pinch of salt as they are just trying to score points off each other.”

“I think it's more difficult to believe claims from a party that is making negative claims about another party.”

Here, though, personal affiliation with a specific party was not a significant factor, with similar levels of disdain being expressed by those respondents with, and those

without, a specific party allegiance. In some respects, these responses echo the findings reported in the body of literature on negative political campaigning that has emerged internationally over the last three decades (see Lau and Rovner, 2009, and Nai and Walter, 2015, for reviews), in that there is no consensus that attacking one's opponent(s) is an effective campaign technique, or that it has detrimental effects on the politician, party or campaign group making the attack. Previous research, in a Scottish context only, has been rare, and the results have also been inconclusive. In a study of the 2007 Scottish Parliament election campaign, Pattie *et al.* (2011) found that negative campaigning can “backfire” on the party responsible, reducing the propensity of people to vote for it. However, Morisi (2018), when focusing on the 2015 UK General Election in Scotland, found that an attack strategy can lead to both electoral gains *and* losses, depending on voters' “identification” with the issues being discussed.

Likely presence of bias or spin

The noun “spin”, in the political sense, is defined by Oxford Dictionaries (2018) as “the presentation of information in a particular way; a slant, especially a favourable one”. As Andrews (2006) observes, the concept of political “spin” has its origins in the US in the 1970s, with the first recorded use of the term in the UK being in 1987. However, it was with the election of the “New Labour” Government in 1997 that the terms “spin” and “spin doctor” became common parlance in Britain (Andrews, 2006, p.35). This was certainly a concept of which our survey respondents were conscious, with relatively significant proportions of the sample (from 14.7% to 26.2%) suggesting that each of the five posts will be biased in some way, subject to some

form of “spin”, or that the statistics will have been “cherry-picked” to support the political argument being presented:

“Everything seems to be biased one way or the other and although things are probably not lies as such they are presented in such a way that they don't reflect reality.”

“Because it's a quote from a political party who always put a spin on information to make them look better.”

“It's from a political party, so the statistics are likely to be cherry picked to fit the message.”

The respondents' political allegiance was only a significant factor ($p < 0.05$) in the response to the Greens' post at Figure 4, most noticeably amongst Liberal Democrat supporters. Indeed, one-quarter (25.6%) of the 39 Liberal Democrats in the sample accused the Greens of peddling “propaganda” or “politically skewed information”.

The reasons for this response are unclear, but may be linked to the Liberal Democrats' criticisms of the Greens in striking a budget deal with the SNP Government (e.g., BBC News, 2017).

No source(s) provided

In the key reviews of online credibility literature, the inclusion of references and information sources — described variously as “technical criteria” (Eysenbach *et al.* (2002, p. 2697), “verification material” (Rieh and Danielson, 2007, p. 347),

“attribution indicators” (Zhang *et al.*, 2015, p. 2077), and “the provision of evidence” (Choi and Stvilia, 2015, p. 2404) — is regarded as an important factor when making credibility judgements. As was mentioned above, none of the five posts in this survey gave any indication of the source(s) of the facts and figures contained within, and significant proportions of the sample (from 20.3% to 35.2%) noted this in their responses. The following remarks, concerning the two posts deemed most credible overall (Figures 4 and 1, respectively), were typical of the many comments made here:

“No source is stated for the figures here. They appear to come from a survey of some kind, but it is totally unclear which.”

“Although exact numbers are quoted, giving the impression of reliability, there is no source given for them. So I can’t assess the quality of the source, leaving room for doubt.”

Posts lack detail, definitions or context

On a related theme, significant proportions of the sample (around one-third in each case) also pointed towards a lack of detail, definitions or context in the posts, which, consequently, had a negative impact on their perceptions of the information’s reliability. “Context”, in the online information credibility literature, is frequently discussed in terms of the *user’s* environment, circumstances, situation or expectations (e.g., Wathen and Burkell, 2002; Fogg, 2003; Hilligoss and Rieh, 2008). Here, however, our survey respondents instead considered the context in which the *information* was created and disseminated (Fallis, 2004), which might then facilitate

“reasoned judgments of information quality” (Meola, 2004, p. 338). With the SNP’s post in Figure 1, for example, respondents looked for: information on the time period covered by the 88.7% figure, and how and by whom the data was gathered; clarification on what constitutes a “positive initial destination”; information on the proportion of these school leavers who actually complete their training or further/higher education courses; details of the nature of the jobs to which school leavers are progressing; information on any other factors that might be at play, such as changes to welfare benefits eligibility; or details of the parameters used to define “Scotland’s most deprived communities”. With the Conservatives’ post in Figure 2, respondents sought: further information on the nature of the 152,000 places cut, particularly whether these were part-time or full-time places, or on courses that had proven cost-ineffective to run or difficult to fill; clarification on whether this was a net or gross figure; information on what these cuts would equate to, when expressed as a percentage of overall Scottish college places; information on whether these cuts had perhaps been counterbalanced by, say, increased university places or apprenticeship opportunities; and information on other, potentially influential factors, such as changing demographics or changes in the patterns of how and where people study.

With Figure 3, meanwhile, Scottish Labour’s inclusion of a quote from, and an image of, an SNP politician, as well as the lack of any explicit indication that the figures related to *oil and gas* revenue forecasts, created considerable confusion among respondents, particularly those who lived outside Scotland or who had little knowledge of Scottish political issues:

“I’m not sure what this is saying. I find it confusing.”

“I don’t really understand what this story is about. I have no idea who John Swinney is or which party he represents.”

And although Figure 4, posted by the Scottish Greens, was regarded overall as the most credible of the five posts, 29.7% of the sample did question the lack of detail and context in the tweet. Comments here related largely to the lack of information about the origins and size of the sample(s) of “single parent families” and “single mothers”, and the use of the phrase, “some of the highest childcare costs in the UK”, which was regarded as “vague”, “wishy-washy” and not particularly informative.

Several respondents also pointed to the fact that at least some of the data cited was over four years old. Interestingly, using what Burkell (2004, p. 495) describes as a “proxy indicator of information quality”, six respondents noticed a grammatical error in the Greens’ post (“...would make a big difference these families”), observing that this did little to inspire trust in the information’s credibility:

“Do they not employ a proofreader? I hate to imagine the errors in their manifesto.”

The final post, Figure 5 from the Liberal Democrats, was also criticised for a perceived lack of clarity. For example, with regard to its claims about larger class sizes, respondents looked for this to be expressed in a more meaningful way, by perhaps indicating the percentage by which the average class size had grown in the last decade. With the figure on teacher numbers, respondents wanted to know if this

related to 4,000 individuals or full-time equivalents (FTEs); and with the point made about the volume of teacher guidance, the respondents wished to establish what this guidance consists of, and whether all 20,000 pages apply to every individual teacher across the country. With regard to the Liberal Democrats' final point, concerning Scotland's position in world education rankings, participants called for further information on these rankings, and the criteria used in their calculation. Information on Scotland's precise position in these rankings over the last 10 years was also sought. Respondents were also curious as to the rationale for selecting England and (particularly) Vietnam as comparators; with some regarding the latter's inclusion in the post as "condescending", "distasteful", or "implicitly racist".

Figures "appear" reasonable (or unreasonable)

In the vast body of literature on online information credibility, very little attention has been paid to the role that "hunches" or "gut feelings" play in credibility judgements (see, for example, Ahmad *et al.*, 2011; St. Jean *et al.*, 2011). In the absence of cited sources or contextual details, significant proportions of our survey sample (from 14.7% to 30.3%) gave more intuitive reasons for believing (or disbelieving) the information presented. Here, the respondents noted, the figures just "seemed" or "felt" reliable, or unreliable. Occasionally, these perceptions were complemented by a vague awareness of the subject having been discussed in the media:

[Discussing Figure 1] "Not sure of the stats but it is my sense of what is happening."

[Figure 2] "I'm sure I've read something about this before".

[Figure 3] “It chimes with what I've seen in the general media.”

[Figure 4] “It fits with my assessment of that situation, and the stats don't seem unreasonable.”

[Figure 5] “The quantitative points chime with reputable articles I've read. Though only the direction of change, I can't remember any numbers.”

Respondents' professional or personal knowledge and experience

Finally, in terms of the factors affecting information credibility perceptions, small proportions of the sample (from 3.1% to 9.4%) drew on their own professional or personal experiences in determining the reliability of the five posts, using what Tseng and Fogg (1999) describe as “experienced credibility” judgements. For example, with Figures 1, 2 and 5, respondents who currently or had previously worked in the Scottish education sector, or who had family or friends who worked in the sector, felt well qualified to gauge the credibility of these posts:

[Discussing Figure 1] “I am a researcher in the field of education in Scotland and have read Scottish Government reports and other research that indicates analysis to the contrary.”

[Figure 2] “As a former academic, I continually keep a close eye on what is happening in the education sector”

[Figure 5] “I have family members in teaching, so I'm well aware of class sizes, teacher shortages and issues with special needs children in mainstream schools.”

A number of the survey respondents worked in, or had connections to, the North Sea oil and gas industry (Aberdeen, the city in which the current authors' institution is based, is frequently referred to as the “Oil Capital of Europe”), and therefore felt suitably knowledgeable about the contents of Figure 3:

“I know these numbers to be real from my industry background.”

“I work in the oil and gas industry. The 11.8 billion is highly achievable due to recent discoveries. Also oil prices should increase over 2017.”

Meanwhile, several respondents indicated that they were parents of young children, and had recent, first-hand experience of the restrictive childcare costs discussed in Figure 4:

“This topic is one which I am familiar with (a working mother) so I find the figures presented to be more believable through my own experience.”

“I have personal experience of childcare costs and taking home very little money after tax and paying for care.”

Finding out more about the five issues

By means of open questions, the survey respondents were then asked to indicate how they might go about finding out more about the issues discussed in the five posts. The responses to these questions are summarised in Table 4. As can be seen, a small proportion of the sample (from 4.1% to 9.5%) indicated that it would be unlikely that they would make an effort to find out more, largely because the topic(s) were of little personal interest. Whether or not this is an overestimation can only be hypothesised, given people's tendency to over-predict what they deem to be desirable behaviours (see Marcella *et al.*, 2019, for a fuller discussion).

Only a small proportion (from 2.8% to 7.9%) admitted that they did not know how they might go about obtaining further information. The vast majority of the sample, then, appeared to be relatively confident that they could find relevant data; although it has to be said that many were vague in outlining their likely search strategies. Indeed, around one-quarter (21.9% to 31.0%) simply said, for example, that they would conduct "personal research", "research the figures myself", "find a reliable source", or look for "independent research" on the topic(s). A further proportion (9.7% to 12.4%) did specify that their searches would be conducted online, but provided little detail on the sources that might be visited, simply saying that they would "consult relevant websites", "research different sites, looking for facts", or "do a wider search online around the subject". Unsurprisingly, a relatively significant proportion of the sample (13.3% to 19.9%) specified that Google would be their first port of call; indicating that they would "just do a wee Google search", "research on Google to find out evidence", or "use Google to find any more facts or figures about

the story”. From these responses it is impossible to assess what levels of confidence can be placed in the participants’ capacity to check the facts presented.

Take in Table 4

As was noted earlier, the SNP’s post at Figure 1 was the only one of the five to contain a direct link to other information. One quarter (25.1%) of those who responded to Figure 1 indicated that they would follow the link to find out more. However, anyone following that link in the hope of discovering, say, the precise definition of “positive initial destination” will have been disappointed, for the linked document instead contains a summary of the Scottish Government’s plan to reform the Scottish education system (Furby, 2016). Similarly, a very small proportion (1.4%) of those responding to Figure 5 indicated that they would go to the URL (www.scotlibdems.org.uk) at the bottom of the figure. This, however, is simply the home page of the Scottish Liberal Democrats, and would require the user to expend considerable additional effort to find any relevant information, particularly because the website does not contain a search facility. Indeed, the websites and social media sites of the five parties were viewed as probable sources of further detail by only a small proportion (from 3.5% to 7.7%) of the sample. Smaller numbers still (from 2.2% to 6.2%) indicated that they would contact the party directly for further information, or contact their local Member of the Scottish Parliament (MSP) or UK Parliament (MP). Again, these results do little to indicate that the checking mechanisms proposed could provide greater assurance for users.

The websites of the UK Government and Scottish Government (and their respective ministerial departments) were cited as probable sources of further information by between 8.5% and 16.7% of the sample; whilst the websites of various government agencies were also mentioned by small numbers of respondents (from 2.1% to 6.9%), with the Office for National Statistics, the Oil and Gas Authority, the Office for Standards in Education, Children's Services and Skills, and Education Scotland being most prominent here. Very small proportions of the sample (from 0.2% to 0.9%) indicated that they would use freedom of information legislation to obtain further information, although details of the public bodies to which these requests would be directed were lacking.

Interestingly, given recent claims that the British public has "had enough of experts" commenting on policy issues (e.g., Mance, 2016; Katz, 2017), small numbers in the sample (from 0.7% to 4.1%) indicated that they would seek information from universities or think tanks. Non-governmental organisations (NGOs), such as the Child Poverty Action Group and the Joseph Rowntree Foundation, were also mentioned by small sections of the sample (1.2% to 4.8%); these included seven individuals who noted that they would consult the UK fact-checking charity, Full Fact. On this last point, only two other respondents expressed an awareness of any other fact-checking agencies, both mentioning the US-based site, Snopes.com.

The news media was also mentioned by relatively small proportions of the sample (5.1% to 9.7%), with a range of specific newspaper titles, news agencies and broadcasters being cited, including *The Herald*, *The Sunday Herald* (a title since discontinued), *The National*, *The Scotsman*, *The Guardian*, *The Telegraph*, *The*

Times, *The Financial Times*, Reuters, the BBC, and ITN (Independent Television News). In contrast, some respondents specifically listed media outlets that they would *not* consult, because of a perceived bias or lack of rigorous reportage. These included *The Daily Mail*, *The Daily Express*, *The Sun*, and the BBC; with the last of these notably having faced accusations of anti-nationalist bias during, and since, the 2014 Scottish independence campaign (e.g., Green, 2015; Smith, 2018).

Finally, in terms of sources of further information, very small proportions of the sample (between 0.4% and 1.9%) indicated that they would seek information from family and friends. Here, the friends and family members would be approached because of their perceived experience and knowledge of the specific subject area. For example, one participant, responding to Figure 4, said that they would “ask some friends with kids”; while another, responding to Figure 5, indicated that they would “speak to friends who are teachers”.

Overall, then, the survey sample appeared to be confident that they could find additional information that would confirm, or debunk, the claims made by the five parties in their social media posts. Equally, though, details of how they would go about this process were frequently lacking, suggesting that this confidence might well be misplaced and unwarranted. This led the present authors (all information scientists) to undertake information searches of their own, in an effort to trace the origins of the “facts and figures” within the five posts. As Table 5 illustrates, these searches were successful: all of the figures have some basis in publicly available data. However, it should be emphasised that this was only achieved with considerable perseverance, as well as the use of fairly advanced information-

seeking techniques. With this in mind, we would question whether the majority of the public at large will have the time, inclination, or ability, to conduct searches such as these. We therefore believe that it is even more incumbent upon political actors to explicitly reference their sources when presenting “facts” online. Even more significantly, perhaps, these findings suggest that we have a public which, while aware that facts may not be accurate, may over-rate their own capacity to assess and judge the reliability of these facts.

Examples of “facts” being exposed as falsehoods

The survey then asked respondents if they could think of examples of political “facts” having been exposed as falsehoods. Almost one-fifth (18.6%) of the sample said that there had been “too many to mention”, while just over one-third (35.5%) gave one or more examples. Among the most prominent examples given was that of the “Brexit bus”, a now infamous Vote Leave campaign bus which toured the UK with the following slogan emblazoned across its side: “We send the EU £350 million a week, let’s fund our NHS instead. Vote Leave” (e.g., Lewis, 2016). Also prominent were Saddam Hussein’s supposed weapons of mass destruction, which were a major factor in the UK going to war with Iraq in 2003; but which, in a later public inquiry were revealed to be the subject of “flawed” information from British intelligence services (e.g., MacAskill, 2016). Specifically in relation to Scotland, a number of respondents mentioned the SNP Government’s oil and gas revenue forecasts, which formed a major part of its economic case for Scottish independence in 2014 (and were, of course, the subject of the post at Figure 3); but where the SNP shifted its

position dramatically, post-referendum, and declared that future projections would treat such revenues as “windfalls”, rather than being automatically factored in to budget calculations (e.g., Gourtsoyannis, 2018). Also in relation to the 2014 Scottish independence campaign, some respondents spoke of what became known as “The Vow”, when, days before the referendum, the three main UK party leaders at Westminster promised that more devolved powers would be transferred to the Scottish Parliament if the Scottish electorate voted against independence (Clegg, 2014). “The Vow” eventually gave rise to a special commission (“the Smith Commission”), but the extent to which its recommendations met the Westminster promises has been questioned in some quarters (e.g., Gordon, 2014).

Away from the UK, many survey respondents gave various examples relating to Donald Trump’s presidential campaign, and the early days of his presidency. These included: the “Pizzagate” conspiracy theory, which suggested that a paedophilia ring, involving high-level Democratic Party officials, was operating out of a Washington pizza restaurant (e.g., BBC Trending, 2016); the fictitious “Bowling Green massacre”, cited by Trump’s counselor, Kellyanne Conway, as justification for Trump’s travel and immigration ban from seven Muslim-majority countries (e.g., Smith, 2017); another non-existent terrorist attack mentioned by Trump, this time in Sweden (e.g., Topping, 2017); and claims by Trump’s press secretary, Sean Spicer, that Trump enjoyed “the largest audience to ever witness an inauguration, period”, which subsequently resulted in Conway coining the phrase “alternative facts” (e.g., Swaine, 2017).

Personal experiences of being misled by “facts”

Finally, the survey asked if the respondents had ever been personally misled by information presented as a “fact”. Here, 60 (11.2%) of the respondents felt that they had “probably” been misled in the past, but could not present any specific examples or evidence to support this assumption. A further 27 (5.0%) stated that this “happens all the time”, or that there were “too many” instances to specify just one. Meanwhile, 78 (14.5%) of the respondents gave specific examples. These were wide ranging and included: some of the issues already discussed above, namely the “Brexit bus”, “The Vow”, and Iraqi weapons of mass destruction; the Liberal Democrats’ pledge, before the 2010 UK General Election, to oppose student tuition fee increases (see Wintour and Mulholland, 2012); health-related information, including likely hospital waiting times, diet and nutritional advice, maternity and childcare advice, and information on the potential dangers of particular vaccinations; financial information, including pension entitlements, interest rates, and the purchase of endowment policies; consumer information, relating to the purchase of cars, electrical goods, and holidays; and information obtained on social media, including misattributed quotes, April Fool jokes, and celebrity death hoaxes.

Conclusions and further research

This research has focused on public perceptions of the credibility of “facts and figures” contained within five ‘real-life’ social media posts produced by the main

political parties in Scotland in late 2016 and early 2017. These posts are typical of many made by the Scottish parties, in that they rarely, if ever, cite the precise source of any statistics contained within.

The majority of the research participants responded sceptically to the posts, with less than half believing the content to be reliable, and only between 3% and 7% describing the information as “very reliable”. These credibility perceptions were influenced by a range of factors, most notably: the lack of cited sources; suspicion that the data will have been subjected to some form of bias or spin; a lack of detail, definitions, or any form of contextual information in the posts; as well as more intuitive judgements on the reliability (or unreliability) of the information being presented. Additional factors cited by smaller sections of the sample included: personal political allegiance and levels of trust in the political classes; a mistrust of negative campaign techniques; and personal experience and knowledge of the policy issues under discussion.

In terms of finding out more about the data presented in the five posts, only small numbers of respondents were prepared to admit that they would not know how to go about conducting such a task, or that they would be disinclined to look for further information. The majority appeared relatively confident in their own abilities to find further information, yet were decidedly vague when describing their likely search strategies. Given the difficulties encountered by the present authors in (eventually) tracing the original sources of the statistics appearing in the five posts, this confidence is probably misplaced. Indeed, based on this and other previous research (e.g., Marcella and Baxter, 2005; Baxter and Marcella, 2017), we suspect that the

majority of the electorate will lack the time, motivation and the analytical and information-seeking skills necessary to negotiate the ‘tangled web’ of “facts” presented online by Scottish political actors. In the current post-truth era, where the citizen is continually subjected to questionable facts, from politicians, the mass media, and other (sometimes nefarious) sources, this last point is a crucial one; for there are obvious dangers in people making important democratic and personal life decisions based on unverified information from an undisclosed source, in circumstances where their assessment of the reliability of the facts is likely to be immediate and/or based on an intuitive hunch.

Although this present paper has gone some way to addressing an empirical gap, its limitations, in terms of the respondents’ self reported, *hypothetical* information-seeking behaviour explored via an online survey, are acknowledged. The survey did not set out to test the influential theoretical frameworks outlined above, although certain specific aspects of the extant literature (such as Tseng and Fogg’s (1999) “experienced credibility” judgements, and Burkell’s (2004) “proxy indicators” of information quality) did emerge from the results. And although our complementary study (Marcella *et al.*, 2019) collected richer, more detailed qualitative data, via electronically-assisted interviews with citizens in North-East Scotland, there was little evidence of their information behaviour aligning with pre-existing models. Our interview sample was also necessarily limited in size (23 people) and comprised predominantly older, well-educated individuals residing in a relatively affluent area. We therefore believe that there is considerable scope to further explore citizens’ information behaviour, related to the consumption, acceptance or rejection of potentially flawed political facts. A more extensive, nationwide study, involving a

more representative cross-section of the UK public, based on user response to proven, flawed “facts”, and testing the validity of key theories, is recommended.

Indeed, in line with the UK Government’s recent response to the interim report of the DCMS Committee’s public inquiry, which identified a need for a “robust evidence base that informs any policy response” to disinformation (DCMS Committee, 2018, p.3), we believe that the time is ripe to build further upon the research discussed here and in our companion paper. We would argue, for example, that there is a need to construct a new typology of the contested political fact (e.g., the source of the fact is undisclosed, inaccessible, misattributed, or does not exist; or the source is partisan, lacks authority, or has a previous poor record in factual accuracy). In this respect, we would concur with Fallis’s (2015, p. 401) view on “this critical threat to information quality”, that a better understanding of disinformation will aid the development of “techniques for detecting disinformation and policies for deterring its spread”.

We also believe that further research is required into the ‘life cycle’ or ‘evolutionary model’ of a political fact. In tracing the origins of the data appearing in our survey’s five social media posts (see Table 5), it became apparent that some of these facts and figures had undergone lengthy and complex ‘journeys’ since they had first appeared in, for example, a Scottish Parliament or Scottish Government report, or on the website of a third sector organisation. It also became apparent that, as these journeys progressed (via the likes of press releases, speeches, news stories, political broadcasts and social media), the original source of the fact became increasingly unclear, and the fact itself was increasingly likely to be reinterpreted to

suit the needs and the political agenda of the individual or organisation using it. A better understanding is required of how citizens respond to and interrogate a fact at these different phases of its life cycle. In particular, at a time when we are witnessing a “global surge” (Graves, 2018) in political fact-checking, and where some recent research (e.g., Lewandowsky *et al.*, 2012; Berinsky, 2017) has indicated that efforts to correct or retract political misinformation can “backfire” and actually reinforce belief in the original flawed fact, we believe that further investigation of the impact of corrections and refutations on citizens’ credibility judgements is required.

Finally, as LIS practitioners and researchers increasingly turn their attention to addressing the problem of “fake news” (e.g., Banks, 2016; Alvarez, 2017; Cooke, 2017; Sullivan, 2018), we believe that there is a need for further research that draws and builds upon promising, cognitive-based, information literacy interventions (e.g., Walton and Hepworth, 2011) that might enhance citizens’ capacity to evaluate and verify political “facts”.

References

Ahmad, R., Wang, J., Hercegf, K. and Komlodii, A. (2011), "Different people different styles: impact of personality style in Web sites credibility judgement", in Smith, M.J. and Salvendy, G. (Eds.), *Human Interface and the Management of Information: Interacting with Information*, Springer, Berlin, pp. 521-527.

Alvarez, B. (2017), "Public libraries in the age of fake news", *Public Libraries Online*, 11 January, available at: <http://publiclibrariesonline.org/2017/01/feature-public-libraries-in-the-age-of-fake-news/> (accessed 10 October 2018).

Andrews, L. (2006), "Spin: from tactic to tabloid", *Journal of Public Affairs*, Vol. 6, pp. 31-45.

Ault, M.K., Ness, A.M., Taylor, W.D., Johnson, G., Connelly, S., Jensen, M.L. and Dunbar, N.E. (2017), "Ideological lens matters: credibility heuristics, pre-existing attitudes, and reactions to messages on ideological websites", *Computers in Human Behavior*, Vol. 68, pp. 315-325.

Banks, M. (2016), "Fighting fake news: how libraries can lead the way on media literacy", *American Libraries Magazine*, 27 December, available at: <https://americanlibrariesmagazine.org/2016/12/27/fighting-fake-news/> (accessed 10 October 2018).

Baxter, G. and Marcella, R. (2017), "Voters' online information behaviour and response to campaign content during the Scottish referendum on independence", *International Journal of Information Management*, Vol. 37 No. 6, pp. 539-526.

BBC News (2017), "Scottish budget passes first vote after SNP-Green deal", available at: <https://www.bbc.co.uk/news/uk-scotland-scotland-politics-38828873> (accessed 14 February 2019)

BBC Trending (2016), "The saga of 'Pizzagate': the fake story that shows how conspiracy theories spread", available at: <https://www.bbc.co.uk/news/blogs-trending-38156985> (accessed 10 October 2018)

Berinsky, A.J. (2017), "Rumors and health care reform: experiments in political misinformation", *British Journal of Political Science*, Vol. 47 No. 2, pp. 241-262.

Blewett, S. (2016), "Politicians top list of least trustworthy professions; the public's perception of politicians has sunk even lower", *The Independent*, 4 December.

Brandt, D.S. (1996), "Evaluating information on the Internet", *Computers in Libraries*, Vol. 16 No. 6, pp. 44-46.

Burkell, J. (2004), "Health information seals of approval: what do they signify?", *Information, Communication & Society*, Vol. 7 No. 4, pp. 491-509.

Carrell, S. (2017), "SNP deal with Green party saves Scotland's budget", *The Guardian*, 2 February, available at:
<https://www.theguardian.com/politics/2017/feb/02/snp-deal-greens-saves-scotlands-budget> (accessed 10 October 2018).

Choi, W., and Stvilia, B. (2015), "Web credibility assessment: conceptualization, operationalization, variability, and models", *Journal of the Association for Information Science and Technology*, Vol. 66 No. 12, pp. 2399-2414.

Clegg, D. (2014), "David Cameron, Ed Miliband and Nick Clegg sign joint historic promise which guarantees more devolved powers for Scotland and protection of NHS if we vote No", *Daily Record*, 15 September, available at:
<https://www.dailyrecord.co.uk/news/politics/david-cameron-ed-miliband-nick-4265992> (accessed 10 October 2018).

Collins, B.R. (1996), "Beyond cruising: reviewing", *Library Journal*, Vol. 121 No. 3, pp. 122-124.

Collins Dictionary (2017), "The Collins word of the year 2017 is... FAKE NEWS", available at: <https://www.collinsdictionary.com/woty> (accessed 10 October 2018).

Conroy, N.J. (2015), "Automatic deception detection: methods for finding fake news", *Proceedings of the Association for Information Science and Technology*, Vol. 52 No. 1, pp. 1-4.

Cooke, N.A. (2017), "Posttruth, truthiness, and alternative facts: information behavior and critical information consumption for a new age", *The Library Quarterly*, Vol. 87 No. 3, pp. 211-221.

DCMS Committee (2018), "Disinformation and 'fake news': interim report: Government response to the Committee's fifth report of session 2017-19", HC 1630, available at:
<https://publications.parliament.uk/pa/cm201719/cmselect/cmcdmeds/1630/1630.pdf>
(accessed 18 February 2019).

DCMS Committee (2019), "Disinformation and 'fake news': final report", HC 1791, available at:
<https://publications.parliament.uk/pa/cm201719/cmselect/cmcdmeds/1791/1791.pdf>
(accessed 18 February 2019).

Eysenbach, G., Powell, M., Kuss, O. and Sa, E. (2002), "Empirical studies assessing the quality of health information for consumers on the World Wide Web: a systematic review", *Journal of the American Medical Association*, Vol. 287 No. 20, pp. 2691-2700.

Fallis, D. (2004), "On verifying the accuracy of information: philosophical perspectives", *Library Trends*, Vol. 52 No. 3, pp. 463-487.

Fallis, D. (2015), "What is disinformation?", *Library Trends*, Vol. 63 No. 3, pp. 401-426.

Fogg, B.J. (2002), "Prominence-Interpretation Theory: explaining how people assess credibility", available at https://credibility.stanford.edu/pdf/p-iTheory_Fogg_Oct02.pdf (accessed 10 October 2018).

Fritch, J.W. and Cromwell, R.L. (2001), "Evaluating Internet resources: identity, affiliation, and cognitive authority in a networked world", *Journal of the American Society for Information Science and Technology*, Vol. 52 No. 6, pp. 499-507.

Furby, L. (2016), "Our action to raise attainment in our schools", available at: https://www.snp.org/raising_attainment_in_schools (accessed 10 October 2018).

Gordon, T. (2014), "Most Scots want more powers than Smith provides", *The Herald*, 30 November, available at: https://www.heraldsotland.com/news/13191903.Most_Scots_want_more_powers_than_Smith_provides/ (accessed 10 October 2018).

Gourtsoyannis, P. (2018), "Gap between SNP's 2014 plans and North Sea revenue reaches £30bn", *The Scotsman*, 17 September, available at: <https://www.scotsman.com/news/politics/gap-between-snp-s-2014-plans-and-north-sea-revenue-reaches-30bn-1-4800803> (accessed 10 October 2018).

Graves, L. (2018), "Boundaries not drawn", *Journalism Studies*, Vol. 19 No. 5, pp. 613-631.

Green, C. (2015), "Alex Salmond: BBC bias was 'significant factor' in deciding Scottish independence referendum", *The Independent*, 17 September, available at: <https://www.independent.co.uk/news/uk/politics/alex-salmond-bbc-bias-was-significant-factor-in-deciding-scottish-independence-referendum-10506491.html> (accessed 10 October 2018).

Grimmelikhuijsen, S. (2011), "Being transparent or spinning the message? An experiment into the effects of varying message content on trust in government.", *Information Polity*, Vol. 16, pp. 35-50.

Gurn, R.M. (1995), "Measuring information providers on the Internet", *Internet Librarian*, Vol. 15, p. 42.

Hahn, S.E. (1997), "Internet: let the user beware", *Reference Services Review*, Vol. 25 No. 2, pp. 7-13.

Hassan, G. (2014), "Restless nation: Thatcherism as Scotland's 'other'", in *Independence of the Scottish mind*, Palgrave Macmillan, Basingstoke, pp. 103-122.

Hawkins, O. (2016), "Scottish Parliament elections: 2016", House of Commons Library Briefing Paper No. CBP7599, available at: <http://researchbriefings.files.parliament.uk/documents/CBP-7599/CBP-7599.pdf> (accessed 13 February 2019).

Hilligoss, B. and Rieh, S.Y. (2008), "Developing a unifying framework of credibility assessment: construct, heuristics, and interaction in context", *Information Processing & Management*, Vol. 44 No. 4, pp. 1467-1484.

Housholder, E.E. and LaMarre, H.L. (2014), "Facebook politics: toward a process model for achieving political source credibility through social media", *Journal of Information Technology & Politics*, Vol. 11, No. 4, pp. 368-382.

Johnson, T.J. and Kaye, B.K. (1998), "Cruising is believing?: comparing Internet and traditional sources on media credibility measures", *Journalism & Mass Communication Quarterly*, Vol. 75 No. 2, pp. 325-340.

Johnson, T.J. and Kaye, B.K. (2002), "Webelievability: a path model examining how convenience and reliance predict online credibility", *Journalism & Mass Communication Quarterly*, Vol. 79 No. 3, pp. 619-642.

Johnson, T.J. and Kaye, B.K. (2004), "Wag the blog: how reliance on traditional media and the Internet influence credibility perceptions of Weblogs among blog users", *Journalism & Mass Communication Quarterly*, Vol. 81 No. 3, pp. 622-642.

Johnson, T. and Kaye, B. (2010), "Choosing is believing? How Web gratifications and reliance affect Internet credibility among politically interested users", *Atlantic Journal of Communication*, Vol. 18 No. 1, pp. 1-21.

Johnson, T.J. and Kaye, B.K. (2013), "The dark side of the boon? Credibility, selective exposure and the proliferation of online sources of political information", *Computers in Human Behavior*, Vol. 29, pp. 1862-1871.

Johnson, T.J. and Kaye, B.K. (2014), "Credibility of social network sites for political information among politically interested Internet users", *Journal of Computer-Mediated Communication*, Vol. 19, pp. 957-974.

Johnson, T.J. and Kaye, B.K. (2015), "Reasons to believe: influence of credibility on motivations for using social networks", *Computers in Human Behavior*, Vol. 50, pp. 544-555.

Johnson, T.J., Kaye, B.K., Bichard, S.L. and Wong, W.J. (2008), "Every blog has its day: politically-interested Internet users' perceptions of blog credibility", *Journal of Computer-Mediated Communication*, Vol. 13, pp. 100-122.

Kahan, D.M. and Braman, D. (2006), "Cultural cognition and public policy", *Yale Law & Policy Review*, Vol. 24, pp. 147-170.

Kahan, D.M., Braman, D., Slovic, P., Gastil, J. and Cohen, G. (2007), "The second National Risk and Culture Study: making sense of—and making progress in—the American culture war of fact", available at:

<http://www.culturalcognition.net/projects/second-national-risk-culture-study.html>

(accessed 18 February 2019).

Katz, I. (2017), "Have we fallen out of love with experts?", *BBC News*, 27 February, available at: <https://www.bbc.co.uk/news/uk-39102840> (accessed 10 October 2018).

Kaye, B.K. and Johnson, T.J. (2004), "A Web for all reasons: uses and gratifications of Internet components for political information", *Telematics and Informatics*, Vol. 21, pp. 197-223.

Lau, R.R. and Rovner, I.B. (2009), "Negative campaigning", *Annual Review of Political Science*, Vol. 12, pp. 285-306.

Lewandowsky, S., Ecker, U.K.H., and Cook, J. (2017), "Beyond misinformation: understanding and coping with the "post-truth" era", *Journal of Applied Research in Memory and Cognition*, Vol. 6, pp. 353-369.

Lewandowsky, S., Ecker, U.K.H., Seifert, C.M., Schwarz, N. and Cook, J. (2012), "Misinformation and its correction: continued influence and successful debiasing", *Psychological Science in the Public Interest*, Vol. 13 No. 3, pp. 106-131.

Lewis, H. (2016), "How the Brexit campaign lied to us – and got away with it", *New Statesman*, 30 June, available at: <https://www.newstatesman.com/politics/uk/2016/06/how-brexit-campaign-lied-us-and-got-away-it> (accessed 10 October 2018).

MacAskill, E. (2016), "Spy agencies 'produced flawed information on Saddam's WMDs'", *The Guardian*, 6 July, available at: <https://www.theguardian.com/uk->

[news/2016/jul/06/spy-agencies-flawed-information-saddam-wmds-iraq-chilcot](https://www.ft.com/content/3be49734-29cb-11e6-83e4-abc22d5d108c)

(accessed 10 October 2018).

Mance, H. (2016), "Britain has had enough of experts, says Gove", *Financial Times*, 3 June, available at: <https://www.ft.com/content/3be49734-29cb-11e6-83e4-abc22d5d108c> (accessed 10 October 2018).

Marcella, R. and Baxter, G. (2005), "Information interchange", in Fisher, K.E., Erdelez, S. and McKechnie, L. (Eds.), *Theories of Information Behaviour*, Information Today, Medford, NJ, pp. 204-209.

Marcella, R., Baxter, G. and Walicka, A. (2019), "User engagement with political 'facts' in the context of the fake news phenomenon: an exploration of information behaviour", *Journal of Documentation*, in press.

Maxwell, J. (2014), "Better Together vs the truth", *New Statesman*, 28 May, available at: <https://www.newstatesman.com/politics/2014/05/better-together-vs-truth> (accessed 10 October 2018).

Meola, M. (2004), "Chucking the checklist: a contextual approach to teaching undergraduates Web-site evaluation", *portal: Libraries and the Academy*, Vol. 4 No. 3, pp. 331-344.

Metzger, M.J. (2007), "Making sense of credibility on the Web: models for evaluating online information and recommendations for future research", *Journal of the*

American Society for Information Science and Technology, Vol. 58 No. 13, pp. 2078-2091.

Morisi, D. (2018), "When campaigns can backfire: national identities and support for parties in the 105 U.K. General Election in Scotland", *Political Research Quarterly*, DOI: 10.1177/1065912918771529.

Nai, A. and Walter, A.S. (2015), *New perspectives on negative campaigning: why attack politics matters*, ECPR Press, Colchester.

Oxford Dictionaries (2016), "Oxford Dictionaries word of the year 2016 is... POST-TRUTH", available at:
<https://www.oxforddictionaries.com/press/news/2016/12/11/WOTY-16> (accessed 10 October 2018).

Oxford Dictionaries (2018), "Definition of spin in English", available at:
<https://en.oxforddictionaries.com/definition/spin> (accessed 10 October 2018).

Pattie, C., Denver, D., Johns, R. and Mitchell, J. (2011), "Raising the tone? The impact of 'positive' and 'negative' campaigning on voting in the 2007 Scottish Parliament election", *Electoral Studies*, Vol. 30, pp. 333-343.

Riddoch, L. (2016), "The Tories were once unmentionable in Scotland. Not any more", *The Guardian*, 6 May, available at:

<https://www.theguardian.com/commentisfree/2016/may/06/tories-scotland-ruth-davidson-scottish-conservatives> (accessed 10 October 2018).

Rieh, S.Y. and Danielson, D.R. (2007), "Credibility: a multidisciplinary framework", in: Cronin, B. (Ed), *Annual Review of Information Science and Technology*, Information Today, Medford, NJ, pp. 307-364.

Rettig, J. (1996), "Beyond "cool": analog models for reviewing digital resources", *Online*, Vol. 20 No. 5, pp. 52-64.

Settle, M. (2015), "Murphy: failure to learn lessons of Scots referendum could lead to Brexit", *The Herald*, 24 September, available at:

http://www.heraldscotland.com/news/13779645.Murphy_failure_to_learn_lessons_of_Scots_referendum_could_lead_to_Brexit/ (accessed 10 October 2018).

Smith, D. (2017), "Kellyanne Conway's fictitious 'Bowling Green massacre' not a one-time slip of the tongue", *The Guardian*, 6 February, available at:

<https://www.theguardian.com/us-news/2017/feb/06/kellyanne-conway-fake-bowling-green-massacre-three-times> (accessed 10 October 2018).

Smith, M. (2018), "Of course the BBC is biased, but the bias of the switch-off campaigners is much worse", *The Herald*, 13 August, available at:

<https://www.heraldscotland.com/opinion/16414440.mark-smith-of-course-the-bbc-is-biased-but-the-bias-of-the-switch-off-campaigners-is-much-worse/> (accessed 10 October 2018).

St. Jean, B.; Rieh, S.Y.; Yang, J.Y. and Kim, Y. (2011), "How content contributors assess and establish credibility on the Web", *Proceedings of the American Society for Information Science and Technology*, Vol. 48 No. 1, pp. 1-11.

Stoker, D. and Cooke, A. (1995), "Evaluation of networked information sources", in Helal, A.H. and Weiss, J.W., (Eds), *Information superhighway: the role of librarians, information scientists and intermediaries*, Essen University Library, Essen, pp. 287-312.

Sullivan, M.C. (2018), "Why librarians can't fight fake news", *Journal of Librarianship and Information Science*, DOI: 10.1177/0961000618764258.

Sundar, S.S. (2008), "The MAIN model: a heuristic approach to understanding technology effects on credibility", in Metzger, M.J. and Flanagin, A.J. (Eds), *Digital media, youth, and credibility*, The MIT Press, Cambridge, MA, pp. 73-100.

Swaine, J. (2017), "Donald Trump's team defends 'alternative facts' after widespread protests", *The Guardian*, 23 January, available at: <https://www.theguardian.com/us-news/2017/jan/22/donald-trump-kellyanne-conway-inauguration-alternative-facts> (accessed 10 October 2018).

Topping, A. (2017), "'Sweden, who would believe this?': Trump cites non-existent terror attack", *The Guardian*, 19 February, available at:

<https://www.theguardian.com/us-news/2017/feb/19/sweden-trump-cites-non-existent-terror-attack> (accessed 10 October 2018).

Torrance, D. (2012), "Better Together or Yes Scotland? Year one in the battle for Britain", *Scottish Affairs*, Vol. 80, pp. 62-90.

Tseng, S. and Fogg, B.J. (1999), "Credibility and computing technology", *Communications of the ACM*, Vol. 4 No. 5, pp. 39-44.

Walton, G. and Hepworth, M. (2011), "A longitudinal study of changes in learners' cognitive states during and following an information literacy teaching intervention", *Journal of Documentation*, Vol. 67 No. 3, pp. 449-479.

Wathen, C.N. and Burkell, J. (2002), "Believe it or not: factors influencing credibility on the Web", *Journal of the American Society for Information Science and Technology*, Vol. 53 No. 2, pp. 134-144.

Wilson, P. (1983), *Second-hand knowledge: an inquiry into cognitive authority*, Greenwood Press, Westport, CT.

Wintour, P. and Mulholland, H. (2012), "Nick Clegg apologises for tuition fees pledge", *The Guardian*, 20 September, available at:

<https://www.theguardian.com/politics/2012/sep/19/nick-clegg-apologies-tuition-fees-pledge> (accessed 10 October 2018).

Zhang, Y., Sun, Y. and Xie, B. (2015), "Quality of health information for consumers on the Web: a systematic review of indicators, criteria, tools, and evaluation results", *Journal of the Association for Information Science and Technology*, Vol. 66 No. 10) pp. 2071-2084.



Scottish National Party (SNP)

10 March at 11:21 · 🌐

88.7% of school leavers from Scotland's most deprived communities going on to a positive initial destination – the highest ever proportion and up from 83.9% in 2011/12.

Read more about our action to tackle the educational attainment gap:
https://www.snp.org/raising_attainment_in_schools



👍 Like 💬 Comment ➦ Share 📄

👍❤️😱 362 Top comments ▾

89 shares

Figure 1: SNP post on school leavers



ScotConservatives @ScotTories · Mar 21

We should be discussing the 152,000 college places cut by the SNP, rather than #IndyRef2

WE SHOULD BE DISCUSSING:

152,000
college places cut by the
SNP since 2007

INSTEAD OF INDYREF2

Scottish
Conservative
& Unionist

15 155 165

Figure 2: Scottish Conservatives post on college places



Scottish Labour @scottishlabour · Mar 9

KD: John Swinney has looked at the numbers and he knows the case for independence lies in tatters. #FMQs

"The early years of an independent Scotland are timed to coincide with a massive North Sea oil boom."

John Swinney, March 2013

Revenue the Treasury expects to receive this year:	Revenue the SNP claimed would be generated this year:
£0.9billion	£11.8 billion

SCOTTISH LABOUR

25 30 21

Figure 3: Scottish Labour post on oil and gas revenues



Scottish Greens @scotgp · 17 Dec 2016

#scotbudget should be an anti-poverty budget.



Scotland has some of the highest childcare costs in the UK, and childcare costs remain a major barrier to people meeting the **Minimum Income Standard**.

42% of single parent families were out of work for childcare reasons in 2012. Affordable, high quality childcare provision would make a big difference these families: **31% of single mothers said they could work more if this was available.**

14 8

Figure 4: Scottish Greens post on childcare costs



Scot Lib Dems @scotlibdems · 23h

Question on education at #FMQs.
Here's what the First Minister won't tell you today:



SNP Schools Record
150,000 children in larger classes
- 4,000 fewer teachers
+ 20,000 pages of teacher "guidance"
- Now below England & Vietnam in world education rankings
= a decade of SNP failure on education

www.scotlibdems.org.uk

3 15 9

Figure 5: Scottish Liberal Democrats post on schools

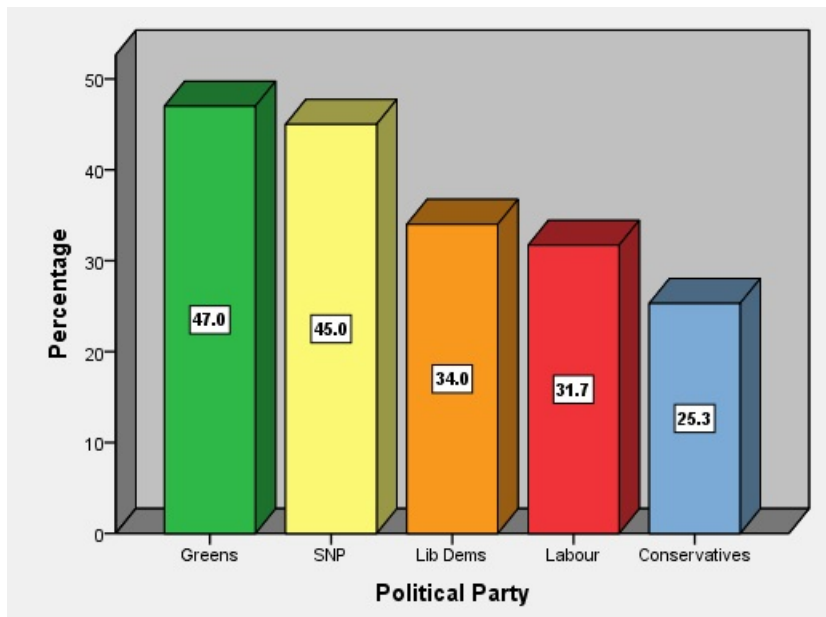


Figure 6: Percentage of sample survey describing information in social media posts as “very” or “quite” reliable

Table 1: Known demographic details of online survey sample		
Gender (<i>n</i> = 369)	Male	35.2%
	Female	64.2%
	Other (e.g., “agender”, “gender fluid”)	0.6%
Residence (<i>n</i> = 406)	In Scotland	64.5%
	Outside Scotland	35.5%
Age group (<i>n</i> = 408)	16-24	8.1%
	25-34	20.8%
	35-44	24.5%
	45-59	30.6%
	60 or over	15.9%
Political allegiance (<i>n</i> = 230)	Labour	26.1%
	Scottish National Party	22.6%
	Greens	22.2%
	Liberal Democrats	17.0%
	Conservatives	12.2%

Table 2: Perceived reliability of the information presented in the social media posts

Figure, party, and number of respondents	Very reliable (%)	Quite reliable (%)	Quite unreliable (%)	Very unreliable (%)	Don't know (%)
1. SNP (<i>n</i> = 537)	6.5	38.5	25.7	11.9	17.3
2. Conservatives (<i>n</i> = 482)	3.1	22.2	36.9	18.7	19.1
3. Labour (<i>n</i> = 454)	4.2	27.5	29.3	21.4	17.6
4. Greens (<i>n</i> = 434)	4.8	42.2	27.2	8.5	17.3
5. Lib Dems (<i>n</i> = 420)	3.3	30.7	31.4	13.8	20.7

Table 3: Factors affecting perceptions of the reliability of the information in the social media posts

Factor	Fig 1. SNP (%)	Fig 2. Cons (%)	Fig 3. Lab (%)	Fig 4. Greens (%)	Fig 5. Lib Dem (%)
Trust in specific party	18.2	3.5	2.9	12.2	3.6
Mistrust of specific party	3.2	14.7	4.0	2.3	3.6
Mistrust of politicians and parties in general	5.8	3.1	2.4	1.6	2.6
Mistrust of negative campaigning	-	16.1	7.3	-	12.6
Bias or spin likely to be present in posts	26.2	23.8	24.2	14.7	18.1
No source(s) provided	26.4	24.8	20.3	35.2	32.3
Posts lack detail, definitions or context	28.8	35.2	35.7	29.7	30.9
Figures “appear” reasonable (or unreasonable)	21.9	14.7	28.0	30.3	22.1
Respondents’ professional or personal experience	6.1	5.4	3.1	9.4	6.0

Table 4: How the respondents would find out more about the issues discussed in the social media posts

Source	Fig 1. SNP (%)	Fig 2. Cons (%)	Fig 3. Lab (%)	Fig 4. Greens (%)	Fig 5. Lib Dem (%)
Not interested, so would not bother	4.1	6.0	9.5	7.8	7.1
No idea about how to find out more	2.8	5.2	7.9	5.7	4.3
Unspecified search/research	21.9	27.3	25.8	29.9	31.0
Unspecified online search/research	11.7	12.4	9.7	9.7	10.7
Search on Google	19.9	19.7	15.0	14.9	13.3
Follow link on social media post	25.1	n/a	n/a	n/a	1.4
Consult political parties' websites or social media sites	3.5	7.0	7.7	7.4	7.6
Request information directly from the party, or from local MP/MSP	2.8	4.3	2.2	6.2	4.0
Consult government websites	12.3	10.1	16.7	8.5	11.6
Consult government agency websites	6.9	6.0	2.6	2.1	3.8
Make an FOI request	0.9	0.4	0.4	0.2	1.2
Consult universities or think tanks	1.9	4.1	1.3	0.9	0.7
Consult NGOs	1.3	1.2	2.4	4.8	3.8
Consult news media	6.9	9.7	9.3	5.1	6.6
Consult family, friends and colleagues	0.6	0.4	0.9	1.8	1.9

Table 5: Original sources of “facts and figures” in the five social media posts	
Fig. 1 (SNP)	Scottish Government (2017). <i>Initial Destinations of Senior Phase School Leavers</i> .
Fig. 2 (Cons)	Scottish Funding Council (2016). <i>Baseline Report for Academic Year 2014-15</i> .
Fig. 3 (Lab)	Office for Budget Responsibility (2017). <i>Economic and Fiscal Outlook, March 2017</i> . Scottish Government (2013). <i>Oil and Gas Analytical Bulletin 2013</i> .
Fig. 4 (Greens)	Engender (2016). <i>Unlocking the Pipeline – Gender and Employability in Scotland</i> . Save the Children (2011). <i>Making Work Pay – the Childcare Trap</i> . Gingerbread (2016). <i>Statistics – Work and Looking for Work</i> . Office for National Statistics (2014). <i>Families in the Labour Market</i> . Department of Education (2014). <i>Childcare and Early Years Survey of Parents 2012-2103</i> .
Fig 5. (Lib Dems)	Scottish Government (2016). <i>Summary Statistics for Schools in Scotland, No.7</i> . Scottish Government (2016). <i>Teachers – Teacher Numbers – High Level of Summary of Statistics Trend</i> . Scottish Parliament Education and Skills Committee (2016). <i>Official Report, 30 November 2016</i> . Organisation for Economic Cooperation and Development (2016). <i>PISA 2015 Results (Volume 1): Excellence and Equity in Education</i> .