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Information literacy challenges in digital culture: conflicting engagements of trust and doubt

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ABSTRACT

The ability of citizens to establish the credibility of information and information sources through critical assessment is often emphasized as essential for the upholding of a democratic society and for people's health and safety. Drawing on material-discursive conceptualizations, the article asks, how does critical assessment of information and information sources play out as it is folded into a networked information infrastructure in which different types of information are mediated and shaped by the same algorithms and flattened into the same interfaces? The empirical material comprises dyadic interviews with 61 adolescents. The interviews were analysed using an interpretative approach focusing on the construction of action and meaning. The analysis foregrounds trust and agency as two dimensions. This way normative assumptions become visible as stereotypes, sometimes positioned as ideals towards which to strive, other times as deterrent examples: the non-evaluator, the naïve evaluator, the skeptical evaluator and the confident evaluator. The created stereotypes help to comprehend different understandings of critical assessment of information and how these can bring about different actions. The article argues that critical assessment of information as an element in media and information literacy must be understood not just in relation to how it is used to assess the credibility of information, but also regarding how it is performatively enrolled in the shaping of knowledge and in the creation of ignorance and doubt.

Background and aim

The ability of citizens to establish the credibility of information and information sources through critical assessment is often highlighted as essential for the upholding of a democratic society and for people's health and safety. This normative understanding underpins the efforts of international organizations such as UNESCO or IFLA (International Federation of Library Associations and Institutions), who make great efforts to raise awareness, provide guidance and educate. Their aim is to advance media and

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information literacy (MIL) with critical evaluation of information and information sources as a cornerstone. Recently, national and international health agencies have joined these efforts. It seems simple – more media and information literacy of the right kind engenders more empowered, better-informed citizens. This, in turn, should lead to responsibly acting citizens and the emergence or endurance of societies based on the ideals of deliberate democracy. Yet, at the same time as discussion about the importance of critical evaluation of information and information sources grows, one of the key pillars of the practice is crumbling. There are signs that trust in institutions, particularly media, is decreasing, not least in democratic societies (Kavanagh & Rich, 2018). Also, society's information infrastructure is dominated by a small number of commercial multi-sided platforms whose interests, architecture and affordances are largely opaque to users and even to information producers.

Against this backdrop, the following question drives our inquiry: How does critical assessment of information and information sources play out as it is folded into a networked information infrastructure in which different types of information are mediated and shaped by the same algorithms and flattened into the same interfaces? Specifically, we foreground the interplay of trust and agency and how these are perceived and enacted in relation to the specific conditions and affordances of this information infrastructure. We argue that critical assessment of information as an element in media and information literacy must be understood not just in relation to how it is used to judge the credibility of information, but also regarding how it is performatively enrolled in the shaping of knowledge and in the creation of ignorance and doubt. We explore this based on an empirical material comprising 30 dyadic interviews with adolescents in their late teens (17–19 years of age). The interviews concerned these young people's conceptions of internet algorithms, of their effects and of the assessment of information in everyday life.

Dimensions of trust

The circumstances for the said decline of trust vary between different countries and groups in society, but it is a phenomenon that has been documented for most of the world (de Zúñiga et al., 2019). Evidently, the role of trust in media and information literacy is complex. Without a citizenry, for which overall trust in high-level institutions, such as science, public authorities, the judiciary, or the press, is the norm rather than the exception, media and information literacy becomes difficult. It might even be counter-productive, at least regarding the often-asserted aim of advancing democratic deliberation. Yet, in authoritarian or corrupt societies, the role of trust in institutions as a foundation for media and information literacy must be shaped differently. At least if the aim is to advance democratic deliberation and citizen empowerment, doubting such institutions might be advisable, as it might be for oppressed or disadvantaged groups in all societies.

Our interest lies with institutional trust and trust in systems as part of it (cf. Hardin, 2002). Public authorities, science or the press are examples of societal institutions that can have more or less trust invested in them and this level of trust is likely to vary over time and to differ across countries or communities. As we show in the following analysis, considering how enactments of trust interlace with specific material-discursive practices and sociomaterial situations is key. This leads us to an important reflection on

what follows. For the purpose of understanding critical assessment of information, we are primarily interested in enactments of trust as well as reflections on these enactments in relation to society's algorithmic information infrastructure and the specific situations in which people and their practices are part of it. Enactments of trust include also its contrasts. These are mainly framed as mistrust or distrust, where mistrust refers to vigilance and caution, while distrust is characterised by cynicism and suspicion (Lenard, 2008). In relation to critical assessment of information, this means that with distrust the burden of proof for being critical is shifted and the question changes from *how is this true* to *how is this false* and extended to the entire system for knowledge production. Carefully paying attention to these dimensions of trust in relation to today's algorithmic information infrastructure, allows us to elucidate how critical assessment of information, as a cornerstone for media and information literacy, is destabilised through the intermixing of institutional trust with personal trust and the morphing of mistrust into distrust.

Enactments of trust from a sociomaterial perspective

A sociomaterial perspective on the ways in which people, institutions, values and technologies form complex networks informs our understanding of information and information infrastructure. Specifically, we draw on a material-discursive approach as proposed by Barad (2007) and as developed further by Orlikowski and Scott (2015). Sociomateriality implies that neither materiality nor discourse are given priority, but sayings, doings and matter are constitutively entangled and collectively shaped. Algorithmic information systems do not just mediate information, collect data, visualise patterns or bring about associations between data entries. Like the scientific instruments that Barad highlights in her work, they shape and make (im)possible information, data, trust and mistrust, or relations between people in very profound ways, while they are also being re-configured – including in their meaning – when they are used. Sociomateriality sees technology and people as not merely interacting, but as enmeshed in each other, as intra-acting, to use Barad's concept. This also has implications for our position as researchers or, as Orlikowski and Scott (2015) argue, 'in agential realism, our analyses do not just reflect the world, they are active interventions: the making of difference' (p. 698). While the questions we ask our interview partners and the ways in which we interact with them are not judgmental, they are also not disinterested. Framing a project around an interest in critical assessment of information and trust is necessarily conducted based on certain assumptions; our assumption is that the power structures within the material-discursive networks we study are fundamentally and problematically skewed.

The premise for assessing information is that we cannot know everything ourselves. We have to trust others and their knowledge. This knowledge – referred to as testimonial knowledge, second-hand knowledge, or evidence, depending on disciplinary tradition – is embedded into larger institutional arrangements and mediated through their information networks. Effectively, these institutions and their various manifestations constitute information sources in their own right, providing us with testimonial knowledge, and are understood to function as cognitive authorities. This sounds straightforward enough; however, the networks involved in the actual ways in which this trusting is enabled are extremely intricate, historically grown, technically complex and culturally

shaped. They, in turn, require trust in complex systems, abstract methods, associations, technologies, people, standard-setting bodies, and much more.

Research on credibility and assessment of information

Various fields have attended to studying critical assessment of information and information sources, each engaging with different concepts including credibility, assessment, evaluation, judgement and so forth – often in relation to media and/or information literacy. We present in broad strokes selected issues of importance to our study, bringing together areas of research that do not normally converse. For consistency, we use the term *assessment of information and information sources* to also include evaluation, judgement and various considerations of the credibility of information.

While, in earlier research, the focus was predominantly on people's difficulties and shortcomings in how they assess information more generally in online environments (e.g., Metzger, 2007; Metzger et al., 2010), the normalization and ubiquity of digital culture, has led to more nuanced considerations. For example, McGrew and colleagues (McGrew et al., 2017, 2018; Wineburg & McGrew, 2017) have highlighted peoples' difficulties in carrying out *civic online reasoning* in a number of studies, in particular difficulties in establishing the authority of sources by searching online in order to compare one source with another. Assessment of information is often discussed in relation to sets of evaluative criteria, most notably currency, accuracy, authority, objectivity and coverage, which gives way to so-called checklist approaches (Meola, 2004). These work reasonably well in school or academic settings, but are often of limited use elsewhere in everyday life (Flanagin & Metzger, 2000). Instead, Meola (2004) emphasizes the need to assess the credibility of information by comparing it with other information sources external to the very website that is being evaluated. He argues that learning to assess information online also needs to include training on how to discern between different sources that require more or less evaluation. Such a contextual approach, according to Metzger (2007), emphasizes how the assessment of information sources should be a social responsibility rather than an individual endeavour. People apply certain heuristics when assessing the credibility of information, including 'reputation, endorsement, consistency, self-confirmation, expectancy violation and persuasive intent' (Metzger & Flanagin, 2013, p. 214; see also Hilligoss & Rieh, 2008; Sundar, 2008). Our research, grounded in a sociomaterial understanding of information, complements this focus on cognitive capacities and explores credibility assessment in relation to the contemporary information infrastructure and the socio-political landscape, giving rise to it.

The materiality of individual information sources (Tuominen et al., 2005) or the importance of the search process and search engines (Hargittai et al., 2010) are important for the assessment of information. As Hargittai et al. (2010) observe,

> how users get to a Web site is often as much a part of their evaluation of the destination site as any particular features of the pages they visit. Accordingly, looking at Web site credibility without the entire search context ignores an important part of the puzzle. (p. 470)

Related, the notion of *infrastructural meaning-making* (Haider & Sundin, 2019) stresses the importance of users understanding the conditions of information access on par with their understanding of information and information sources. Thus, awareness of the

workings of algorithms can be considered equally important as the ability to assess individual information sources (Gran et al., 2020; Head et al., 2020). Fletcher and Nielsen (2018) find a 'generalised scepticism' towards all kinds of selection, including algorithmic selection, of news to exist in the population. While they also find that younger people are more likely to approve of algorithmic selection of news, they also note that age is not the only decisive aspect this regard.

A recurrent theme in research on credibility assessment of information is the notion of being *critical*. Unsurprisingly, what being critical implies varies. A deductive logic, so important to science, builds on the notion of criticizing theories. In this context, being critical is taken to mean critical thinking, in the sense of questioning what is taken for granted (Nygren & Guath, 2019). Savolainen (2011, p. 1252) detects a disputational discourse noting 'the negative criteria surpassed the positive criteria in the credibility judgments in particular.' A different line of research, often starting from the work of Kapitzke (2003) and Elmborg (2006), emphasizes the *critical* notion of information literacy somewhat differently and goes beyond critical thinking. As Elmborg (2006) states: '[Information literacy] involves the comprehension of an entire system of thought and the ways that information flows in that system. Ultimately, it also involves the capacity to critically evaluate the system itself' (p. 196). Foregrounding user agency, Velkova and Kaun (2019) discuss the need for opportunities to resist algorithmic power through tactical practices framed around algorithmic resistance.

Method and material

We interviewed 61 adolescents, between 17 and 19 years old, following a semi-structured format. We chose participants from this age group since we expected them to recently have reflected on algorithmic curation of information. Furthermore, they are between adulthood and youth and we anticipated them to be able to reflect on their own and others' experiences and attitudes, including those of their parents. Fifty-seven interviews were with pairs, while three interviews were individual, and one interview had three participants. All participants received a cinema ticket as a token of appreciation after they had answered afollow-up email. Pair interviews allowed us to generate a rich material based on qualitative interviews with a fairly high number of adolescents. The pairs knew each other beforehand. This contributed to a relaxed atmosphere, which in turn made it easier for an informal conversation to develop (Polak & Green, 2016).

The recruitment of participants followed a purposive sampling of schools, through which we tried to achieve a broad representation of adolescents in terms of interests and socioeconomic background. We included pupils from both college-preparatory and vocational upper secondary schools in small, medium-sized and large cities. For variation, we also included six pupils from a Danish school, geographically very close to Sweden and with a similar educational background. With one exception – a school from which we recruited ten participants – no more than three interviews involved participants from each school. We contacted teaching or library staff, who then informed us of pupils who wanted to participate. This implied that the participants likely had already reflected on the interview topic more than others in their age group. However, considering our research interest and the complexity of the topic, we considered this an advantage since it potentially made the interview situation less intimidating for the participants.

Although we recruited participants through the school, we attempted to explain that the interviews concerned their everyday life in a broader sense. Participation was voluntary and all interviewees read and signed informed consent forms. The interviews lasted between 45 and 70 minutes and were carried out by one of the authors. They were recorded and transcribed by a research assistant who made some adjustments to the written language. Most of the interviews had to be translated from their original language into English.

In line with the study's sociomaterial perspective, we employed an interpretative approach focusing on the construction of action and meaning (Charmaz & Belgrave, 2012). Each interview was read by both researchers before the coding process started. The transcriptions were uploaded to the qualitative analysis programme *Nvivo*. The first phase of coding resulted in the emergence of a number of themes, from which we established several sensitizing concepts to guide the second phase of coding. Specifically, the notions of *trust* and *agency* drove our continued line of inquiry. The following analysis is presented with quotes from the interviews in an attempt to increase transparency. Since we did not specifically explore gender aspects, we use plural forms to refer to our interview participants in the text.

Analysis: critical, distrustful or aware

Most direct mentions of critical assessment of information and information sources touched upon some of the aspects discussed in previous research – including criteria such as currency, origin, tendency and authority. Considering these are included in most instructional guides used to teach it, this comes as no surprise. Rather, what is interesting, are the ways in which critical assessment of information and information sources is said to be carried out (or not) and specifically in relation to larger narratives, metaphors, actors or limitations. Crucially, while what people say and what they do does not necessarily match up, sayings and doings are still ontologically and epistemologically connected. A material-discursive approach acknowledges this tension. In what follows, we present our analysis under four broad headings: *Being critical of information and information sources*, *Critical assessment of information in school*, *Conspiracy theories* and *Infrastructural awareness*. These are not mutually exclusive themes, but topical areas, each of which foregrounds a different facet of the variously configured interactions between trust,mistrust and distrust, their enactments, information infrastructures and social institutions.

Being critical of information and information sources

All interviews included a direct question about what the participants understood critical assessment of information and information sources to be, something which everyone also had an understanding of. Naturally, the answers varied. Yet, what stood out is the amount of attention paid by many interviewees to the notion of being *critical* – or not.

Researcher: So, what do you think critical evaluation of sources means?
Interviewee 2:   Well, I would say it means that you are critical of sources, whether or not they are credible.
Interviewee 1:

> Yes, that you sort of question them, whether there's a reason why they're not true, sort of thing.

Here, critical assessment is discursively positioned in opposition to trust – as distrust. It is seen to mean questioning a source by doubting its truthfulness. In most cases, the starting point for our interviewees is to question the credibility of the information at hand. This critical practice can either be seen as a way of sifting away false information – in which false and true are dichotomic concepts – as this interviewee states: 'Critical evaluation of sources is like a huge filter really, it filters out incorrect information.' Or it can be seen as a means of evaluating credibility in a more nuanced and contextual way:

> Interviewee 1:   Using an intellectual lens, questioning things. Questioning information and questioning information in the form of 'okay, how much more of this thing is there – who is saying it?' So, you put all the information you get into a larger perspective – and into a larger context. This is my take on critical evaluation of sources.

Juxtaposing these two quotes highlights the relation between trust, credibility and responsibility in a particularly interesting way. In one case, agency is attributed to an instrumental understanding of the activity of source critiqueitself. It is a metaphorical filter that does the work of weeding out false information. In the other case, it is a pair of glasses that need to be put to use, leaving agency with the person. This contrast connects to a larger discussion of where responsibility should be placed, how to design information systems, and how to legislate or develop educational strategies.

In order to trust a source to which someone refers, you have to trust the system used for referencing testimonial (Origgi, 2008) or second-hand (Wilson, 1983) knowledge. Yet – and here lies an important problem – for some critical assessment applies without limits. For example, one interviewee explains that she does not trust the *system* of source critique: 'No, I don't do that, the system itself, if you can say that. Because, well, you never know whether it's true. That's how it is, for me, anyway. Then maybe it's ridiculous to be so pedantic.' This person appears to refer to the notion that any source of information can always be manipulated and that nothing, which is mediated, can ever be fully trusted. Consequently, the argument proceeds; criticism has to be extended to also include the entire process established for critically evaluating sources. Whether critical assessment of information is understood as a fixed object or as a process has implications for how agency is situated. In the above, we see a double move. Responsibility is seen to lie with the individual. Yet, personal responsibility is taken to extend beyond establishing the trustworthiness of a piece of information or its source to also include assessing the reliability of the very tools and signals that society has for establishing this reliability. Interestingly, in our material, this way of thinking appears to intensify when the discussion turns to difficulties in adapting critical assessment of information from school-related to everyday life practices outside school.

Critical assessment of information in school and outside

To a certain degree, the interviews echoed a way of speaking about critical assessment of information that reflects how the interviewees encountered it in school. Many interviewees also used the terminology taught, e.g., CRAP (Credibility, Reliability, Authority,

Purpose) test. Equally, when askedwhich sources of information they actually trusted, most repeated what they had learned in school. While it was certainly significant that our interviews were actually carried out in school settings, our interviewees also reflected on their difficulties when attempting to apply what they had learned in school to their everyday lives. The practices learnt at school do not always appear meaningful outside school or adapting them proves difficult. In the words of one of our interviewees:

> Then I think, if you're very comfortable with yourself as a person, you just read through this, and then it's like 'oh, this sounded good.' You don't look at it the same way as you would in school, because when it comes to school, there is a completely different awareness of it.

Clearly, the incentives are different in the two situations. Previous research has shown similar associations between the importance of a task and the diligence applied to assessment (Pan et al., 2007). In school settings, critical assessment of sources counts towards the teachers' evaluations and might even impact grading. In the absence of this layer of control, information is assessed differently. The same interviewee continues: 'When you're at home, it's sort of freer. "Yes, but I read this here," or "this post is on my Instagram," or "check out what they wrote in that blog."' Having said that, absolute trust in officially sanctioned and teacher-approved sources is also questioned in the school context:

> IP2: In this way, our teachers are actually our sources, that they have said that 'NE [National Encyclopaedia – a Swedish online commercial encyclopaedia] is great, everything is correct' and so now we trust it blindly. So, if there was something on NE that didn't make sense, we would still think it was true. So maybe it's not really great that we have this somewhat blind trust in it. That we could be critical, but we're not as far as NE is concerned because we expect it to be right.

Here, the person questions what they refer to as 'blind trust' and challenges the very notion by stating: 'I'm always critical of most things.' Shortly after, the statement is modified: 'Or I wish I were more critical of it because I'm not as critical of NE as I am of Wikipedia, for example. But I think I should be.' Being critical in the sense of always challenging everything is positioned here as an ideal to which to aspire. Trust, mistrust and distrust are not only directed towards the source and the system, but also – and this is what we want to address more carefully in the next section – towards each other.

Conspiracy theories

The complex and shifting relations between different enactments and perceptions of trust are particularly tangible when the conversations turn to conspiracy theories. Conspiracy theories are certainly not new, but in recent decades have developed into part of contemporary culture, particularly youth culture, in new ways (Barkun, 2013). This is closely related to how social media and recommender systems thrive on the algorithmic amplification of the outrageous and the extreme (Stano, 2020). Those, largely due to their business models, often prioritize popularity. In slightly different ways, this also applies to general purpose web search engines. Popularity is often a simple measure of exposure, for example, number of views, likes, shares, clicks, links, and similar. This self-perpetuating system of amplification disproportionately benefits the unexpected and surprising and makes it even more visible. Based on the belief that nothing happens by chance but is

designed by 'an organization made up of individuals or groups/ … /acting covertly to achieve some malevolent end' (Barkun, 2013, p. 3), conspiracy theories are precisely that – outside established norms – and often shocking. Here, conspiracy theories more than anything else put the spotlight on the contradictory enactments and perceptions of trust. Showing serious interest in conspiracy theories can easily be construed as taking a critical stance. As one interviewee noted: ' … there's a bit of a contradiction here when you're against conspiracy theories. Because conspiracy theories are a kind of source critique, if you think about it.'

Clearly, expressing disbelief in socially accepted narratives and established sources can be seen as an expression of critical capabilities. At the same time, taking conspiracy theories seriously is precisely what the various media and information literacy programmes and guidelines attempt to counter. The interviews took place during spring 2019. At the time, anti-vaccine and flat earth theories were flooding social media. Conspiracy theories had a strong presence in the everyday online lives of our interviewees and almost all had at least some experience of encountering conspiracy theories online. Most talked about conspiracy theories as something entirely made up and people who believed in them were described as wearing 'tin foil hats.' Meanwhile, most interviewees still found them fascinating, pointing to a grey zone of uncertainty where the demarcation line between belief and disbelief is floating.

One person notes:

> I have not tried to be convinced fully of a conspiracy theory, but I suddenly heard some good points and stuff, and I was like … hm … yeah. That's what I like about it, at first you think it's like crazy, but then you're like "that's actually some good points." (English in original)

Here fully committing to conspiracy theories is a choice; you can let yourself be convinced. Some interviewees distinguished between conspiracy theories that were just for fun and other conspiracy theories that actually made sense to them. Frequently, this distinction was supported by referring to whether *facts* proved or disproved a theory.

Unsurprisingly, facts are assigned a key role in how trust is established. Yet, what is even *regarded* as a fact and who can provide these? At times, people responsible for spreading conspiracy theories are portrayed as displaying considerable factual knowledge on the topic in question, akin to experts. This leads to some interviewees expressing more trust in conspiracy theorists than they have in established institutions. Conspiracy theories are experienced as relatable. They are also highly visible in social media, not least on YouTube and similar. Facts and the absence of facts is something to which many of the interviewees returned to. In the following quote, someone contemplates the notion that the earth might be flat and describes reading arguments both supporting and contesting this theory:

> / … /I'm always critical of everything because I've never been in space myself and seen that the earth is round. So, it might sound like I believe in that theory now, but I don't. But I still think there's a slight risk that this is the case. So, I'm always critical both ways. And I have a hard time taking sides. So, it's hard to say, what I think is totally stupid and not totally stupid.

Being critical of information is taken to mean being sceptical of taken for granted knowledge in order to choose between different possibilities. Evidence, facts, are significant for this, but also who provides them. Someone else notes:

Yes, it's always important to question things whether or not it's the authorities, because … let's put it this way, had we been in North Korea, for example, it would be a given that we questioned everything the authorities told us, but they don't think the same way at all. We, therefore, cannot be sure either that our authorities always, well, value the truth.

Here, critical assessment of information is couched in distrust, clearly based in the assumption that societal institutions and authorities cannot be relied on.

If we cannot have first-hand knowledge ourselves, we must trust others. At the same time, being critical and not automatically taking claims for granted, is seen as socially desirable behaviour. Yet, for many it seems to imply that all issues should be envisioned as having two sides that need to be given equal consideration and all institutions are equally untrustworthy, corrupt even. This way, critically assessing information, despite or probably due to its often formulaic approach, easily turns into settling a question of belief. At times, the doubt that forms part of critical assessment of information, is indistinguishable from the doubt of established narratives that conspiracy theories thrive on.

Infrastructural awareness

The circulation of conspiracy theories in contemporary society and the ways in which they are used must be considered as being integral to the specific information infrastructure within which this happens. Conspiracy theories circulate on commercial platform services such as YouTube, Facebook, WhatsApp and Instagram, and they do so in relation to the particular affordances of these platforms.

Researcher: But if you come across such things in your feeds, what … kind of, how do you do it? How do you deal with this?
IP2:   Click on it out of sheer curiosity. (Giggles)
Researcher: Yes?
IP1:   Yes.
IP2:   But then you get more results because you clicked on that one, that one time.
IP1:   Damn, each time is just as horrible.

Here, agency for critical assessment of information is distributed between the person and the application's algorithms. People and algorithms are interwoven and there is awareness of one's own entanglement with the technical side of the infrastructure. Yet, we found that awareness of the role of the technical infrastructure, including of its problematic role, does not necessarily result in avoidance of activities that are known to have unwanted outcomes. However, it may still be decisive for how information is judged once it has been encountered.

One participant's explains how an interest in people's reasons for believing in conspiracy theories leads to encountering more and more information on the very topic that the theory concerns:

… after a while, it becomes like, I don't want to hear, I know what they're going to say now, but then it becomes … you still get stuck in some cycle. So sometimes I've thought, Should I even be searching for this? Because then I won't get out of it.

Again, we see how the attributed responsibility is shared between the individual and the application. They know that their interests and the ways in which they are made to act within the application, as part of the infrastructure, will lead them to encounter ever

more undesired material. Yet, ultimately, they concede that withdrawing from the algorithmic arrangements, in which they are enlisted cannot happen from the inside. Humans and their material-discursive practices are not outside the information infrastructure, they are part of it.

As well as asking whether there were sources of information that the interviewees tended to trust more than others, we also asked them whether there were information sources they did not trust. Here, Google in particular was assigned an important role. The interviewees reflected on how they trusted or mistrusted Google by referring to the ranking order of the links on the search result page: 'Well, I sort of think that those that come high up are more credible, but you can never be sure of that.' While they described different levels and kinds of insights into how digital intermediaries actually work, most interviewees had not given much thought to this before the interviews. In some cases, their infrastructural awareness was quite limited and idealized, as in the following quote by a person who had immigrated to Sweden a few years previously and who said that they had only really encountered search engines and social media then. When asked about how they thought the search results on Google came about, they replied:

> I don't know. I only [use] Google or I use Instagram and I don't think about such things. But I think there is an organization or some large office that wants to do a favour for people all over the world.

This idealistic picture of digital intermediaries as an altruistic administrative organization is challenged by other understandings that we also encountered in our interviews.

Many participants identified Google as standing out from other information intermediaries, including in particular Facebook. Google was considered less problematic in regard to the information it provides. Yet, we also encountered other conceptions of what Google is and does. One person stated that Google 'verified' the links it provided, 'that it sort of, that Google has sort of approved of them in some way. But I don't really know.' Here, a similar understanding to the one advanced above in the depiction of Google Search as an office shines through. It is Google that, *de facto*, is seen to conduct the critical assessment of sources rather than the person interacting with the search engine. Another participant expressed a strategic awareness of how to tinker with algorithms in order to get the desired results:

> I also think it depends on how relevant it is compared to the question you have asked or the exact thing you have been searching for. I can ask a question, yes, but then I get this answer. But if I add a word or two in the search engine then I get another link that has interrelated the words I just added. And then suddenly it becomes more relevant than the first one.

This kind of algorithm awareness – a type of critical information literacy – is broader and more profound than merely assessing the sources (see also Gran et al., 2020). It is a way to playfully engage with the algorithm in order to get what you want. Having this kind of awareness might be a way for an individual to ensure that they primarily encounter information that they rarely need to assess. Both agency and trust are attributed here to the ability to purposefully interact with the respective intermediary's algorithmic structures. This is a kind of infrastructural meaning-making in which the critical component relates to access, rather than just the source in itself (Haider & Sundin, 2019).

Discussion

Evaluator stereotypes

Inevitably, our analysis is bound by the specific demographics of our participants. Yet, it still creates opportunities for formulating wider implications. Imagining trust and individual agency as two dimensions offers a way of thinking through some of the different ways in which critical assessment of information can be perceived and enacted. In this way, certain normative assumptions become visible as stereotypes. In the interviews, these were positioned as ideals towards which to strive; at other times, they were used as deterrent examples, strengthening the performativity of these material-discursive constructions (Figure 1).

For example, a combination of low agency and high trust would create *naïve evaluators*, who tend to believe in what they find or encounter, without considering themselves as being actively involved in making such a judgement. Digital intermediaries, which provide algorithmically-curated information, often considered to be of high personal relevance, encourage this inaction. This naïve approach comes close to what could be described as *non-evaluation*, uniting both low trust and low agency. Low agency is configured into the platform infrastructure and the opportunities for users to make conscious adjustments tend to be hidden inside dark patterns. As stereotypes, the naïve evaluator and the non-evaluator are particularly useful for rationalizing specific educational approaches in order to encourage literacy skills, but also as strawmen to distance oneself from. This is also how they appeared in our interviews. Their characteristics were implicitly positioned as a backdrop against which to discuss one's own or others' behaviour.

On the other side of the spectrum, uniting low trust and high agency, we find *sceptical evaluators,* who do not believe in anything they encounter. Yet, they are extremely committed to their own responsibility for evaluating information. The statement made in one interview that you always have to be critical 'because I have never been in space myself and seen that the earth is round' exemplifies the *sceptical evaluator's* ideal of
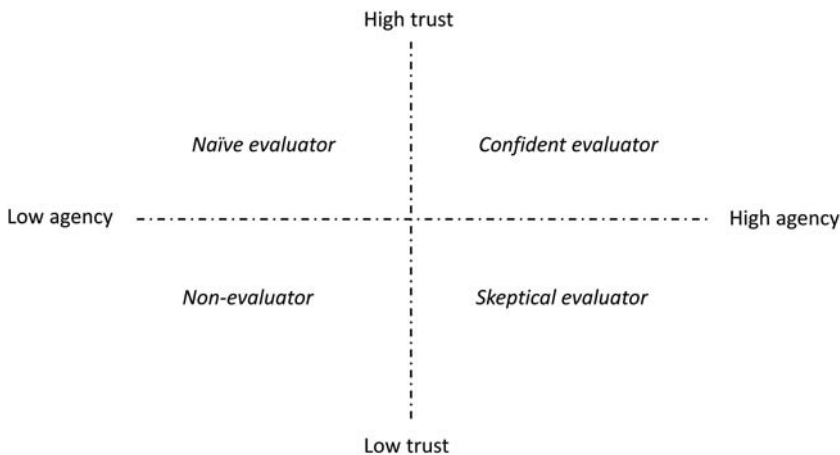

Figure 1. Information assessment stereotypes matrix.

never fully trusting anything you have not experienced yourself. In such a framing, all information, regardless of its origin, demands the same kind and the same level of critical diligence. Nothing can ever be taken for granted. This is a form of general distrust that has been shown to be symptomatic of conspiracy belief (Butter & Knight, 2020). Also, in our material, we are offered glimpses of such an idealization of the sceptical evaluator in relation to conspiracy theories, which are seen to be in an epistemic balance with established scientific knowledge. Both are judged with the goal of questioning everything in exactly the same way. For our participants, this flows almost naturally from their interpretation of the purpose of critical assessment of information. Yet, in contemporary society, conspiracy theories are told and circulated with this approach in mind. They might even be produced just for the purpose to be spread in social media. They are thus accessible to many people, regardless of their educational background, a relatability and familiarity thatscience cannot compete with. Furthermore, contemporary society is characterized by a *discourse of doubt* (Oreskes & Conway, 2010), premised on similar assumptions about institutional and personal trust as conspiracy belief. Some of the conspiracy theories we encountered in our interviews are certainly on the fringes of what could be considered credible, also by our participants. Yet, the attitude towards critical assessment that was expressed in relation to these conspiracy theories flows into a general sentiment regarding the purpose of critical assessment of information at large.

Finally, a further ideal is what could be called the *confident evaluator*, combining high agency and high – but not blind – institutional trust. Here, questioning credibility is a question of mistrust rather than distrust. Stereotypical *confident evaluators* put their trust in authoritative information sources while also considering themselves to be capable of establishing what is trustworthy and what is not. This stereotype is advanced as an ideal by the education sector and library associations, in which media and information literacy is wedded to the advancement of democracy. They recognize the need to critically assess all kinds of information. However, the assessment is at a significantly higher level of abstraction than the actual information. Their rationale is that society's institutions largely work as intended and the processes in place function well enough as safeguards against most misconduct and misinformation. Needless to say, the notion that societal institutions are fundamentally trustworthy is profoundly situational. Thus, confident evaluators need to display awareness and adaptiveness and be able to consider the actual conditions within which they act, for example, the political situation, form of government, or level of corruption in a given society. This flexibility is at odds with the way in which, for example, information literacy is occasionally taught in the form of checklists that move between contexts or by simply dividing sources into trustworthy and non-trustworthy ones.

Crafting ignorance and media and information literacy reverse engineered

Our analysis traces a number of challenges related to the control of information in contemporary society, tying back to meaning and purpose of being critical given the specific sociomaterial possibilities afforded by society's information infrastructure. On the one hand, democracies can look back on a long tradition of questioning and criticizing taken-for-granted knowledge, such as in science and news media; it is from this tradition,

or an idealised version of it, that media and information literacy sprung. On the other hand, in the last decades, a *discourse of doubt* has gained momentum whereby this striving for a critical stance and a questioning attitude has acquired a new dimension and can be described as a shift from mistrust to distrust as the dominant mode of criticism (see also Head et al., 2020).

Plausible sounding counternarratives are launched, disagreements between scientists, normal variation between different models or results are disproportionately highlighted to create the impression of serious scientific controversy over an issue. It is a way to purposefully and strategically *craft ignorance,* in order to manufacture uncertainty (Proctor, 2008; McGoey, 2019). It has been shown how this was achieved for the tobacco industry or to discredit climate science (e.g., Michael, 2008; Oreskes & Conway, 2010). Crafting ignorance in this way requires people to believe that doubting an issue is what is called for and that applying methods of critically assessing the credibility of information, as an act of distrust, facilitates this position of doubt. Here, Lenard's (2008) distinction of mistrust and distrust offers a useful point of reference. The cynicism and suspicion considered in the concept of distrust comes close to the sceptical evaluator, while for the stereotypical confident evaluator mistrust implies being cautious. Trust is crucial for understanding critical assessment of credibility, but it is trust in institutions, methods and systems rather than in individuals (Hardin, 2002). This discourse of doubt was a strong undercurrent in our interviews, also facilitated by the way in which contemporary information intermediaries individualise searching, retrieving and encountering information via algorithmic curation and personalization. The crafting of ignorance we argue, also involves the reverse engineering of media and information literacy, which appears to be performatively enlisted in the creation of uncertainty by indiscriminately devising trust as an individual responsibility and truth as a matter of personal choice from the 'marketplace of ideas,' cast in a neoliberal framing (Davies, 2018.) The discourse of doubt necessitates the ideal of the sceptical evaluator and its material-discursive construction is folded into today's individualizing and polarizing information infrastructure.

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