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New experts on the web?

Nicola Mößner

Abstract

During the Covid-19 pandemic, a considerable amount of people seem to have been lured into believing in conspiracy theories. These people deliberately disregard expert advice by virologists and physicians concerning social behaviour that is aimed at reducing the number of new infections. Disregarding traditional experts and their advice is just one example of what, in the philosophy of science, is referred to as a crisis of expertise – the phenomenon whereby people seem to have lost their trust in traditional expert advice and are looking for alternatives.

In the following paper, the trend to use Internet technology as an epistemic alternative will be analysed in detail by investigating the question of whether the Internet really allows people to become epistemically more autonomous. The focus will be on the epistemic and moral vulnerability of people resorting to new media tools instead of relying on traditional expert opinion. It will be shown that some important presuppositions about the Internet and, in particular, social media tools as alternative ways to collect information and find emotional support in a group of like-minded people cannot be maintained.

Keywords: algorithm, expert, epistemic individualism, social media, trust

The coronavirus pandemic has changed the lives of millions of people. Not only does it challenge politicians to find a manageable way to balance economic interests with health care interests – it also deeply affects the individual level. Worries are divided along the same line of problems as government decisions: *pro economy vs. contra health care or the other way around?* Many people feel confused by seemingly contradictory rules, e.g. not being allowed to spend the holidays at a lake or beach nearby, but being allowed to fly to a tourist island miles away from home. They are looking for orientation and for someone who could offer reliable advice. The pandemic therefore not only tells us something about moral dilemmas and the problems of democratic societies in the

21st century, but also teaches us a lesson about epistemic questions. In the context of public protests against repeated lockdowns and other measures to keep the pandemic at bay, adherents of conspiracy theories have played a significant role. So why, one might wonder, do at least some of the people who are looking for orientation give in to the temptation of listening to what often seems to be irrational nonsense?¹

The phenomenon at hand can be regarded as one example of what, within the philosophy of science, has become known as “the crisis of expertise”. This term refers to the fact that, in recent years, a certain amount of people have seemingly lost their trust in traditional expert² opinion. This decrease of epistemic reliance does not seem to be restricted to particular topics. Distrust in scientific results concerning global warming³ is a notorious example with regard to Americans, whereas Europeans are caught up in debates about the necessity of vaccination campaigns at schools and kindergartens.⁴ Both examples show that relying on expert opinion is by no means a question of private preferences. On the contrary, the effects of people's particular choices and their consequent behaviour often affect community life on a broad scale. Philosophers of science have therefore emphasised the fact that the crisis of expertise also points towards an emergent

1 See, for example, Krause 2021.

2 In the following, the term 'expert' is to be understood in the sense of Alvin I. Goldman: “[...] an expert (in the strong sense) in domain D is someone who possesses an extensive fund of knowledge [...] and a set of skills or methods for apt and successful deployment of this knowledge to new questions in the domain” (Goldman 2011, 115).

3 Realising this problem, the environmental photographer James Balog developed the project “Chasing Ice” (<https://chasingice.com/>). He took pictures of melting glaciers in the Arctic over a period of time which enabled him to literally show the problematic developments triggered by global warming.

4 This problematic situation, especially regarding the outbreak of measles in Europe, is documented by the European Centre for Disease Prevention and Control (ECDC) at <https://ecdc.europa.eu/en/news-events/ecdc-insufficient-vaccination-coverage-eueea-fuels-continued-measles-circulation>, accessed February 21, 2022. The relation between conspiracy theories and campaigns against Covid-19 vaccinations is explained by Michael Butter in an interview with *Zeit Online* (see Butter 2021).

political crisis for the ideal of well-informed decision-making in democratic societies (see e.g. Anderson 2011; Kitcher 2011).

The most important questions of this debate concern, firstly, the reasons that prevent people from trusting traditional experts and, secondly, possible remedies for this situation. The present article addresses the first question by shedding some light on the reasons which might motivate people to follow the individualistic trend in their epistemic processes. Acknowledging the fact that many different aspects are involved in eliciting this change in epistemic behaviour (see e.g. Gelfert 2011; Kitcher 2012; Oreskes & Conway 2012; Proctor & Schiebinger 2008), I will focus on developments in new media technology as an incubator of epistemic individualism. Internet technologies provide the tools that are necessary for an alternative method of acquiring and processing information – in contrast to relying on traditional expert opinion. Yet this technology-driven strategy also makes people vulnerable to new kinds of epistemic risks such as becoming locked in “filter bubbles” (see Pariser 2012), “echo chambers” or “information cocoons” (see Sunstein 2006, 8ff.).

Moreover, I will argue that the vulnerability of people trapped in this process is mostly a result of their expectations with respect to those online alternatives. Many of those who turn away from traditional experts and trust in new media technologies as an alternative do not only seek information, but also (emotional or moral) support in a community of like-minded people. However, computer scientists (see e.g. Lanier 2018) and mathematicians (see e.g. O’Neil 2016) involved in developing these technologies have pointed out that many of these virtual communities are formed by algorithms. People are therefore betrayed twice: they are trapped in epistemically problematic conditions and also led to believe that they share their thoughts with real human beings and receive advice from them – when it is in fact algorithms that lure them into particular world views.

This is then how we will proceed in the following article: firstly, we will take a brief look at the philosophical debate about the crisis of expertise. It will be argued that the Internet provides the necessary alternative that allows people to turn away from traditional expert opinion. Secondly, the trend of using Internet technology as an epistemic alternative will be analysed. Here, an important question arises concerning what kind of epistemic individualism we actually have to face. Finally, we will focus on the epistemic and emotional vulnerability of people opting for new

media tools instead of relying on traditional expert opinion. It will be shown that some important presuppositions of considering the Internet and, especially, social media tools as alternative ways of gathering information and finding moral support do not hold.

1 The crisis of expertise

It seems to be an empirical question whether an actual *crisis* of expertise is what is at stake. The difficulty of this question can, again, be seen in the Covid pandemic situation. On the one hand, conspiracy theories are becoming more popular,⁵ but at the same time, many people listen very carefully to what scientists have to say about the new disease and how to best protect yourself. This paper does not aim at defending a pessimistic or optimistic point of view concerning people's actual reliance on expert opinions. What will be pointed out, however, is central to the people who actually refrain from expert advice, regardless of whether this trend is currently increasing or not. In the following, we will not take sides in the debate about the crisis of expertise in the philosophy of science, but highlight those aspects that seem to be relevant to the question why some people have changed their epistemic attitudes towards expert opinions and whether this makes sense from an epistemological point of view. In what follows, a summary of some of the main arguments from this debate⁶ will be presented that Philip Kitcher has put forward. We will then discuss whether there are any aspects that might be missing in this debate.

Kitcher correctly mentions three reasons why people might have changed their epistemic attitude towards expert opinions (see Kitcher 2012, 212f.). The first is that some experts might have underestimated the threat of losing their reputation due to proclaiming research results which were not sufficiently tested first. These scientists give in to the social pressure usually exerted by the media to come up with simple solutions and statements. If, however, the experts' assertions turn out to be false, this undermines the scientists' public credibility.⁷

5 This often implies that these people choose 'new experts' to rely on who are related to such conspiracy theories. It has to be noted, however, that such 'experts' do not match Goldman's definition which puts an emphasis on true beliefs.

6 Readers interested in the details of this debate may refer to (Kitcher 2011; Leuschner 2012; Nichols 2017; Oreskes 2019) and the references contained in these papers.

7 Susanne Hahn (2021) points out that, in this context, the phenomenon of 'bullshit', i.e. assertions that are not truth-oriented, plays an important role, too. In particular, the pressure that

Secondly, laypeople usually do not understand the dynamics and characteristics of professional discourse. Scientific results are often presented in a rather cautious manner, using formulations such as 'We have tried to show that...' or 'It is commonly the case that...'. Scientists usually do not make bold statements concerning their research results. This is in line with Popper's dictum about scientific humility as a consequence of acknowledging the general fallibility of human reasoning (see Popper 1987, 225ff.). However, laypeople are used to the black-or-white-talk of politicians and to apodictic judgements made by the press. Consequently, the cautious style of communication used by scientists might give rise to the impression that these alleged experts are not confident in their claims.

Finally, Kitcher states that value judgements are unavoidable in science (see Kitcher 2012, 213).⁸ Yet some of these are wrong, being the outcome of narcissism or considerations about personal profits – and they can therefore conflict with democratic ideals, as Naomi Oreskes and Erik M. Conway have pointed out in their studies on scientists working for the tobacco industry etc. (see Oreskes & Conway 2012). Obviously, there are bad apples in the scientific community, namely those who have, for instance, an eye on their personal interests alone rather than on presenting the truth. However, if laypeople learn about such misbehaviour in science, they might feel justified in distrusting experts in general.⁹

arises due to a constant struggle for attention in the public domain is considered a driving force in this process. Scientists as well as media producers and journalists are often trapped in a vicious circle that encourages its participants to bullshit (see *ibid.*, 226).

8 Here, he follows Richard Rudner's thesis that the scientific practice itself requires this form of value-laden judgements (see Rudner 1953). An elaborated defence of this by no means consensual thesis is presented by Heather Douglas (2009).

9 After all, how could they decide, and based on what evidence, whom to trust? Goldman (2011) tried to shed some light on this by discussing the case of a novice who has to decide whom to trust when confronted with two divergent potential expert opinions. However, things might get even more complicated here, as it is by no means clear that a scientist deciding to act in her own (financial) interest on a particular occasion is not (or has not been) a truly reliable source of information in other contexts.

Kitcher's analysis seems to be a fair summary of the common story told in the philosophy of science concerning the reasons why many people have become sceptical about expert opinions. However, there are at least two further aspects to complete the picture: on the one hand, being sceptical about expert opinions seems to be different from literally turning away from specialists' advice. The latter kind of behaviour only makes sense if an alternative epistemic strategy is available. This is where Internet technologies and social media tools contribute significantly to worsening the situation.

On the other hand, philosophers' analyses are somewhat imbalanced due to their focus on how experts could improve their behaviour, especially their communicative strategies, in order to mend the problematic situation. However, trust-based settings imply at least two parties. Philosophers often discuss actual cases of untrustworthy scientists, but tend to idealise the second party involved by presupposing that laypeople behave rationally. What has to be taken into account is that the social dynamics of the situation at hand are to a considerable degree driven by emotions.¹⁰ I will show that the epistemic and the social dimension of the problem of expertise are deeply intertwined. The example of the *#MeToo*-debate will highlight this difficulty, yet it also points towards a more general effect. The case at hand will also highlight why social media tools are so successful in closing the gap left by traditional experts.

Here is the example: in 2017, the *New York Times* reported that Harvey Weinstein, the famous media producer, had been accused of sexual harassment. Only ten days later, the social movement *#MeToo* started to pool women's voices with similar negative experiences on social media platforms. The sociologist Eva Illouz wrote the following in the weekly German newspaper *Die Zeit*: "*#MeToo* is the first Western movement based on social media: here, women tell their stories directly without the intervention of a long chain of experts (psychologists, lawyers, journalists) who might dilute or distort their story" (see Illouz 2018, 48).¹¹ The quote shows that

10 Vincent F. Hendricks and Mads Vestergaard (2018) cite some of the psychological effects at work in the crisis of expertise when analysing the characteristics of what has turned Western societies into so-called *post-factual* or *post-truth communities* (see *ibid.*, especially ch. 5).

11 Translation of: "*#MeToo* ist die erste westliche Bewegung, die auf sozialen Medien beruht: Hier schildern Frauen ihre Erlebnisse unmittelbar, ohne dass eine lange Kette von Experten (Psychologen, Juristen, Journalisten) ihre Rede abschwächte oder verfälschte" (Illouz 2018, 48).

those engaged in this debate regard new media technologies as tools of empowerment. That is, these women use social media tools as supporting devices in their attempt to free themselves from apparently paternalistic experts from different professions who do not seem to speak in their favour. Using social media platforms such as Facebook or Twitter allows them to make their experiences publicly known without the threat of being silenced by the social power of the people who wronged them. It also allows them to find new allies whose moral or emotional support will help them in their struggle for justice.

But let us dwell a bit longer on the promise of a democratisation of knowledge that has been credited to the Internet since its advent in the 1990s. Many people still assume that Internet technology makes more and more diverse information available to a larger variety of people. They emphasize the potential for free and unrestricted access to information – information which allegedly had previously been available to particular expert elites only. Moreover, the Internet not only allows people to passively consume more information, but also enables them to actively participate in discussions and the dissemination of information. Consequently, the technology's function of epistemic empowerment is due to the assumed fact that information is no longer a treasure kept under wraps by a few experts. People using the Internet can therefore become epistemically autonomous – but is this really the case?

The quotation above shows that what is at issue in the crisis of expertise is not only related to epistemic worries, as Kitcher points out. It is also important that at least some people who have turned away from traditional experts are motivated by the feeling of a lack of moral or emotional support. The fact that there is an affective dimension involved besides the epistemic dimension is due to this being a trust-based situation. The concept of trust is, as Bernd Lahno has pointed out, a multidimensional concept that entails an emotional attitude (see Lahno 2004, 38ff.). He explains that the latter finds its expression, for example, in the fact that a person who trusts someone assumes that they both share certain aims and values. Moreover, trust that has been betrayed – such as in the example above – is met with negative emotional responses, not just rational disappointment.

The crisis of expertise is thus not merely an expression of doubts about the capacity of traditional experts as neutral testifiers: the emotional aspect constitutes a further relevant

characteristic. The task of experts is not limited to being a reliable source of information. On the contrary – they are also expected to be an ally when it comes to defending a particular point of view. Concerning this point, several traditional experts have forfeited the trust that was placed in them. Social media platforms and their communication tools have stepped in to fill this gap. Still, it can be questioned whether these technological means are really doing better in meeting the needs pointed out above.

2 A new kind of epistemic individualism?

By turning away from traditional expert opinion and relying on Internet technology instead, people often seem to think that this makes them epistemically more autonomous. It is worth examining this claim in more detail before we discuss the idea of Internet technologies as an alternative epistemic strategy. Two questions come to mind in this context: firstly, why didn't people strive earlier for more epistemic autonomy? Secondly, what kind of epistemic autonomy and epistemic individualism are we facing today?

To begin with, one might argue that, in fact, people did strive for more epistemic autonomy in previous times as well. After all, various forms of information have long been available in libraries etc. So striving for epistemic autonomy is not a recent phenomenon. The entire period of Enlightenment has been described as an attempt to remove epistemic dependencies (see e.g. Kant 1999 [1784]). However, there still seems to be a noticeable qualitative difference to the last decade. This development is related to the rapid technological progress that has made the Internet a seemingly indispensable part of our daily life.¹² In a nutshell, the Internet offers vast amounts of information and by using search engines you can literally ask questions to find the data you are looking for. Additionally, social media tools seem to offer people the emotional support they seek by connecting them to each other in peer networks.

Does this striving for more epistemic autonomy mean that we have to face the return of a form of epistemic individualism? Elizabeth Fricker explains the related ideal of an autonomous knower as follows: “The wholly autonomous knower will not accept any proposition unless she herself possesses the evidence establishing it. Thus she will not accept anything on the basis of another's word for it, even when she has evidence of their trustworthiness on the topic in

12 Surveys show, for example, that 90% of the German population (age 14 and above) use the Internet, with 75% using it on a daily basis (see van Eimeren et al. 2017).

question” (Fricker 2006, 225). This is the ideal that John Locke once defended, writing very critically about the capacity of testimony as a source of knowledge: “For I think we may as rationally hope to see with other men’s eyes, as to know by other men’s understandings. So much as we ourselves consider and comprehend of truth and reason, so much we possess of real and true knowledge. The floating of other men’s opinions in our brains, makes us not one jot the more knowing, though they happen to be true” (Locke 1690, 84). His position can be called *testimonial nihilism*. Reliance on testimony is allowed only to the degree that someone becomes aware of a new piece of information – but to accept this as knowledge, the epistemic subject *has to check* the content of the assertion by using her own epistemic capacities of reasoning and perception.

Today, people's striving for more epistemic autonomy does not aim at this radical ideal, the practical impossibility of which Fricker has pointed out very clearly (see Fricker 2006, 227f.). People still rely on the word of others, but – and that is the difference – they want to make their own choices about whom to trust and whom to distrust. They no longer follow traditional schemes. The status of being an expert – a teacher, a physician, a scientist etc. – is no longer a necessary criterion for the decision about whose word to rely on.

Fricker points out that, initially, one might think of these two epistemic phenomena – i.e. testimonial dependency and epistemic autonomy – as contradictory. And indeed there is a certain tension involved here, since trusting others as sources of information entails the risk of error due to lies or mistakes originating from the incompetence of others (see *ibid.*, 242). Still, their statements are often relevant to the recipients' practical aims. Our epistemic misfortune can thus also affect our actions. In risk-based situations people are vulnerable in two ways: they might end up holding wrong beliefs. Or their practical decisions – for instance, whether to accept a particular medical treatment – that are based on the word of others might have grave consequences, such as serious health problems for their children because they declined to vaccinate them. Consequently, an epistemically superior subject who could avoid depending on others would be better off in both epistemic and practical terms. However, as Fricker argues, human beings are not in such a position. All of us are more or less limited in our cognitive capacities and therefore cannot avoid being epistemically dependent on others.

But despite this seemingly disadvantageous situation, Fricker claims that relying on others and striving for epistemic autonomy are still compatible epistemic strategies. The epistemic subject

can indeed make the best of her predicament by carefully choosing whom to trust.¹³ In particular, she should carefully consider reasons speaking in favour of (or against) an informant's credibility, i.e. her competence and sincerity (see *ibid.*, 243). If this precondition is fulfilled, we can benefit from epistemic capabilities that are superior to our own.

To sum up: people who turn away from traditional expert opinion often substitute this epistemic gap by turning towards Internet technology and, in particular, towards social media tools. Despite this practice being evidence of the desire for a higher degree of epistemic autonomy amongst the individuals concerned, the analysis has shown that this neither means a return to a Lockean ideal of an autonomous knower nor that there is a contradiction to the division of epistemic labour *per se*.

In the next two sections, we will take a more detailed look at the difficulties of relying on social media tools in epistemic contexts. It will become clear that, besides the epistemic and practical challenges mentioned by Fricker, there is also the question of the emotional bond apparently offered by online communities.

3 Social media and the epistemic vulnerability of people

In the following section, the point will be made that traditional experts are not only expected to offer individual advice – they also play a crucial part in public discourse. In contrast to giving advice in communities of like-minded people, the task of experts is not to tell convenient stories, but the truth; for example that social distancing is an appropriate behaviour to reduce infection rates in the coronavirus pandemic. Replacing expert opinions by news and other information feeds on social media platforms will deprive people of this important corrective which, in turn, might also lead to serious problems on the social and political level. Why does this happen?

The main epistemic problem of using newsfeeds on social media platforms as sources of information is the risk of getting caught up in what has become known as “filter bubbles”. Eli Pariser (2012), who invented the term, describes its effect as an “information diet” (*ibid.*, 14). A similar phenomenon Cass R. Sunstein (2006) calls “echo chambers”.¹⁴ This, too, refers to a community that deprives the individual of relevant information of certain kinds. Both phenomena

13 I will not discuss whether Fricker's suggestion how to evaluate whether a testifier is a suitable epistemic strategy. Readers interested in this topic can refer to (Gelfert 2014, 110ff.; Mößner 2010, ch. 3.2.3.2).

lead to a narrowed-down perspective on particular issues – such as the reasons (i.e. the human responsibility) for global warming etc.

Moreover, both phenomena are usually related to social media. Filter bubbles are the result of algorithms that filter information in accordance with previously established profiles of the individual about her assumed or known interests or preferences.¹⁵ Echo chambers are the result of psychological and social mechanisms in groups of people. In such contexts, prevailing opinions will be repeated over and over again and thereby tend to become more extreme in the long run. Although there might be a chance that some of the community's members do not share those extreme standpoints, they will usually not counter those opinions. Wishing to belong to the group at hand will prevent these people from speaking up if they do not share the promoted point of view.

From an epistemological perspective, both phenomena are problematic in two respects. First, they will deprive the individual of information she might need to make up her mind about particular questions.¹⁶ As Fricker has pointed out, this reduction of relevant information can affect the individual both on an epistemic level – she will come to hold false beliefs – and on a practical

14 The concepts of filter bubbles and echo chambers have already come under attack (see e.g. Bruns 2019). This disagreement about the concepts seems to be the result of simplifications and overgeneralizations. Admittedly, not all online communities will turn into filter bubbles and not all of the latter stem from the virtual world. Moreover, not all of the pessimistic developments that Pariser and Sunstein describe necessarily affect all members of a particular community alike. Besides these preliminaries, however, their approaches are still helpful to remind us of potential worst case scenario developments.

15 This filtering, which is characteristic of personalised information supplies on the Web, is certainly most problematic if the individual is not aware of the filtering process. This aspect is highlighted by Pariser (2012) and has been philosophically analysed in (Mößner & Kitcher 2017).

16 In such bubbles, people will lose track of divergent points of view as the filtering mechanisms provide them with information that tends to support their previously held beliefs only. The technological tools cater to what is known in psychology as “confirmation bias”, that is, the effect that people are told what they like to hear and are thus confirmed in what they are already convinced of (see Hendricks & Vestergaard 2018, 126ff.).

level. For instance, she might not receive a vital medical treatment. Expert advice definitely seems to be the better alternative here as these specialists are not supposed to tell people what they would like to hear, but what they have to hear. The background assumption is obviously that experts, when asked for help, genuinely want to help. They do not merely want to promote their own ideas and goods, but say what they think is best for the people seeking advice.

However, more than the epistemic situation of the individual is at stake here. As was said before, turning away from traditional expert opinion could also seriously affect the well-being of people in democratic societies on a broader scale. Democratic societies are based on the idea that people can make up their minds about the common good. This presupposes that they exchange their ideas and come to acknowledge the needs and opinions of their fellow citizens. Empathy regarding the living conditions and experiences of others is very helpful in such a process of deliberation. Sunstein writes: “[a]s preconditions for a well-functioning democracy, these requirements – chance encounters and shared experiences – hold in any large country. They are especially important in a heterogeneous nation – one that faces an occasional danger of fragmentation” (Sunstein 2018, 7).

Unfortunately, this is exactly the point where echo chambers and filter bubbles exert their harmful impact. These phenomena undermine the important exchange of ideas in a democratic society to such an extent that there is a real threat of a community falling apart over time. Populist narratives of ‘Us against them’ are much more likely to succeed because people no longer perceive common interests and demands, but only those promoted by their particular social group.

This is also why Sunstein stresses that there is an important difference between citizens and consumers. Although personalised information on the Web might be a good strategy for the latter, it often turns out to be harmful to the former. Sunstein makes explicit the duties of citizens with respect to the epistemic basis of their decision-making: “Citizens are not supposed merely to press their own self-interest narrowly conceived, nor are they to insulate themselves from the judgements of others. Even if they are concerned with the public good, they might make errors of fact or value – errors that can be reduced or corrected through the exchange of ideas. Insofar as people are acting in their capacity as citizens, their duty is to ‘meet others’ and ‘consult,’

sometimes through face-to-face discussions, and if not, through other routes, as, for example, by making sure to consider the views of those who think differently” (Sunstein 2018, 51).

Here, traditional experts play another crucial role by providing their knowledge and discursive skills as the pillars of the public forum for sharing ideas and experiences. Although they are not infallible, they contribute important information from their field of expertise to public discussions – for instance about how to best protect our environment without harming the job market too much or whether the development of autonomous vehicles should be promoted.

From both an epistemological and a political point of view there seems to be much at risk if people start feeling too comfortable in their online communities. Yet beyond these worrisome effects that, fortunately, have already caught the attention of at least some scholars, there is another aspect that might, in the long run, also cause the individual to feel quite uneasy in the digital world.

It is not only a lack of epistemic reliance that motivates some people to turn their backs on traditional expert advice. It is also the feeling of a lack of moral or emotional support. An important aspect of the empowerment apparently provided by online communities is the feeling of companionship, of shared encouragement. The crucial question, however, is who these people unwittingly rely on in order to gain the support they are looking for.

4 The betrayal of algorithms

The following discussion will focus on two aspects: firstly, we will take a closer look at the thesis that people can gain more epistemic autonomy by relying on Internet sources. Secondly, we will examine who, or what, is often at the heart of the respective online communities.

The thesis was that people striving for more epistemic autonomy can do so because of a new alternative – the Internet – that provides them with huge amounts of information. This allows for conveniently and rapidly searching through an enormous amount of data by literally asking questions (by using search engines such as Google). Moreover, further developments of this new technology have also provided something that traditional experts have not, namely a moral or emotional support that people can now enjoy in their online communities. Regardless of the empirical question whether this new epistemic and social strategy is successful and whether it is at

least better than its predecessor, an important premise in this argument is that people are free to choose which source to rely on. However, it seems that this important premise is false. Consequently, the thesis that people increase their epistemic autonomy by their new epistemic behaviour loses its most relevant supporting reason. Why is this the case?

The answer lies in the technological mechanisms used on social media platforms and their background psychological assumptions. Taking a closer look at these shows why the aforementioned premise is misguided. The point is that social media technologies exploit a certain liability of the human mind. We are inclined to repeat actions and follow patterns of behaviour which are rewarded by those around us. This is, for example, an important psychological practice in education. Learning is triggered by positive feedback. Many people look for opportunities to receive more of this support – in particular, when it is combined with actual rewards, such as certificates, money, reputation etc. Sometimes it might suffice that someone tells you that you did well. This idea has been hard-wired into social media platforms. The ‘likes’, the hits, the comments that people receive on these platforms function as a kind of online reward. The patterns of online interaction appeal to the psychological inclination of members of such communities. This makes them continue to use these platforms and will often increase their use of them – taking a look at their own profile to check how many ‘likes’ they have received etc. This is evidence of a form of addictive behaviour.

A consequence of this is that people are no longer independent and autonomous as was presupposed in the argument above. If people are addicted to the feedback loops on certain social media platforms, they will not be able to make free and independent choices about which newsfeeds to use as sources of information. It should be obvious that epistemic autonomy and addictive behaviour are contradictory. The initial assumption that people can gain epistemic autonomy by using Internet tools – at least regarding technologies working in the way described – thus turns out to be false.

These mechanisms are not just a philosophical dystopia, but actually exist, as Jaron Lanier has pointed out. As a computer scientist and one of the pioneers of virtual reality, he seems to be a valuable source of information with regard to the questions at hand. Although – or perhaps also

because of – being deeply involved in designing the online world since its inception, Lanier became an influential critic¹⁷ of more recent developments of the Internet, in particular social media.

His criticism is the following: “How can you remain autonomous in a world where you are under constant surveillance and are constantly prodded by algorithms run by some of the richest corporations in history, which have no way of making money except by being paid to manipulate your behavior?” (Lanier 2018, 2). He calls into question whether people are actually able to act autonomously on the Web and also explains why there is a reason to worry: social media tools often work exactly to the purpose of their providers by implementing strategies that result in the users' addiction to the tools (see *ibid.*, 7ff.). This addiction is due to the random feedback that people receive on social media platforms¹⁸ – the ‘likes’ and hits on their profiles and comments etc. will ultimately make them change their behaviour in order to receive even more positive feedback.

Lanier adds that these mechanisms, reproduced by algorithms, are no longer a harmless way to advertise certain products, i.e. the economic purpose of offering personalised services on the Web, but are actually a psychological manipulation of its users. “The core process that allows social media to make money and that also does the damage to society is *behavior modification*” (*ibid.*, 10). Obviously, being addicted to online services and thus being manipulated and controlled (to purchase certain products etc.) is the opposite of being autonomous. This is why the main premise of the argument that people are able to become more epistemically autonomous by turning away from traditional experts and towards Internet technologies as an alternative does not hold.

17 In 2014, for example, he was awarded the “Friedenspreis des Deutschen Buchhandels” for his book “Who Owns the Future?”, see <https://www.friedenspreis-des-deutschen-buchhandels.de/die-preistraeger/2010-2019/jaron-lanier>, accessed February 21, 2022.

18 “The pioneers of the online exploitation of this intersection of math and the human brain were not the social media companies, but the creators of digital gambling machines like video poker, and then of online gambling sites. Occasionally, pioneers of the gambling world complain about how social media companies ripped off their ideas and made more money, but mostly they talk about how social media is helping them identify the easiest marks” (Lanier 2018, 15f.).

Let us now look at the second aspect, the question of who, or what, is at the heart of online communities and the virtual counterpart of people's longing for moral or emotional support. Again, it will be argued that an important premise does not hold. The related argument tries to establish the thesis that social media platforms are a better alternative compared to traditional expert advice because they offer both help with epistemic questions and the support that people often find missing in traditional experts' work.

The above considerations have already shed some doubt on the epistemic assumption expressed in this argument. There are also reasons to worry about the expectations regarding the psychological and emotional effects of online communities. These reasons can be derived from the fact that it is often algorithms instead of real human beings that are the backbone of the respective groups. A consequence of this is that the negative phenomena – filter bubbles, echo chambers etc. – are a product of what is sometimes called *artificial intelligence*. In many cases, it is not the opinions and ideas of real people that such communities are based on, but fake statements by software programmes called *bots*.

Lanier explains: “Fake people are present in unknown but vast numbers and establish the ambiance. [...] Invisible social vandalism ensues. Social pressure, which is so influential in human psychology and behavior, is synthesized” (Lanier 2018, 36). Moreover: “Massive fake social activities turn out to influence real people. They indirectly create a genuine social reality, which means they make money. People are successfully manipulated by them” (ibid., 57). He claims that human users are not able to detect computer-generated statements in their newsfeeds on social media platforms. They cannot see a difference between comments or ‘likes’ generated by algorithms and those by real people. Many human users are even still unaware that this manipulation by algorithms occurs in their online community.

Yet the effects of these automatically generated comments, ‘likes’ and hits on human psychology and behaviour are the same as those brought about by real people: members of the group will try to adjust to the prevailing opinion and will alter their behaviour, such as changing their Web profiles in a way they think will lead to more ‘likes’ etc. The social mechanisms governing the lives of people in such groups are controlled by technologies *pretending to be human*.

Even more worrisome is the fact that the problematic effects of these bubbles and chambers are often, at least to a relevant degree, driven by algorithms. Sunstein points out that opinions tend to become more extreme in echo chambers. A consequence of this is that extremism can be fostered by software programmes. This extremism is not even meaningful, that is, there is no political or social programme at work, but a random effect of technology, as Lanier points out. “Because the stimuli from the algorithms don't mean anything, because they genuinely are random, the brain [of the user] isn't adapting to anything real, but to a fiction” (ibid., 15). Consequently, the problem is that people get radicalised in their opinions by unwittingly supporting statements produced more or less at random by computer programmes. This does not seem to be a good prospect for future society!

A number of people turn to the Internet in order to search for moral and emotional support. The above considerations suggest that at least some of them will end up with fake friends. The emotional bonds they believe to have found in their online community might be the result of algorithms¹⁹ – a rather dystopian effect of the new media world that we might indeed call a *betrayal*.

5 Conclusion

To sum up: we started our considerations by taking a closer look at people who shy away from traditional expert advice, for example people who believe in conspiracy theories during the Covid-19 pandemic. These people represent the actual effect of what philosophers of science discuss under the term ‘crisis of expertise’. Beyond the reasons commonly mentioned in this debate for why people strive for more epistemic autonomy, two additional aspects have to be taken into account: the availability of a technological alternative to traditional expert advice, namely social media tools, and the fact that there is an assumed lack of moral or emotional support by traditional experts that motivates people to look for such alternatives.

The analysis showed that the recent trend to strive for more epistemic autonomy on the Web does not imply an epistemic individualism aimed at destroying our current practice of the division

19 Although the extent of this development might have reached a new dimension, the phenomenon itself is not that new. Humans have long shown a tendency to get emotionally involved with technologies. Just think of the *Tamagotchis*, the virtual pets of the 1990s.

of epistemic labour. Yet people want to decide for themselves whom to trust and whom to ask for advice. Their aim is supported by the belief that the Internet provides all the information required to answer people's questions. Moreover, social media tools seem to provide moral or emotional support. The Internet thus seems to fulfil both the epistemic and the social demands of its users.

However, taking a closer look at what this technology really has to offer shows that, in fact, neither of these demands are met. Due to the vast amounts of information available on the Web, certain strategies of personalisation were developed. They often lead to what has become known as *filter bubbles* which tend to narrow down the epistemic possibilities and resources of Internet users. They receive constant confirmation of their previously held beliefs.²⁰ No falsifying data, no disturbing news will reach them.

As social constructs – not technological features – these bubbles can be identified with Sunstein's *echo chambers*. Forming opinions in such contexts will always be biased and, as Sunstein pointed out, these biased opinions tend to become more radical over time. Filter bubbles and echo chambers thus mean a threat to the epistemic achievements and performances of the individual and also challenge socio-political activities based on information gained online. They reduce the diversity of opinions and possibilities of chance encounters with divergent points of view by screening off the different communities from one another. This means a crucial lack of relevant information for democratic decision-making.

Moreover, such closed communities of only like-minded people often tend to deteriorate with regard to their discussion manners. That is, in the unlikely case that they do take note of people defending a divergent point of view, no exchange of arguments will take place. The discussion will be dominated by insults, particularly in political disputes.²¹ Consequently, epistemic deficiencies resulting from the trend of a striving for more epistemic autonomy also pose a threat to another

20 Such a steady stream of confirmation was already criticised by Popper. Evaluating the status of allegedly scientific theories, he pointed out that the theories that are constantly confirmed and seem to be able to explain any phenomena are indeed pseudoscientific (see Popper 2002, 45ff.). The above problem of an unquestioned confirmation for epistemic purposes has thus become a turning point in the philosophy of science, marking the transition from verificationism to falsificationism.

important pillar of our democratic societies, namely the argumentative exchange of ideas and opinions, or *rational discourse*, as Jürgen Habermas puts it (see Habermas 1983).

Finally, many of these disturbing effects are triggered by algorithms. These software tools produce stimuli which are known to produce addictive behaviour amongst users. Consequently, the crucial premise that people are free to choose their sources of information on the Web turned out to be false. Addiction and autonomy are contradictory patterns of behaviour. The same goes for the apparent fulfilment of a demand for moral support on the Web. If technology is at the heart of these online communities, no proper support can be offered.

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21 *Hate speech and shitstorms* have become quite familiar phenomena these days (see e.g. Heinze 2016).

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