The Information Environment and Blameworthy Beliefs

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ABSTRACT

Thanks to the advent of social media, large numbers of Americans believe outlandish falsehoods that have been widely debunked. Many of us have a tendency to fault the individuals who hold such beliefs. We naturally assume that the individuals who form and maintain such beliefs do so in virtue of having violated some epistemic obligation: perhaps they failed to scrutinize their sources, or failed to seek out the available competing evidence. I maintain that very many ordinary individuals who acquire outlandish false beliefs thanks to their use of popular social media platforms (and other similar internet technologies) deserve little or no blame for believing these falsehoods. Such individuals would be fully blameworthy only if they had formed or maintained the relevant beliefs partly in virtue of violating some epistemic obligation and had no excuse for violating that obligation. However, the nature of these internet technologies provides excuses for violating the relevant epistemic obligations, and so individuals are excused for holding the resulting false beliefs.

1. Introduction

In a recent poll, 38% of Americans said that it was 'probably true' or 'definitely true' that Hillary Clinton campaign staffers' leaked emails included code words for human trafficking, pedophilia, and satanic ritual abuse.[1] The same poll found that 46% of Americans believe that millions of illegal votes were cast in the 2016 Presidential election. Another survey recently found that 43% of American parents with children under the age of four think that the risks of childhood vaccines are 'medium or high.'[2]

These aren't mundane mistakes, or near misses – they are outlandish falsehoods that have been convincingly debunked in the popular media (in other words, these outlandish claims have been demonstrated to be false on the basis of a good deal of evidence, and that evidence is available via popular sources of information). Accordingly, many of us have a tendency to fault the individuals who hold such beliefs. We naturally assume that the individuals who form and maintain such beliefs do so in virtue of having violated some epistemic obligation: perhaps they failed to scrutinize their sources, or failed to seek out the available competing evidence. However, before assigning blame we should consider how these outlandish beliefs have become so widespread. Prior to the advent of Google, Facebook, Twitter, and the like, such a large segment of the population would never have encountered such implausible and easily-debunked claims, never mind come to believe them. But thanks to recent changes to the ways that information is distributed online, false claims spread more easily and more widely than ever before.[3]

The fact that large numbers of perfectly ordinary people now hold beliefs that, not too long ago, would have been limited to a handful of dedicated cranks, is plausibly due to changes to the information environment. As such, when we consider individuals in isolation, we should hesitate to hold them personally responsible for believing these sorts of falsehoods. By way of analogy,

consider how recent changes to the food environment produced an obesity epidemic. Since human beings didn't evolve in an environment where fat and sugar are ubiquitous, we aren't well-equipped to maintain a healthy weight in such an environment. So, because avoiding unhealthy food in our current environment takes more time, resources, and self-control than most human beings possess, many ordinary individuals are not fully blameworthy for becoming obese. Similarly, human beings aren't well-equipped to avoid believing outlandish false claims in an environment where such claims are ubiquitous. So, because the most easily accessed sources of information are filled with such falsehoods, avoiding outlandish false beliefs takes more time, resources, and self-control than most human beings possess. And, consequently, many ordinary individuals can't reasonably be blamed for believing these sorts of falsehoods.

It is common to grant that individuals are not responsible for the false beliefs they form or maintain due to unusual cognitive deficiencies, or due to unusual circumstances (such as extreme cultural isolation).[4] My claim is that, thanks to recent changes to the information environment, it is now the case that very many ordinary individuals acquiring information in perfectly ordinary ways are not responsible for their outlandish false beliefs. More specifically, I maintain that when we focus on individuals in isolation, and consider what they can reasonably be expected to do on their own, we should conclude: very many ordinary individuals who acquire outlandish false beliefs thanks to their use of popular social media platforms (and other similar internet technologies) deserve little or no blame for believing these falsehoods.[5] Such individuals would be fully blameworthy only if they had formed or maintained the relevant beliefs partly in virtue of violating some epistemic obligation and had no excuse for violating that obligation. However, the nature of these internet technologies provides excuses for violating the relevant epistemic obligations, and so individuals are (at least partially) excused for holding the resulting false beliefs. Consequently, when assigning blame for the current epidemic of outlandish false beliefs we should resist our instinct to focus on individuals; instead, we should focus on the technologies and public policies that have created an information environment that makes widespread false beliefs inevitable.

2. Blameworthy Beliefs and Excuses

We do not possess direct voluntary control over our own doxastic states: we can't simply decide to believe, disbelieve, or suspend judgment regarding a given proposition. However, we possess a good deal of indirect control or influence over our doxastic states: our actions and failures to act often play an important role in determining what we believe. As such, we often deserve praise for believing truths and blame for believing falsehoods.[6] For instance, someone who carefully collects and evaluates the available evidence and consequently arrives at the truth deserves praise for her true belief. Conversely, someone who uncritically accepts a claim from a source he knows to be unreliable and consequently believes a falsehood deserves blame for his false belief.

Plausibly, an individual deserves blame for forming or maintaining a given problematic belief only if that belief is formed or maintained partly in virtue of the fact that she has violated some epistemic obligation.[7] *Epistemic obligations* are obligations to perform or omit actions in virtue of the fact that doing so is necessary to achieve epistemic success.[8] For example, when encountering objections to our beliefs under ordinary circumstances we have an epistemic obligation to attend to, rather than ignore, those objections. So, someone who is presented with a devastating objection to an important belief but ignores it simply because he doesn't like being contradicted is violating an epistemic obligation; and, consequently, he is blameworthy for maintaining the false belief which he would have abandoned had he attended to this objection.[9]

However, an individual does not deserve blame for a problematic belief any time she forms or maintains that belief partly in virtue of violating some epistemic obligation – an individual does not deserve blame for her problematic belief whenever she has an excuse for violating the relevant epistemic obligation.[10] For instance, suppose some individual is presented with a devastating objection to a highly cherished belief but ignores this objection, not because he doesn't like being

contradicted, but because he has been trained since childhood to reflexively ignore any and all objections to this particular belief. We can imagine a case of this sort where an individual violates his epistemic obligation to attend to objections and maintains his problematic belief partly in virtue of violating this obligation; yet, because he has an excuse, he does not deserve blame for violating this epistemic obligation, and so does not deserve blame for maintaining the problematic belief.[11]

For present purposes, two general features of excuses should be emphasized. First, most (and perhaps all) excuses for violating epistemic obligations fall into one of two traditional categories: *force* (or *compulsion*) and *ignorance*.[12] Force excuses a violation of some obligation when you have no voluntary control or influence over whether you fulfill the obligation, or when fulfilling the obligation would be so difficult that you can't reasonably be expected to do so.[13] For instance, extensive indoctrination or direct neurological manipulation might make it impossible for you to perform the actions required to fulfill a certain epistemic obligation; in such a case, because you were compelled to violate your epistemic obligation by forces beyond your control, you do not deserve blame for doing so. Alternatively, the actions required to fulfill a certain epistemic obligation might involve more time and greater powers of concentration than most ordinary human beings possess; in such a case, because most ordinary humans could not reasonably be expected to fulfill the obligation, you do not deserve blame for failing to do so.

Ignorance excuses a violation of some obligation when your failure to fulfill the obligation is due in part to the fact that you lack a relevant true belief.[14] For instance, you might fail to perform the actions required to fulfill a certain epistemic obligation but only because you don't realize that you have the obligation, or because you don't understand how to fulfill it; in such a case, so long as you are not culpable for the ignorance that prevents you from fulfilling your obligation, you do not deserve blaming for failing to do so.

The second general feature of excuses that should be emphasized is that the extent to which excuses mitigate blame comes in degrees. A *full excuse* fully mitigates blame, such that the subject is entirely blameless; a *partial excuse* partially mitigates blame, such that the subject is still partially blameworthy (but less blameworthy than he would be in the absence of the excuse).[15] This point is most obvious in cases involving force. Someone who reveals important information that she has sworn to keep secret is fully excused if she has been subjected to extensive torture – for instance, strong electric shocks over an extended period of time. But someone who reveals the same information is only partially excused if he has been subjected to much less extensive torture – for instance, mild electric shocks for a brief period of time. Applied to epistemic obligations, the point is that when some force makes it nearly impossible for us to fulfill our epistemic obligations, we are fully excused for failing to do so; and when some force makes it simply too difficult for us to fulfill our epistemic obligations, we are partially excused for failing to do so.[16] For instance, when downloading software you might have an epistemic obligation to read the relevant 'terms of use' document; but given that the document would take a great deal of time to read and even longer to understand, it would be unreasonable to expect most ordinary people to devote the time and energy required for this task. Perhaps you aren't entirely blameless for failing to read the document, but you deserve much less blame than you would if the document had been short and easy to understand.

3. The Current Information Environment

Large numbers of ordinary individuals acquire outlandish false beliefs thanks to their use of popular social media platforms (and other similar internet technologies). For instance, as we've seen, nearly half of all Americans believe that millions of illegal votes were cast in the 2016 Presidential election. Someone who maintains that these individuals are blameworthy for believing this outlandish falsehood claims, first, that these individuals hold this belief partly in virtue of having violated some epistemic obligation, and second, that these individuals have no excuse for violating the relevant epistemic obligation.[17]

Presumably, anyone who maintains that individuals violate an epistemic obligation in the sorts of cases at issue will claim that the relevant individuals have an obligation to seek out additional evidence, or that they have an obligation to avoid the problematic sources of information.[18] That is, a defender of this view will claim that, because the false beliefs at issue result from encountering false claims on social media (or the like), individuals have an obligation either to fact-check the relevant claims by seeking out additional evidence, or to avoid the problematic sources altogether; and, that because most ordinary individuals would have avoided forming or would have corrected their false beliefs if they had fulfilled their epistemic obligations, they are blameworthy for holding these false beliefs.

Most ordinary individuals are blameworthy, then, only so long as they have no excuse for failing to seek out additional evidence, or for failing to avoid the problematic sources of information. However, if we reflect on the nature of the relevant internet technologies, we will find that such individuals have excuses for violating these epistemic obligations. The crux of the issue is that the human brain was designed by natural selection to operate best in a specific range of circumstances, and our hard-wired cognitive tendencies make it especially difficult to avoid false beliefs in the current information environment. In the remainder of this Section I will review two such cognitive tendencies, and explain how they generate excuses for holding outlandish false beliefs in conjunction with currently popular internet technologies.

3.1. The Truth Effect

Our brains are particularly poorly equipped to handle circumstances in which we frequently encounter false claims. Thanks to the nature of our evolutionary history, we evolved a strong natural tendency to accept what people tell us.[19] One well-known manifestation of this tendency is the 'truth effect': the more frequently we encounter a particular claim, the more likely we are to believe it.[20] For instance, researchers have shown that people are significantly more confident in the truth of a statement like 'French Horn players get cash bonuses to stay in the U.S. Army' the second time they read it; and after reading it a third time, they are more confident still.[21] If our species had evolved in an environment in which false claims were more prevalent, we would only assume that a more frequently repeated claim is more likely to be true so long as we had multiple independent, reliable sources. Instead, our natural tendency is to ignore the quality of our sources, and to quickly forget where we heard or read a particular claim. Consequently, sheer repetition influences what we believe even when we have very good reasons to think that our sources are unreliable. In one study, subjects who read a particular statement on three separate occasions over the course of two weeks, and who were given explicit advance warning that the source of the information was unreliable, still judged that statement to be either probably or certainly true almost 70% of the time.[22]

Accordingly, the prevalence of misinformation and unreliable sources online is particularly dangerous for creatures with brains like ours.[23] Not too long ago, an ordinary resident of a typical Western democracy consuming information from mainstream sources would not be very likely to encounter fabricated news and conspiracy theories. If an individual with no credentials made an implausible allegation with no evidence, it would be unlikely to be repeated in the popular media. But in the current information environment, popular sources of information operate differently. When a man with no credentials claimed on Twitter that non-citizens illegally cast three million votes in the 2016 presidential election, his claim was retweeted more than ten thousand times – despite the fact that he provided no evidence of any kind.[24] His claim was soon picked up by popular news sites, such as InfoWars and the Drudge Report, and was eventually endorsed by Donald Trump.

Such cases are not isolated incidents.[25] Thanks to the proliferation of news websites that reproduce the same invented stories, and the countless social media posts calling attention to them (including an army of bots specifically designed for that purpose), many ordinary people encounter false claims regarding controversial topics at least as often as they encounter true claims. For instance, a study examining news story performance on Facebook in the final three months of the 2016 U.S. presidential

election found that the 20 most popular fake news stories – including 'Hillary Sold Weapons to ISIS' and 'Pope Francis Shocks World, Endorses Donald Trump' – generated more user engagement than the 20 most popular mainstream news stories Silverman (2016). Similarly, Oxford researchers who reviewed all election-related posts by Twitter users located in Michigan in the run-up to the 2016 election determined that links to fake news items were posted exactly as often as links to legitimate news items.[26] Research concerning the heated debates surrounding vaccine safety has produced similarly distressing results. A 2007 review of all vaccine-related videos posted to YouTube found that only half the videos presented vaccines in a positive light, and that negative videos had both higher user ratings and more views.[27] The results of a recent review of vaccine-related posts on Twitter was not quite as dire, but there was still a negative post regarding vaccines for every 2.5 positive posts.[28] More generally, a recent exhaustive survey of all news stories posted on Twitter between 2006 and 2017 found that false news stories typically 'reached far more people' than did true news stories – in fact, the study found that, 'even when controlling for the account age, activity level, and number of followers and followees of the original tweeter,' Twitter users were 70% more likely to retweet falsehoods than truths.[29]

The effects of repeated exposure to misinformation on ordinary social media users has recently been demonstrated in the lab. Yale University researchers presented subjects with a combination of real and fake news headlines using a Facebook-style display, and asked them to rate each stories' accuracy.[30] When some of these headlines were displayed again after a delay, the researchers found that a single additional exposure doubled the number of participants who rated the story as accurate. The researchers found this effect even for truly ridiculous headlines: only 5% of subjects thought 'Trump to Ban All TV Shows that Promote Gay Activity Starting with Empire as President' was accurate the first time they read the headline; but after reading it a second time, 10% thought the story was accurate. Moreover, while some of the fake news headlines came with warnings that the story was disputed, these warnings had very little influence on accuracy ratings: subjects tended to judge a fake news headline that they had seen once before to be more accurate than a novel fake news headline, even when the familiar headline was flagged as disputed and the novel headline was not.

3.2. Confirmation Bias

Our brains are also particularly vulnerable to accepting false claims that happen to be consistent with what we already believe. In the ways that we gather, evaluate, and remember information, we exhibit a fundamental preference for whatever conforms to our existing beliefs – a preference commonly known as *confirmation bias*.[31] For instance, we generally prefer to read or listen to claims that are consistent with our beliefs. A recent study found that roughly two-thirds of people will give up the chance to win a small sum of money if it means they don't have to listen to arguments inconsistent with their beliefs.[32] We also tend to accept claims that are consistent with our beliefs uncritically, while carefully scrutinizing claims that are inconsistent with our beliefs. For instance, many people will accept even an implausible, unsupported fabrication when it concerns a public figure they already dislike. The aforementioned Yale University study found that the first time Hilary Clinton supporters read the invented headline 'Sarah Palin Calls To Boycott Mall of America Because Santa Was Always White In The Bible,' 24% thought it was accurate (conversely, only 12.6% of Donald Trump supporters agreed).

Our tendency to hold onto our beliefs is not so strict that we are incapable of changing our minds; even if you have already made up your mind on a particular question, so long as you encounter enough contradictory evidence you will eventually modify your beliefs. But thanks to the advent of social media and personalization algorithms, our beliefs now influence the information we're exposed to in ways never before possible; and as such, internet users are much less likely to ever encounter contradictory evidence. The information you're presented with on social media is determined primarily by who your friends are and whom you follow. So, your beliefs play a significant role in determining what information you encounter because they determine what sorts of individuals make up your social network – for example, liberals tend to have more liberal Facebook friends and conservatives tend to have more conservative

friends.[33] In addition, Google, Facebook, Twitter, and the like, all use personalization algorithms to filter and rank the content you see – algorithms that use all the information the site has about you in order to guess what you'll be most interested in. For instance, the items that appear in your Facebook News Feed and the order in which they appear are determined in part by which of your friends you have interacted with the most, and how often you have clicked on links to specific websites.[34] The algorithm filters out items that you're unlikely to engage with, and it further encourages you to click on stories that most closely align with your evident beliefs by placing such stories at the top of the page.

Just how unlikely you are to encounter claims inconsistent with what you believe while using social media has recently been demonstrated in controlled experiments. Using a purpose-built news website, Ivan Dylko and colleagues monitored which stories subjects read and how long they read them.[35] For some subjects, news stories were displayed at random; for others, news stories were automatically filtered according to the subjects' political views (mimicking typical social media personalization algorithms). The researchers found that, compared to a random display, when content was filtered in the style of standard social media platforms, subjects clicked on stories consistent with their political views twice as often and spent twice as much time reading those stories. In addition, they clicked on stories inconsistent with their political views eight times less often and spent almost eight times less time reading those stories.[36]

One might think that the popularity of social media and the ubiquity of personalization algorithms have simply intensified *selective exposure* – an individuals' ability to select which news products to consume and which to ignore. But there is a difference in kind here, rather than degree. A social media user does not review his options and select what he likes and what he doesn't – unbeknownst to him, the very options he selects from have already been limited by the algorithm.[37] More importantly, the effects of an algorithmic filter are *cumulative*. The more you select stories consistent with your beliefs, the better the algorithm gets at filtering out stories inconsistent with those beliefs; and the less likely you are to encounter stories inconsistent with your beliefs, the more likely you are to select only stories consistent with your beliefs. In other words, the current information environment has given rise to a *confirmation bias positive feedback loop*. In such an environment, the falsehoods you encounter are very likely to be claims that you will accept uncritically, and you are very unlikely to encounter subsequent corrections. As recent studies have confirmed, false claims spread with alarming speed on Facebook and Twitter amongst large communities of like-minded individuals.[38] Moreover, corrections of false claims are unlikely to spread within precisely those communities where the falsehood is shared most widely.[39]

3.3. Excuses for the Resulting False Beliefs

Because false claims are repeated so frequently online, an ordinary person consuming information in an ordinary way will repeatedly encounter outlandish falsehoods. But we have a special difficulty avoiding false beliefs in such circumstances, given our brains' powerful natural tendency to reflexively conclude that frequently repeated claims are true. In addition, thanks to the advent of social media and personalization algorithms, an ordinary person consuming information in ordinary ways will regularly be exposed to precisely those falsehoods that are consistent with what she already believes – and due to our hardwired confirmation bias, she is most likely to reflexively accept precisely such falsehoods. Moreover, the false beliefs that inevitably result will inevitably go uncorrected, since these same features of the information environment make it unlikely that she will encounter sufficient contravening evidence. Consequently, many ordinary people have excuses for many of the outlandish false beliefs that they acquire by relying on social media (and other similar internet technologies).

Suppose one claims that individuals acquiring information via social media (and the like) are blameworthy for their false beliefs because they have violated their epistemic obligation to fact-check potentially false claims by seeking out additional information from alternative sources. Even so, typical internet users are excused both by force and ignorance for violating this obligation. While seeking out additional evidence for every potentially problematic belief you acquire via social media may not be impossible, it would be unreasonable to expect most ordinary social media users to do so. Merely

supplementing one's social media habits by consuming information from mainstream sources[40] will not suffice. As we saw above (§3.1), most anyone who uses social media will thereby be exposed to a wide range of potentially problematic claims; and it is not the case that the average consumer of mainstream news sources will encounter competing evidence for all or most of these potentially problematic claims. Instead, individuals would need to actively fact-check all or most of the controversial claims they encounter online; but doing so would be enormously time consuming since it would require regularly locating and reading through large numbers of independent sources. So, because most ordinary social media users can't reasonably be expected to devote the time, energy, and resources required to conduct adequate research regarding the beliefs at issue, they have an excuse for violating their epistemic obligation to seek additional evidence; and, as such, they have an excuse for holding any false beliefs that they would have eliminated or diminished had they fulfilled this obligation. Arguably, the difficulty of fulfilling this epistemic obligation constitutes a full excuse; but, at the very least, it is a partial excuse: ordinary social media users deserve much less blame for failing to fulfill this obligation than they would if seeking out additional evidence for every potentially problematic claim one encounters via social media did not require large amounts of time, energy, and resources.

In addition, most ordinary social media users are excused for violating this epistemic obligation by their ignorance of the fact that the claims at issue require fact-checking. The controversial claims you encounter via social media and popular news sites are likely to reflexively produce highly confident beliefs for at least two reasons. First, because your social networks tend to be composed of like-minded individuals, you can expect to be exposed to the same claims repeatedly on Facebook or Twitter; and the more frequently you encounter a particular claim, the more confident you are likely to be that it is true. Second, because such websites rely on personalization filters, you can expect to be exposed to one-sided information regarding many controversial topics. But our brains are hardwired to treat the coherence and consistency of a set of claims as an indication that they are true. In fact, experiments have shown that people are more confident in the accuracy of their judgements when they have been given one-sided information, even when they know they have been given one-sided information, and even when they know that the information they've been given is incomplete.[41] So, since many of the false claims you encounter online will be part of set of false claims that form a coherent story, such claims will be mutually reinforcing and increase the confidence of your resulting beliefs. When some individual forms an outlandish false belief due to her social media use, then, her confidence that this belief is true necessarily means that she does not recognize that her belief could be corrected by additional research. And because she is ignorant of her obligation to seek additional evidence, she is excused for violating that obligation; as such, she is excused for holding this belief.[42]

One might object that most people ought to know that misinformation is prevalent on social media (and the like), and so most people ought to be aware that the claims they encounter using such sources require further investigation. However, first, simply being aware that misinformation circulates via social media does not oblige you to fact-check most of the claims you encounter on social media. So, this objection is only reasonable if most people ought to know just *how prevalent* misinformation is on social media. But, this latter claim is false. For instance, research demonstrating that false news stories reach far more people on Twitter than do true news stories is quite recent, and at the moment, familiarity with such research is restricted to a small group; there is simply no reason for most ordinary individuals to have learned of it.[43] (Although, it's worth noting that there will still be many individuals who are aware of just how prevalent misinformation is on social media; and, accordingly, the extent to which you are excused for believing the sorts of false claims at issue might depend on just how much you know about the prevalence of misinformation on social media.) Second, even if you know that misinformation is widespread on social media it does not follow that you know that any particular claim you encounter on social media is potentially problematic and in need of independent verification. Consequently, even if one claims that there are many instances in which individuals ought to realize that the claims they encounter require fact-checking, there will still be many instances in which individuals encounter outlandish falsehoods and

yet it's not the case that they ought to realize that any fact-checking is required. Specifically, in cases where a subject has been repeatedly exposed to a particular outlandish falsehood, and where that falsehood closely conforms to what the subject already believes, it's not plausible that the subject ought to know that she ought to seek out additional evidence regarding the claim at issue. The nature of social media (and similar internet technologies) makes such cases quite common.

Alternatively, suppose one claims that individuals acquiring information via social media (and the like) are blameworthy for their false beliefs because they have violated their epistemic obligation to avoid problematic sources of information. Plausibly, most ordinary individuals would avoid forming many of the outlandish false beliefs at issue if they fulfilled this epistemic obligation. However, again, most ordinary individuals are excused both by force and ignorance for failing to do so. Given the evidence surveyed above (§§3.1–3.2), the only way to avoid forming outlandish false beliefs is to avoid being repeatedly exposed to false claims consistent with your existing beliefs – which, in turn, requires that you avoid social media (and similar internet technologies) altogether. But relying on Facebook, Twitter, and the like, is currently the cheapest and most convenient means of acquiring information; also, such platforms are frequently one of the principal means by which individuals stay connected to friends and loved ones. As such, refusing to use such sources of information requires more time, resources, and self-control than many ordinary people possess. No doubt there will be some segment of the population that does not need to rely on social media to stay connected to friends and loved ones, and which has the time and money required to acquire information exclusively from mainstream television, books, and periodicals; the present excuse will not apply to this segment of the population. But, just as most ordinary individuals can't reasonably be expected to never eat fast food, they can't reasonably be expected to never use Facebook, Twitter, and the like. So, because most ordinary individuals can't reasonably be expected to devote the time, energy, and self-control required to avoid social media altogether, they have an excuse for violating their epistemic obligation to avoid problematic sources of information; and, as such, they have an excuse for holding any false beliefs they would have avoided had they fulfilled this obligation. Plausibly, the difficulty of fulfilling this epistemic obligation constitutes a full excuse; but, at the very least, it is a partial excuse: ordinary individuals deserve much less blame for failing to avoid social media (and the like) than they would if doing so did not require so much time, energy, and self-control.

In addition, most ordinary individuals are excused for violating this epistemic obligation by their ignorance of the fact that social media constitutes a seriously problematic source of information, and by their ignorance of the dangers of being repeatedly exposed to false claims consistent with their existing beliefs. One might suggest that most ordinary individuals who aren't aware that misinformation is prevalent on social media are culpable for their ignorance.[44] However, even if most ordinary individuals ought to know that misinformation is prevalent on social media, it doesn't follow that such individuals ought to know that they have an epistemic obligation to completely avoid social media. The dangers of being repeatedly exposed to false claims consistent with your existing beliefs is known only to a small group of researchers and specialists; so too is the extent to which the average social media user will be repeatedly exposed to falsehoods consistent with their beliefs (thanks to the sheer quantity of misinformation and the use of personalization algorithms). It's not plausible that most ordinary social media users ought to become experts in information technology and psychology; hence, it's not plausible that most ordinary social media users ought to recognize that they should completely avoid social media. Consequently, most ordinary individuals are at least partially excused (and plausibly fully excused) for the false beliefs they form using social media: they deserve much less blame than they would if they understood the risks of acquiring information through Facebook, Twitter, and the like.[45]

One might object that you do not need to avoid social media and popular websites altogether in order to avoid forming false beliefs; instead, we simply need to be especially vigilant – to be skeptical of our sources, and to scrutinize implausible claims. However, the suggestion that people can regularly overcome their hardwired cognitive biases through sheer force of will is a dangerous form of wishful thinking.[46] Research has shown that the only effective strategies for reducing your tendency to accept false claims are extremely time and energy intensive, and require that you know

ahead of time that a given claim is false. For instance, one of the few effective strategies is to actively edit false claims when you read them.[47] Most people don't know ahead of time that the false claims they encounter online are false; nor would they have the time and energy required to inculcate themselves against the influence of such claims if they did.

4. Conclusion

Ultimately, then, we should grant that due to recent changes to the information environment, many ordinary people obtaining information in ordinary ways deserve little or no blame for many of their outlandish false beliefs. While ordinary individuals form and maintain these sorts of beliefs partly in virtue of violating their epistemic obligation to seek additional evidence or to avoid problematic sources, they are at least partially excused for violating these obligations; and, as such, they are at least partially excused for holding the resulting false beliefs.

However, it is important to emphasize that we have been considering individuals in isolation, focusing on what they can reasonably be expected to do on their own. Even though individuals deserve little or no blame considered in isolation, it's still plausible that groups of individuals are blameworthy for the sorts of false beliefs at issue. Some philosophers maintain that groups – such as media companies, or societies, or states – deserve blame for the false beliefs individuals hold even when the relevant individuals are personally blameless.[48] One natural suggestion would be that companies such as Facebook and Twitter are blameworthy for the false beliefs that individual users acquire in virtue of being repeatedly exposed to the false information widespread on these platforms.[49] A similarly natural suggestion would be that states are collectively blameworthy for allowing a problematic information environment – one that makes widespread outlandish false beliefs inevitable – to continue to exist. Crucially, the relevant companies and states taken as a whole don't have the excuses that individuals do: they have a kind of control over the nature of the information environment that individuals lack, they have access to expert knowledge that most individuals don't, and their time and resources are not limited to a similar extent.

Alternatively, one might claim that all of the individuals at issue are blameworthy for their false beliefs in virtue of failing to perform some joint action that constitutes a joint epistemic obligation.[50] That is, while there's nothing that ordinary individuals can reasonably be expected to do on their own to avoid being repeatedly exposed to false claims in the current information environment, these individuals can reasonably be expected to work together to change the nature of the information environment. For instance, in a democratic state, ordinary individuals can encourage the government to use some combination of laws, regulations, and incentives to minimize the spread of false information via social media. Since many ordinary individuals hold outlandish false beliefs at least partly in virtue of failing to fulfill this obligation to contribute to the requisite joint action, all such individuals share in the epistemic blame.[51]

An analogy might help illustrate the overarching claim here: imagine a particular region where people are allowed to drive cars, but where no traffic laws of any kind have been established. Without distinct lanes on the streets and highways, without speed limits, and without signs and traffic lights, it would be beyond the capabilities of most ordinary people to drive very far without getting into an accident. Safe driving in such circumstances would require more sustained attention than most people can maintain and faster reflexes than most people possess. Accordingly, we wouldn't blame individuals when they inevitably drove into something or someone; however, we would blame the state or citizenry for not creating safe roads. Perhaps the state is collectively blameworthy for failing to establish necessary traffic laws; or, perhaps the citizenry all share responsibility for failing to work together to establish such laws. In any case, we can't accurately identify who deserves blame by focusing on individuals in isolation.

The United States and a number of other nations currently allow methods of distributing information that many people can't make use of without acquiring outlandish false beliefs. Given recent changes to our information environment, our hardwired cognitive tendencies make

widespread outlandish false beliefs inevitable; since we can't modify the human brain, the only way to alleviate the current epidemic of false beliefs is to change the information environment itself.[52] So, just as states (or groups of citizens) ought to create a traffic environment that ordinary human beings can navigate without regularly getting into accidents, states (or groups of citizens) ought to use some combination of laws, regulations, and incentives to create an information environment that ordinary human beings can navigate without regularly forming outlandish false beliefs. Those states (or groups of citizens) that fail to do so are fully blameworthy for the widespread false beliefs that result.[53]

Notes

1. The Economist/YouGov (2016).
2. Funk (2017).
3. Specific examples illustrating this point are discussed below (§3.1).
4. See, for example, Alston (1985, 67–68), Goldman (1988), Russell (2001, 36), and van Woudenberg (2009).
5. Rini (2017) defends a related claim, but she focuses on reasonableness rather than epistemic blame: she argues that individuals often act reasonably when they come to believe fake news items distributed via social media. In addition, there is no overlap between Rini's argument and the argument I present below. In particular, her argument's central assumption is that granting greater credibility to the testimony of fellow partisans is an epistemically virtuous practice – the argument I present below does not rely on any such assumption.
6. The claim that we deserve praise or blame for our beliefs in virtue of performing or failing to perform certain belief-influencing actions is a standard view in the ethics of belief literature. See, for example, Kornblith (1983), Kim (1994), Leon (2002), Nottelmann (2007), Meylan (2015), and Peels (2017).
7. See Leon (2002), Nottelmann (2007, Chap. 14), and Peels (2017, Chap. 3).
8. For detailed characterizations of epistemic obligations or duties, see Feldman (2002), Nottelman (2007, Chap. 12), and Peels (2017, 101–108). Any discrepancies amongst these characterizations shouldn't matter for present purposes.
9. This example is taken from Kornblith (1983).
10. See Nottelmann (2007, Chap. 14) and Peels (2017, 124–130).
11. The extent to which ignorance provides an excuse in such cases is controversial. See, for example, Fricker (2007, Chap. 4).
12. For discussion, see Levy (2007), van Woudenberg (2009), and Peels (2017, Chaps. 4 and 5).
13. See Peels (2017, 134–137).
14. See Peels (2017, 165–169).
15. See van Woudenberg (2009, 382–383) and Peels (2017, 127–128). Peels (2017, 137) denies that partial force ever provides a partial excuse; however, because he maintains that being subjected to partial force can still make one blameless, his view is consistent with the conclusion defended below.
16. As Alston says, 'one can properly be blamed for a belief only if that belief stems, in the specified way, from failures to do what could reasonably be expected of one; simply failing to do what would be ideally adequate is not enough' (1988, 286).
17. Alternatively, following Montmarquet (1993), one might claim that these individuals are blameworthy because they acquire their outlandish false beliefs partly in virtue of exercising intellectual vices. For the sake of brevity, I will ignore this view in what follows; however, I believe the arguments presented below demonstrate that such a view is false.
18. Miller and Record (2013) and Levy and Mandelbaum (2014) defend claims along these lines.
19. For further discussion, see Mandelbaum (2014) and Mandelbaum and Quilty-Dunn (2015).
20. For a recent review of the relevant research, see Renner (2016).
21. Hasher, Goldstein, and Toppino. (1977).
22. Henkel and Mattson (2011).
23. Levy (2017) emphasizes this point.
24. Collins and Nuzzi (2017).
25. For further discussion, see Sunstein (2017).
26. Howard et al. (2017).
27. Keelan et al. (2007).
28. Love et al. (2013).
29. Vosoughi, Roy, and Aral (2018, 1149).
30. Pennycook, Cannon, and Rand (2018).

31. For a recent review of the relevant research, see Mercier (2016). For a related discussion of the impact of confirmation bias on epistemic responsibility, see Miller (2014, §4).
32. Frimer, Skitka, and Motyl (2017).
33. Gaines and Mondak (2009). For evidence that typical Twitter users are much more likely to encounter political claims consistent with rather than inconsistent with their existing beliefs, see Himelboim, McCreery, and Smith (2013) and Halberstam and Knight (2016).
34. Bakshy, Messing, and Adamic (2015).
35. Dylko et al. (2017).
36. Some researchers downplay the influence of echo chambers: see Dubois and Blank (2018). For a compelling case regarding the various dangers of echo chambers, see Nguyen (Forthcoming).
37. Pariser (2011) emphasizes this point.
38. Del Vicario et al. (2016) and Shin et al. (2017). For discussion, see Sunstein (2017, Chap. 4).
39. Shin and Thorson (2017).
40. As Miller and Record (2013) suggest.
41. Brenner, Koehler, and Tversky (1996).
42. Levy (2007) emphasizes this point. See, also, Hall and Johnson (1998, 133).
43. Vosoughi, Roy, and Aral (2018).
44. For instance, one might claim that anyone who hasn't investigated the prevalence of misinformation on social media (and the like) is effectively choosing not to know something they'd rather not know, or is exercising an intellectual vice such as laziness. For discussion of how these general sorts of cases constitute culpable ignorance, see Moody-Adams (1994, 301–302) and Fitzpatrick (2008, §4). For discussion of this point specifically in relation to current information technology, see Miller and Record (2013).
45. Levy and Mandelbaum (2014, 28–29) maintain that we have an epistemic obligation to avoid problematic sources for many of the same reasons outlined above, but only so long as we know of the dangers that such sources pose. While the claim that one doesn't have the obligation if one is ignorant is distinct from the claim defended above, Levy and Mandelbaum's view is still consistent with the ultimate conclusion that ordinary individuals are not blameworthy for the outlandish false beliefs they acquire via social media.
46. For reviews of some of the difficulties involved in overcoming cognitive biases, see, for example, Lilienfeld, Ammirati, and Landfield (2009) and Kenyon (2014).
47. See Rapp (2016).
48. See, for example, Fricker (2016) and Levy (2018, §3).
49. See Miller and Record (2017) on the topic of search engine autosuggestions.
50. For an explanation and defense of the notions of joint epistemic obligations and shared blame, see Miller (2008, 2015) and Millar (Forthcoming).
51. However, each individual may not be equally blameworthy. For discussion of this issue with respect to shared *moral* blame, see Beerbohm (2012, Chap. 9), and Mellema (2016).
52. While she is not concerned with shared or collective blame, Rini (2017) draws a similar conclusion regarding the need for institutional change in order to address the problem at issue.
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