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Breaking the Epistemic Pornography Habit: Cognitive Biases, Digital Discourse Environments, and Moral Exemplars

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Breaking the Epistemic Pornography Habit: Cognitive Biases, Digital Discourse Environments, and Moral Exemplars Andrew D. Spear Grand Valley State University

<u>Purpose</u>: This paper analyzes some of the epistemically pernicious effects of use of the Internet and social media. In light of this analysis, it introduces the concept of *epistemic pornography* and argues that epistemic agents both *can* and *should* avoid consuming and sharing epistemic pornography.

<u>Design/Methodology/Approach</u>: The paper draws on research on epistemic virtue, cognitive biases, social media use and its epistemic consequences, Fake News, paternalistic nudging, pornography, moral philosophy, moral elevation, and moral exemplar theory to analyze the epistemically pernicious effects of the Internet and social media.

<u>Findings</u>: There is a growing consensus that Internet and social media activate and enable human cognitive biases leading to what are here called "failures of epistemic virtue". Common formulations of this problem involve the concept of "Fake News", and strategies for responding to the problem often have much in common with paternalistic "nudging". While Fake News *is* a problem and the nudging approach holds out promise, the paper concludes that both place insufficient emphasis on the agency and responsibility of users of the Internet and social media, and that nudging represents a necessary but not sufficient response.

<u>Originality/Value</u>: The essay offers the concept of epistemic pornography as a concept distinct from but related to "fake news" – distinct precisely because it places greater emphasis on personal agency and responsibility – and, following recent literature on moral elevation and moral exemplars, as a heuristic that agents might use to economize their efforts at resisting irrational cognitive biases and attempting to live up to their epistemic duties.

Keywords: Cognitive Bias, Fake News, Epistemic Virtue, Epistemic Pornography, Nudge, Pornography, Moral Elevation, Moral Exemplar

"...do not send to know for whom the bell tolls; it tolls for thee." (John Donne, Meditation 17)

1. Introduction: The Paradox of the Internet and Social Media

The Internet and social media make possible unprecedented access to information, analysis, alternative points of view, and even to new forms of social and political organization (McIntyre 2015; Sunstein 2018). At the same time, they appeal to, enable, and even encourage human cognitive biases thus leading to both proliferation of false and misleading information, and to degradation of the quality and efficacy of public discourse (Polage 2012; Lazer et al. 2018; McIntyre 2015, 2019; Sunstein 2018; Vosoughi et al. 2018). From the standpoint of their most prominent impact on discourse,ⁱ it seems clear that the Internet and social media currently play this latter epistemically pernicious role more frequently and more forcefully than they do the former epistemically positive one.

This paper analyzes and proposes a partial solution to the epistemically pernicious effects of the Internet and social media. In what follows, a basic set of *epistemic virtues* is first introduced. Having subjects instantiate these or similar virtues is desirable, probably necessary, for achieving the goals of objectivity and the likelihood of truth in the formation of beliefs. They

are plausibly seen as independent of and so underlying more specific scientific, political, cultural or moral disagreements,ⁱⁱ and thus represent an ideal or image, if a partial one, of epistemic agents as they might be, and of the sorts of epistemic practices we might hope for from epistemic agents as they engage with Internet and social media as well as in belief formation and discourse generally. In response to this image of epistemic virtue, some results of current research and theorizing in social and evolutionary psychology are considered. The image of human cognition these results suggest raises doubts about the extent to which we are able to live up to the epistemic virtues outlined, but also helps to explain *why* the Internet and social media are so epistemically pernicious.ⁱⁱⁱ The concept of "Fake News" and the so-called *nudge* approach to dealing with the pernicious epistemic effects of the Internet and social media are then considered. While Fake News *is* a problem and the nudging approach holds out promise, it is argued that both place insufficient emphasis on the agency and responsibility of users of the Internet and social media. What is needed in addition is a more agent-centered approach that emphasizes individual responsibility and at least the aspiration to instantiate intellectual virtues.

In light of this discussion, the concept of "epistemic pornography" is introduced to identify a particularly pernicious unit of discourse that flourishes in on-line and social media environments. Whereas the concept of fake news primarily suggests passive deception of its victims, epistemic pornography emphasizes how information presented in certain ways can enlist the active engagement of epistemic agents by appealing to their unguarded psychological needs and cognitive biases. There is a close analogy between epistemic pornography and traditional pornography, and recognizing this helps to highlight epistemic pornography's harmful effects. In light of these harmful effects, all three major moral theories in philosophy can be seen to imply that we have moral duties not to consume or share epistemic pornography.

Finally, the possibility of a more agent- and personal-responsibility-centered approach is defended by way of a review of empirical literature that suggests cognitive biases *can* be resisted and diminished through awareness, intentional effort, and training. In particular, recent work on *moral elevation* and *moral exemplar theory* in psychology and philosophy provides reason to think that the concept of "epistemic pornography" may itself offer a useful heuristic for overcoming our cognitive limitations and living up to our epistemic duties.

2. Human Beings as We Would Have Them: Some Intellectual Virtues Contemporary virtue epistemologists have developed the notions of epistemic character and virtue in the context of accounts of justified or warranted belief (DePaul and Zagzebski 2003).^{iv} On such accounts to be, e.g., justified in holding a belief is for that belief to have been formed as a result of some truth-directed and conscientiously exercised intellectual virtue. One way of understanding the ideal intellectual conduct it would be desirable for a person to exhibit is to describe the set of intellectual virtues that such a person should have and exercise. Even those deeply divided on scientific, political, or cultural matters can generally agree that our thinking should be aimed at being objective, consistent, and at holding true rather than false beliefs.^v Here, a list of intellectual virtues consistent with the virtue epistemological approach is briefly sketched. The virtues identified represent relatively common ground concerning how an ideal epistemic agent would conduct herself.^{vi} Were agents to consistently exhibit these virtues, the most pernicious effects of discourse on the Internet and social media could be significantly mitigated. Intellectual virtues are here divided, somewhat artificially, into those that are primarily self-regarding and those that are other-regarding.

Concerning self-regarding intellectual virtues, here are five significant ones. First, *Intellectual honesty* is the tendency to hold beliefs for reasons or based on evidence, while

controlling for one's personal preferences, wishes, and biases. Second, *open-mindedness* consists in being willing and able to revise beliefs in the face of new or contrary evidence. Epistemic agents are by nature fallible and so should be ready to adjust their beliefs accordingly. Third, *intellectual imaginativeness* is the ability to think of or imagine alternative possibilities that are at variance with one's own views, and to give such possibilities serious consideration. *Conscientiousness* is the synthetic ability to weigh available evidence, positive and negative, in one's belief formation, to determine the (approximate) relative likelihood of one's beliefs all relevant factors considered, and to adjust one's credence accordingly. Fifth, and finally, *intellectual humility* is a kind of second-order or monitoring virtue that consists in the abilities to (i) properly assess the strength of the justification that one possesses for one's beliefs and (ii) to accurately recognize one's own epistemic abilities and limitations.^{vii}

Other-regarding epistemic virtues divide into how we treat others when we take in reasoning, testimony, etc. *from* them, and also when we present our own reasoning, views, etc. *to* them. Three of the former and two of the latter are considered. When listening to testimony or argumentation from others, *charitability* means extending the default supposition of rationality and sincerity to one's interlocutor, while *critical trusting* means nevertheless being on the lookout for possible defeaters concerning either the sincerity or intellectual competence of the interlocutor. *Bias avoidance* is equivalent to what Miranda Fricker has called *testimonial justice* (Fricker 2007), and amounts to actively monitoring so as to avoid allowing bias or prejudice to cause one to excessively downgrade or upgrade one's view of the credibility and intellectual competence, and so trustworthiness, of one's interlocutor.

When one is testifying to others or trying to convince them, one should practice the related virtues of *sincerity* and *epistemic non-maleficence*. Sincerity means that, in presenting information and arguments to others, one does so only when that information and argument is backed by one's own epistemic virtues, and in a way that is sincere and truthful. Epistemic non-maleficence means refraining from appealing to the epistemic deficiencies and cognitive biases of others in order to enlist their belief in what one is arguing for.

The foregoing epistemic virtues, briefly sketched, encode the central goals of impartial use of reason and evidence in the hope of arriving at unbiased and true beliefs, as well as the principles of dialogical respect and engagement that such goals imply for one's dealings with others as interlocutors.

3. Cognitive Biases and their Role in the Epistemic Effects of Internet and Social Media

In this section some main results of current research and theorizing in social and evolutionary psychology are introduced. The image of human cognition that this research gives rise to challenges the extent to which we are likely to be able to live up to the epistemic virtues just outlined, but also helps to explain *why* the Internet and social media can be so epistemically pernicious.

3.1 Human Beings as they Are: The Evolutionary and Social-Psychological Image of Human Epistemic Practices

While the foregoing discussion of epistemic virtues encodes a classical conception of human rationality, impartiality, and respect for evidence, contemporary thinking deriving from social and evolutionary psychology suggests that human beings are rather ill-disposed to the task of living up to this ideal. First, some relatively well-established experimental results concerning human rationality are considered. These results are then placed in the context of some recent theories of human reason. Concerning rationality itself, there is good evidence that *confirmation bias* is rampant: that individuals pursue or view as salient evidence that supports what they already believe, while they fail to look for evidence that conflicts with their beliefs, or fail to notice it when it is presented (e.g. Nickerson 1998). When forced to confront defeating evidence for their beliefs, people have been shown to double-down (the so-called *"backfire effect"* (Nyhan & Reifler 2010; Redlawsk et al. 2010)) and to raise rather than lower their credence, thus suggesting a kind of resistance to counter-evidence even when it is present and to some extent acknowledged.

Subjects have also been shown to form beliefs and make choices for reasons that are not transparent to them, and then *confabulate* or rationalize after the fact, offering false but plausible stories for why they believe (and act) the way they do (Nisbett & Wilson 1977; Hirstein 2009a; Sullivan-Bissett 2015). The phenomenon of *implicit bias* further suggests that people form beliefs and make judgments on the basis of stereotypes they are themselves unaware of or even claim not to accept (Jost et al. 2009; Holroyd et al. 2017). The *reiteration effect* suggests that mere repeated exposure to information makes subjects more likely to rank it as true or likely to be true (Hertwig et al. 1997), while *source amnesia* is a phenomenon in which subjects remember a piece of information, but do not remember the source or context from which they acquired it (Schachter et al. 1984).^{viii}

To the foregoing can be added the now relatively well-established result that people tend to over-estimate their abilities, including their reasoning abilities, and that this effect tends to be most exaggerated precisely in people whose actual skills are relatively worse (Kruger & Dunning 1999); such self-attributions also tend to persist even when the initial basis for them has been discredited (Ross et al. 1975). There thus seems to be a great deal of evidence for the existence of deep-rooted and widespread *prima facie* obstacles to individuals reasoning in accordance with the intellectual virtues outlined above. Prominent recent theoretical models of human cognition, motivated in part by the foregoing data, also paint a bleak picture of our abilities to live up to the ideals of intellectual virtue. Here are three.

- The Dual Processing View

Daniel Kahneman has been the most prominent advocate of the so-called dual-process view of human cognition (2011). The central idea is that there are two kinds of information processing or cognition that go on in the human mind. Type-1 processes are quick, automatic, heuristic processes that we deploy with little or no conscious thought. These processes tend to have some advantages and to be "good enough" for many ordinary purposes, but also tend to be conservative and inflexible, and so to lead us into unusual or non-ideal beliefs and decisions. By contrast, type-2 processes are slow, deliberative, and conscious. These tend to kick in only when type-1 processes are stymied by social or environmental factors, forcing the agent to go into a more explicit and conscious mode of thinking. Such "type-2" cognition is generally more systematically or objectively rational, but it takes a lot of time and effort, and can be easily stymied by additional situational factors or by conflict with type-1 processes. Type-1 processes cut deep; they are arguably part of who we are and how we are built. Thus, while it may be possible to control for them by constant vigilance and regularly reverting to type-2 reasoning. they present, from the standpoint of more idealized epistemic virtue, a kind of constant epistemic hazard. In terms of the experimental results just discussed, it is not difficult to imagine either confirmation bias or implicit bias (e.g. implicit racial bias against a particular group) as the result of type-1 cognitive processes working in a relatively automatic way. Jonathan Haidt's view that moral and political judgments are largely automatic and intuitive rather than reflective and

rational suggests that they are typically type-1 processes, and so raises similar worries for the overall rationality and objectivity of belief and argument on these topics (Haidt 2001).

Mercier and Sperber's Hypothesis

Another recent way of thinking about human cognition and reasoning, namely the evolutionary psychological view of Mercier and Sperber, also takes its point of departure from the fact of rather widespread human cognitive biases. If such irrationalities are so common, then it is unlikely, Mercier and Sperber argue, that the primary evolutionary purpose of reason is to achieve objectivity or discover truth. Rather, they maintain that human reasoning was selected for primarily for its persuasive or rhetorical role in social contexts: its ability to unify, organize, and convince fellow group members, and to maintain and leverage one's own social status within the group (Mercier and Sperber 2011). Thus, the primary purpose of human rationality is rhetoric not logic, persuasion not proof. Given such a view, phenomena such as confirmation bias, implicit bias, self-justifying confabulations etc. are expected rather than surprising, even as they are generally at odds with the epistemic virtues introduced in the previous section (see e.g. McIntyre 2015, Ch. 2).

- Terror-Management Theory

Finally, terror-management theory, introduced by Ernest Becker (1973) and developed by Landau, Solomon, Greenberg, and Pyszczynski (1986; 2007; 2015), suggests, somewhat dramatically, that human psychology is best understood in terms of our awareness of our own mortality, and that managing this awareness, individually and collectively, is a major function of our cognitive faculties. This awareness is dealt with most effectively and most conclusively in the context of strong interpersonal constructs of meaning and identity, rendering commitment to and preservation of these primary cognitive and existential concerns. Thus, according to terror management theory, impartial rational belief formation becomes difficult in cases where serious consideration of alternative possibilities and evidence against one's own worldview amounts to a challenge to the stability of that worldview and so ultimately to one's means of coping with the "terror" of confronting an uncertain, cold, and indifferent universe. To the extent that this is correct, it makes perfect sense that many of the epistemic virtues introduced above would be muted while the various cognitive biases and irrationalities that have been so thoroughly documented by evolutionary and social psychologists would be expected insofar as these serve to either preserve or protect the core meaning-giving and identity-defining worldview of the agent or agents in question.

In short, the view of human cognition that emerges from evolutionary and social psychological considerations suggests epistemic agents are naturally prone to irrationalities and to preserving their preferred belief set and commitments. Further, they are averse to cognitive dissonance, and likely to let social factors, personal commitments and motivations of a non-rational nature, as well as simply the path of least resistance determine the direction that their thinking and belief-formation takes. Groups of like-minded individuals who hold similar beliefs will typically only augment and reinforce these tendencies. The demands of intellectual virtue discussed in the previous section are thus harsh indeed for the epistemically flawed and to some extent bewildered creature that contemporary evolutionary and social psychology paint us as being.

3.2 Homo Sapiens in the Digital Information Jungle: How the Internet and social media harness and amplify Cognitive Biases

In light of the foregoing, it is not difficult to see how it is that the Internet and social media both exploit, nurture, and encourage flawed epistemic practices. Here four prominent though by no

means exhaustive ways in which Internet and social media latch onto human cognitive biases in epistemically pernicious ways are considered.

First, the Internet makes available large amounts of content, but places no particular constraints on what individuals do or don't access. Individuals are free to choose from a huge array of options via a web search or based on recommendations from an on-line platform, but without ever having to look at all or even many of the alternatives. It is thus not surprising that beings driven by confirmation bias, aversion to cognitive dissonance, and a craving for validation of their beliefs and identity would naturally prefer sources of information and on-line contexts that affirm these. The Internet ensures that they will have no trouble finding them, not just occasionally, but every moment of every day. Further, the natural human tendency to seek confirmation is also reinforced by those Internet platforms that use algorithms and other strategies geared to offer users additional content based on their pre-existing searches and preferences (Cybenko & Cybenko, 2018; Sunstein 2018; Lombardi 2019). So-called "echo chambers" or "information silos" are a natural consequence. To all of this must be added the unsettling evidence suggesting that people who seek information on the Internet tend to mistake "access to information" for a direct increase in "their own personal understanding" of that information (Fisher et al. 2015). Thus, not only does the format of Internet and social media activate and enable cognitive biases, it seems simultaneously to encourage users to make flawed assessments of their own levels of understanding and knowledge.

Second, and related to the first point, the Internet and social media make agenda-driven and identity- and preference-tailored information very easy to generate, whether for ideological or profit-based motives. It is relatively easy to generate an on-line information or news site. If one has an agenda, they can use such a site to promote, disseminate, and amplify perceived support for that agenda. At the same time, one can seek to set up sites that satisfy existing needs and preferences of Internet users. Even if one has no agenda, the information market is no different from any other, and satisfying people's belief- and identity-affirming preferences can be profitable as well as ideologically convenient (Lombardi 2019; McIntrye 2019, Ch. 5).

In addition to the foregoing, a third feature of the Internet and social media is their ability to draw together like-minded individuals even if these individuals are geographically dispersed. The Internet has no spatial or geographical boundaries. It can thus be a meeting place for likeminded individuals whose views are in fact outliers to find community and mutual support for their views that would not have been available just a few decades ago. As such, fringe, radical, and conspiracy-based sub-cultures have a much easier time organizing, engaging in belief- and identity-affirming discourse only with each other, and being more publicly visible, thereby growing. The messages such groups have to offer can also be artificially amplified via social media platforms by the diligent efforts of even a small number of dedicated advocates, especially if these are combined with more sophisticated means of dissemination such as the use of fake accounts and bots (Cybenko & Cybenko 2018; Sunstein 2018).

Fourth, and finally, the Internet and related technologies make it possible to replicate and repeat the same message generated by the same person or group both cheaply and efficiently, and thus to generate the appearance that a message or piece of information is widely shared and corroborated by multiple sources when it is not. This repetitive feature of the Internet is especially important as it feeds both confirmation bias (a subject who follows only a few selected news sites, but who receives "updates" from them once every quarter hour, has a continuous flow of perceived confirmation coming in; something no traditional newspaper or source could previously easily do) and plays off of the combination of source amnesia and the repetition

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effect, thus potentially affecting the beliefs of even previously unconvinced individuals (Polage 2012; McIntyre 2015; Cybenko & Cybenko 2018).

In short, the Internet and social media are vast, preference-based, easy to access, efficient to use, able to connect like-minded individuals from far-flung geographical areas, prone to the creation of partisan echo-chambers, and able to repeat, reproduce, and amplify particular messages and information. These features make them prime exploiters of the human cognitive biases discussed above.^{ix}

4. Two Paths to Epistemic Improvement

What the foregoing seems to suggest is that while the Internet and social media did not make us prone to intellectual blindness, self-serving rationalization, or dogmatic partisanship, if we do not take proper precautions it seems clear they will keep us this way—and make us even worse. So, what are we to do? Natural human cognitive tendencies push in one direction, while the importance of resisting these tendencies in the name of achieving better epistemic results individually and collectively push in another. How to achieve this? There are two major options or lines of approach that are regularly discussed. While these approaches are not mutually exclusive, it is important to appreciate the differences between them, and the limitations of each.

One approach to the problem is to attempt to restructure the contexts, particularly the digital contexts, in which human beings cognize and make decisions in such a way as to neutralize, harness, or redirect cognitive biases. This amounts, in various guises, to a version of Thaler and Sunstein's idea of "nudges" (Thaler and Sunstein 2008; McIntyre 2015, Ch. 7; Lombardi 2019). On this view, if we want people to make the right choices and pursue the right goals, we need to structure the context of reasoning and decision-making in which they operate in such a way as to, without explicitly coercing them, push or nudge them toward the right kinds of information, reasoning, and decisions. Thus, if we want people to make epistemically rational and genuinely informed decisions on the basis of their interactions via the Internet and social media, we need to structure the format of this information and the ground rules of these spaces in such a way as to point them in the right direction. Perhaps this means banning certain types of content altogether, or flagging low-quality or highly partisan content in some extremely noticeable and hard to ignore manner, or setting up more robust accountability structures for those who share information in digital discourse spaces. Such an approach typically has, as one of its main goals at least, protecting Internet and social media users from so-called "fake news" (Rini 2017; Lazer et al. 2018; Cybenko & Cybenko 2018; McIntyre 2019, ch. 5), where fake news is understood, roughly, as intentionally designed false or misleading information that mimics the appearance and style of traditional journalism, but without concern for its objectives or editorial standards (Lazer et al. 2018).

The alternative approach – not a strict alternative, as the two approaches are compatible in certain ways, but nevertheless importantly different – is to focus on the intellectual obligations, virtues, and vices of discourse participants. This is the approach that that will be advocated for and further articulated in this essay. If individuals made more of an effort to be aware of and control for their own cognitive biases, and to apply this to the way in which they consumed, shared, and reasoned about news in digital discourse environments, low-quality and partisan-heavy sources and arguments would be less effective and, hopefully, less frequent. The approach emphasized in what follows takes individuals' epistemic agency and responsibilities as primary and seeks to formulate a response to the epistemic ills of digital discourse in terms of them. In order to provide initial motivation for such an approach, the next two sub-sections present reasons why thinking about and responding to the pernicious epistemic effects of the Internet and social media in terms of *fake news* and *nudging* are at best necessary, but not sufficient, for addressing the problem.^x

4.1 The Passive Orientation of the Concept "Fake News"

Lee McIntyre has recently defined 'fake news' as "disinformation that is deliberately created to look like actual news in order to have a political effect" (McIntyre 2019, 173), while Lazer et al. (2018) provide a similar definition of fake news as "...fabricated information that mimics news media content in form but not in organizational process or intent" (Lazer et al. 2018). Fake news is a real problem with a long history (McIntyre 2019, ch. 5) that is significantly amplified and exacerbated in digital discourse environments as they currently are (Cybenko & Cybenko 2018; Lazer et al. 2018; McIntyre 2019, ch. 5). At the same time, the concept is insufficient as a way of thinking about the epistemic problems created by digital discourse environments, and the prominent role it currently plays in discussion of these problems itself threatens to contribute to perpetuating them.^{xi}

The main problem with the concept "fake news" is that the characterization of fake news as false or misleading information that "mimics" elements of traditional news or journalism focuses largely on the intentions of those who create it and, especially, on the deceptive nature of such "news" itself, while strongly suggesting passive deception and victimhood when it comes to those who consume and share it. Now, if fake news really were subjectively indistinguishable from "real" news in the way that a dream or virtual reality computer simulation might be subjectively indistinguishable from being awake or from ordinary visual perception of reality, then individuals who "fall victim" to it would indeed arguably be innocent, at least not blameworthy, for believing and even sharing it as though it were credentialed news reporting. However, at least in the case of the vast majority of fake news, this is not where things are. If not always in appearance, then at least in its content and in the sources from which it comes, there are many ways to recognize a piece of news as fake or at least dubious, such as paying attention to the sources it does or does not cite, considering whether one is aware of the source from which the news item comes, considering the editorial practices or known political commitments of the source, considering the plausibility of the report relative to shared background information and facts, checking the source against reporting from other sources already trusted as reliable etc. Further, the fact that unverified and false information is flowing freely on the Internet and social media is itself *widely and publicly* known. For any individual who is aware of this, refusal to engage in even limited skepticism and verification concerning online information and discourse is equivalent to someone who, having been told that a film is fictionalized history in which many characters and events have been altered, goes on to watch the film and take all that it portrays as documentary historical fact. Such an individual not only could have but arguably does or very easily can know better. Fake news is currently a problem not because it is impossible or even extremely difficult for individuals to detect - in the way that a radical skeptical scenario might be - but rather, as already argued, it is a problem primarily because of existing human cognitive biases that, left unchecked, make it very easy for individuals to fall short of epistemic standards and virtues, especially in on-line environments.

If this is right, however, then to the extent that the concept of "fake news" with its associated ideas of manipulation and deception encourages an image of its consumers and sharers as essentially passive victims of something undetectable and so outside their control, it encourages a climate of epistemic irresponsibility amongst media consumers and digital discourse participants that is harmful. Agents who believe that they lack control over their actions have been shown to be more willing to cheat, to exhibit higher levels of aggression and diminished helping behavior, and even to feel less gratitude for others and for events in their lives (Vohs & Schooler 2008; Baumeister et al. 2009; MacKenzie et al. 2014). Encouraging a belief in helplessness or lack of control can thus have real consequences. Yet, the dominant concept of "fake news" and its very

 prominent role in public discourse about disinformation on the Internet and social media does just this. What is needed, in addition to the concept of "fake news", is a concept for thinking about epistemic agents' behavior in digital discourse environments in terms that stress agency, accountability, and responsibility. The concept of "epistemic pornography", to be introduced below, is intended to be such a concept.

4.2 Why Nudging is not Enough

The primary problem for the nudging approach is that, taken by itself, it largely ignores the *cultivation* of individual autonomy and responsibility, and fails to encourage epistemic reform of the cognitive biases it targets. Susceptible to bias and contextual influences though they may be, Internet and social media users remain agents (and citizens) with cognitive capacities they are responsible for exercising and epistemic duties they ought to fulfil. Merely altering their environments in order to make them epistemically "better" not only ignores but may undermine these capacities.^{xii}

Consider Phil, an individual who both suffers from an implicit bias against women, and typically manages to confabulate concerning his biased judgments and actions.^{xiii} Such an individual will have false beliefs about himself, inaccurate assessments of available evidence on given occasions (e.g. concerning the quality of resumes from female job applicants, or the appropriateness of his behavior in social contexts), and will make judgments that have objectively unfair and harmful effects as a result. One way to deal with the harmful social effects of Phil's cognitive biases would be to so arrange relevant contexts and social environments as either not to activate his biases, or so as to mitigate their otherwise harmful effects. For example, job applicant resumes Phil must review could be cautiously scrubbed of any potentially gender-relevant information, including the candidate's name. If we are concerned to mitigate Phil's biases in a broader range of contexts, we simply need to find ways to alter those contexts so that the biases are circumvented. At the extreme, we could simply fit Phil and all those with similar biases with a pair of virtual reality glasses and ear-buds that so altered his day-to-day interactions with people as to make them appear uniformly androgynous or male, thus rendering it impossible for his implicit bias against women to be activated (since he literally never sees *women*, even when he interacts with them). Phil, fearing the potential effects of his own biases, might even agree to wear such glasses and earbuds himself, a situation which Thaler and Sunstein would seem to view as a permissible kind of nudge (Thaler & Sunstein 2008, 245-58; Wilkinson 2012).

The first reason such an approach unsatisfactory is simply that it does not address Phil's root epistemic problem or problems. Rather, it leaves him just as he is, with both his cognitive biases and flawed self-knowledge largely intact. The nudge approach in this case does not seem to change Phil, increase his awareness, or make him a better epistemic (or moral) agent. It simply takes him as he is and prevents him from being able to make errors and cause harms he might otherwise make and cause. It also leaves him the same epistemic hazard he has always been. The moment Phil finds himself in an epistemic environment that has not been engineered to control for or defeat his biases, we can expect them to reemerge and be just as harmful as ever. As such, nudging of this sort, while perhaps necessary in the short-term to prevent certain immediate harms, does not seem to be sufficient to actually assist Phil in the project of epistemic self-reform: the project of internalizing and living up to the epistemic virtues discussed in section 2 above. Yet this is something that, so far as it is possible, is also desirable for Phil and for epistemic agents generally.

Related to the foregoing, a second reason why "nudging is not enough" in the case of someone like Phil is that Phil is, let us assume, a citizen in a liberal democratic society. As such,

the political structure within which he lives and moves presupposes that Phil has some basic set of rights and responsibilities, and that he is at least in principle able to participate in the ongoing deliberations and democratic processes of his state. If Phil is, in fact, epistemically damaged goods to the point where he cannot be trusted to realize epistemic virtues or principles unless aided by nudges via manipulated reasoning and decision environments, it is not clear what is left of the political suppositions concerning his rights, responsibilities, and capacities as a citizen. It may be that the image of human cognition as biased and flawed that is developing in contemporary evolutionary and social psychology ultimately leaves little room for the democratic ideal of citizens as deliberators concerning factual and normative matters who thereby actively participate in ongoing political and social co-existence (Haidt 2001; Zafrilla 2016). To the extent that this is not the case, however, the "nudge" approach to the problem of the pernicious epistemic effects of digital discourse environments is at best necessary but not sufficient both because it fails to bring about epistemic self-reform and greater self-knowledge in epistemic agents, and because it is, if taken as a complete approach, at odds with the image of epistemic agents as citizens and so participants in deliberative democracy.

5. Epistemic Pornography

In light of the situation just outlined, the notion of "epistemic pornography" is here introduced to identify a particularly pernicious unit of on-line discourse, one that is Janus-faced in that it has both epistemic and cognitive-bias- and group-identity-affirming features, thus ultimately playing on and encouraging epistemically sub-optimal features of our psychology in a particularly distressing way. This section explains what is meant by 'epistemic pornography'. The next section explains how it is related to traditional pornography.

If "fake news" is "...fabricated information that mimics news media content in form but not in organizational process or intent" (Lazer et al. 2018), then some fake news is epistemic pornography, and some epistemic pornography is fake news, but the two concepts do not coincide. Epistemic pornography does not merely present false or misleading information in a seemingly credible guise. Rather, it actively enlists the psychological needs and desires of its consumers. They *feel* satisfied and validated when they consume it, and are aware of this positive feeling when they consume and share it. Epistemic pornography does not just deceive, it entices; it is a strong temptation that agents who succumb to are (or should be) aware of, but fail to resist. It is thus a concept that, unlike "fake news", includes the *active* participation and responsibility of the agent who consumes it as an essential component.

More specifically, *epistemic pornography* is a presentation of information (true or false), usually in the form of a meme, tweet, video, short post or clip, but also compatible with an essay or news article format, which

- (i) presents its main claims as unconditionally true on the basis of
- (ii) evidence of some sort that is typically inadequate or partial relative to the issue under discussion, but is presented as definitive and argument-ending,
- (iii) where the claims being made are distinctly compatible with a particular partisan view of the issue, and
- (iv) presented in a congratulatory way that validates those who believe the claims being made for so-believing.
- (v) The net effect of a piece of epistemic pornography on someone for whom it is epistemic pornography is a pleasant or desirable sense of validation, satisfaction, and affirmation, one that plays a significant causal role in its

effect on their own relevant belief-credences and on the extent to which they share or disseminate it.xiv

It is characteristic of epistemic pornography that it *does* present some factual or well-reasoned information, but that this presentation is significantly partial or incomplete relative to the issue under discussion. Further, the total epistemic quality of what is being presented is significantly exaggerated. Epistemic pornography gets its grip on people by simultaneously affirming their pre-existing worldview and identity commitments and, indeed, by congratulating them for having these. It thus works on two levels: an epistemic level and a level of identity-affirmation. Its efficacy derives from the way it connects these two levels and thereby allows the individual who consumes it to simultaneously take themselves to be believing based on evidence and argument while also having their identity and worldview affirmed and even congratulated. What makes epistemic pornography so pernicious is that those who consume, enjoy, and share it are actively complicit with its message and intent. They make love to the exaggerated epistemic self-satisfaction it invites, and encourage others to do the same by sharing it.

Epistemic pornography is thus perfectly suited to fuel confirmation bias and implicit bias, and to appeal to agreement with certain "facts" and "reasoning" as a sign or qualification of group identity. For these reasons, even in the limiting case where the evidence actually provided by epistemic pornography might be quite significant, the evidence will play at most a partial causal role in compelling assent or in increasing credence for the person who consumes it, while the pleasurable validation and affirmation that it provides does the lion's share of work in sustaining or compelling assent. Naturally, for those who do not already share the identity of the identify-affirming aspects of epistemic pornography (parts ii and iv), their experience of it will be off-putting and invoke hostility, thus rendering them highly unlikely to be engaged with or be convinced by its epistemic pornography for one person may not be epistemic pornography to another. In addition, a key element of epistemic pornography is stylistic: it is *exaggerated* (in its treatment of the evidence on offer relative to the claims being made) and *congratulatory* (tacitly or explicitly congratulating its consumer for accepting the claims on offer for the reasons being given).

5.1 Analogy with regular pornography

Epistemic pornography is analogous in certain fundamental ways to traditional sexual pornography. While there is no dearth of literature analyzing pornography, here pornography will be defined as a sexually explicit presentation in images or text that is intended by its producer and/or appreciated by the consumer, whether consciously or tacitly, specifically for its capacity to arouse sexual thoughts and excitement with no regard to other content or implications.^{xv} So understood, pornography as such caters to sex and sexuality as such, the desires for, fascination with, and enjoyment of these things.^{xvi} As such, it is plausible to say that pornography gets its grip on us, probably on just about all of us on first encounter, because of how we are built. We are, among other things, sexual beings, and sexually explicit content thus gets our attention in pre-reflective ways that most people cannot just ignore.^{xvii} Those who consume pornography are thus actively complicit in its intent. They are aroused, enjoy, and are gratified by it. As such, even if we take the view that there is nothing inherently wrong with producing, consuming or enjoying pornography under certain conditions, nevertheless qua pornography it appeals to relatively basic human sexual desires and possibilities, without engaging or representing any of the deeper emotional, psychological, or interpersonal experiences and virtues that a more elevated or complex type of sexual pleasure or relationship

might involve. As such, excessive or single-minded use of pornography invites its user, via the triggering of a relatively basic and common human desire, to make a mistake: the mistake of thinking that the human sexual relations represented by pornography exhaust the range of human sexual and romantic possibilities. Having false beliefs or expectations about central areas of human concern is harmful and so, to the extent that consumption of pornography encourages this, it is itself harmful.^{xviii}

Epistemic pornography differs from sexual pornography in that it appeals to our natures as believing beings rather than as sexual beings. While these are different aspects of our nature, they are both quite basic and correspond to standing desires and needs that we have. Epistemic pornography specifically appeals to the deep human desire to have one's beliefs affirmed, to have one's self affirmed, and to sense that one is part of a community of right-value-sharing individuals who recognize and affirm oneself. Just as all humans have sexuality and sexual desires of some variety, so all humans seem to have this basic desire to have their beliefs affirmed and to sense that their beliefs are shared and affirmed by others (Greenberg et al. 1986). Yet, if a piece of information does *only* this then, just like pornography in and of itself, the piece is limited and appeals only to the most basic and primitive elements of our natures as believing creatures. It limits or reduces us to the raw desire to be affirmed without regard to why or on what basis, in just the way that pornography limits or reduces us to the desire to be sexually gratified without regard to why or on what basis. Just as it would be a mistake for someone to believe that, having enjoyed pornography, they have enjoyed all that there is to human romantic and sexual relations, so it is a mistake for someone to believe, on the basis of having consumed validating epistemic pornography, that they have achieved all that there is to achieve as an epistemically virtuous believing creature.

The analogy between traditional pornography and epistemic pornography then has five crucial points. First, both appeal to basic or "built-in" human desires or needs. Second, both appeal to the respective basic desires or needs in ways that are simplistic, yet carefully tailored to cater directly to the relevant desires. Third, both provide a kind of positive gratification, affirmation, or arousal when successful. Fourth, the arousal caused by both traditional and epistemic pornography is significantly causally related to agents' active complicity with their message and intent. Fifth, and finally, both can result in highly oversimplified, false, or unwarranted beliefs.

Epistemic pornography is, however, potentially more harmful because, unlike with regular pornography, it is very difficult to derive the psychological benefits of consuming epistemic pornography without also *believing* it,^{xix} that is, believing that one's beliefs are indeed validated by what one has consumed.^{xx} Epistemic pornography by its nature invites its consumer to conflate a sense of affirmation and congratulation for their commitments and identity with having actually been given conclusive reasons for holding those commitments and having that identity. It thus bypasses intellectual virtues and goes straight, as it were, for the epistemic gut. It is thus dangerous to consume epistemic pornography and, by extension, it seems possible to have an epistemic pornography problem. Further, in sharing epistemic pornography with others, as often happens in on-line and social media environments, one is sharing something that is likely to have an adverse effect on their epistemic virtues and respect for epistemic duties as well. For this reason, sharing epistemic pornography with others can be as epistemically harmful as consuming it oneself.

6. We Should, Can, and Can be More Able not to Consume or Share Epistemic Pornography

This section briefly argues that we have moral obligations not to consume or share epistemic pornography, that there is reason to think that, human cognitive biases notwithstanding, we are able to do this, and that the concept of epistemic pornography itself might actually serve as a heuristic or moral exemplar that could help agents overcome cognitive biases and exemplify intellectual virtues.

6.1 Intellectual Duties and Virtues to Cultivate in the Face of Epistemic Pornography Whether viewed from the standpoint of virtue ethics, utilitarianism, or deontology, it seems clear that we have a strong *prima facie* moral obligation to consume as little epistemic pornography as possible, and to avoid sharing it with our fellow human beings.

From the standpoint of epistemic virtue, we ought to avoid epistemic pornography and certainly ought not to consume it regularly. Doing so would exercise and strengthen our cognitive biases, understood as epistemic vices, and habituate us to think and reason at our epistemically worst. Cultivating epistemic virtues means practicing epistemic virtues, and consumption of epistemic pornography has no clear role to play in this. For the same reason, we should not share epistemic pornography with others. Given our knowledge of human cognitive biases and tendencies, doing so would be like giving alcohol to an alcoholic, and would be likely to degrade their epistemic virtues.^{xxi} Since, from a virtue ethical standpoint, part of having and exercising virtues includes the contribution that these make to a social and political community of shared practices and common goods (Aristotle 1984; McIntyre 1984), and the dissemination of epistemic pornography is unlikely to contribute positively to realizing such a community, there are good moral reasons, from the virtue ethical standpoint, not to share or disseminate epistemic pornography as well.

The Kantian deontological standpoint is more complicated to assess, but it ultimately prohibits the consumption and sharing of epistemic pornography (Kant 1785/1985). From a Kantian standpoint, much depends on the motivation (whether inclination or duty) of an action, and on the maxim by which the action is guided. As Kant points out, an action that seems moral might nevertheless be performed due to motivations (and thus based on maxims) that are merely prudential or self-interested, and so not in fact relevant for morality.^{xxii} From the traditional Kantian standpoint, only an action motivated by duty and a related maxim that passes the test of the categorical imperative qualifies as morally right. Since even the very same action can admit of very different motivations is really one of inclination or one of duty, a question that is resolved most handily in the case where inclination and duty clearly require opposite actions, and where the individual acts from duty (refrains, e.g. from cheating or from lying) even though doing so would clearly be in his own interests.

In addition to having the right motivation, the maxim of the agent's action, for Kant, must satisfy the categorical imperative. It must be universalizable without contradiction, treat humanity as an end in itself rather than a means, and be a candidate for adoption in a "kingdom of ends". Otherwise the action is not truly an action done from duty. Difficult as it may be to imagine, an agent could genuinely believe that it is his duty to lie in order to achieve his ends, even though he has no desire or inclination to do so. In such a case, the agent might have the right motivation (be genuinely motivated by respect for duty) yet be mistaken about what his duty is (be acting on a maxim that in fact fails to satisfy the categorial imperative).

In light of the foregoing, what have been called "intellectual virtues" in section 2 above can be relatively easily reformulated as maxims of belief formation. Once this has been done, all or at least most of them turn out to be moral duties according to Kantian ethics. On a Kantian account, rational self-legislating beings presumably aspire to *accuracy* as well as *universality* in the beliefs and maxims that they adopt. In other words, rational beings, "humanity" in Kant's terms, are normatively oriented toward warranted true beliefs. Any motive or maxim that undermines or contradicts this orientation, in oneself or in others, is thus a maxim that disrespects humanity by subordinating the rational and so legislative capacities of the individual to inclinations such as laziness, the desire for psychological validation, or the desire for a sense of group belonging.^{xxiii} Similarly, attempting to win rational consent from another person by appealing, not to their rational and legislative faculties, but rather to their inclinations (violating the virtue of "epistemic non-maleficence" discussed above) amounts to treating that individual as a means to one's ends. Thus, both consuming and sharing epistemic pornography, insofar as doing so violates maxims derivative of the intellectual virtues discussed above, also violates the "humanity" formulation of the categorical imperative. Thus, from the Kantian standpoint, agents have a duty not to consume or share epistemic pornography.

In addition, cases where a subject forms beliefs or takes herself to acquire additional confirmation for beliefs based on epistemic pornography will typically be cases of the sort Kant worried about where the subject conflates the rational requirement for evidence, truth, and respect for duty, with the inclination to feel validated and affirmed in one's beliefs and identity. Since moral actions are not actions motivated by inclination, any case where a subject forms beliefs based on epistemic pornography primarily or solely as a result of its appeal to their inclination will be a case that is morally problematic and so objectionable from the Kantian standpoint.

Finally, from a consequentialist perspective, both believing false things and the social and political divisions that doing so fuels seem to be all-things-considered bad. Indeed, the mere fact that widespread and regular use and sharing of epistemic pornography could, e.g., heavily influence a democratic election for the worse would likely be reason enough for consequentialism to reject its regular or widespread dissemination and consumption. Thus, from a consequentialist standpoint one should rarely or never consume epistemic pornography and almost never share it as well.^{xxiv}

6.2 Signs of Hope: Overcoming Bias

Just because we have relatively clear duties not to consume or share epistemic pornography, this does not necessarily mean that we are able to refrain from doing so. *Ought* typically implies *can*, yet the litany of cognitive biases discussed in section 3 above would seem to suggest that it will be difficult if not impossible for us *not* to consume or share epistemic pornography. The situation does not, in fact, seem to be so dire. While the picture of human cognition offered up by evolutionary and social psychology shows that it will be difficult for us to live up to our epistemic obligations concerning epistemic pornography, there is other social psychology literature that suggests that cognitive biases *can* be resisted and diminished through awareness, intentional effort, and training.

Kennet and Fine have argued, based on a review of available research, that subjects who both (i) become aware of a cognitive bias and (ii) desire not to be biased, are able to override the bias so long as they have the cognitive resources (freedom from excessive stress, tight time-constraints, etc.) to do so (Kennett and Fine 2009, 89). Further, it is possible to become aware of one's cognitive biases. On the one hand, one might do this by carefully reading some of the social and evolutionary psychology literature discussed in section 3, and making an effort to track one's own thought and behavior patterns for bias. Additionally, we might observe our own behavior (e.g. with regard to a particular group, or our argumentative behavior in relation to a

particular topic over time) and the explanations that we provide for that behavior, and check for discrepancies (e.g. Holroyd 2015). Further, researchers such as Poos et al. (2017) have found that it is possible to mitigate or reduce the effects of bias, particularly confirmation bias, through structured training programs.

In short, resisting cognitive biases may be difficult, but it is by no means impossible if subjects work to achieve the right amount of self-awareness, and to make an effort to train themselves to perform in epistemically virtuous rather than cognitively biased ways.

6.3 "Epistemic Pornography" as Useful Heuristic in Resisting Bias and Living up to our Epistemic Duties

So, we both should (sect. 6.1) and can (sec. 6.2) work to overcome our cognitive biases, and so work not to consume or share things such as epistemic pornography in particular. With this in mind, there is reason to believe that the concept of "epistemic pornography" may itself offer a useful heuristic for overcoming our cognitive limitations and living up to our epistemic duties. As discussed in the previous section, being vigilant concerning cognitive biases and overcoming them requires both awareness and effort. One of the reasons cognitive biases are so persistent is that both awareness and effort require significant time and cognitive resources. Thus, under conditions where a subject is already stressed, confronting multiple demands on her attention, or crunched for time (surely the majority of situations we find ourselves in), it is easy for even the most conscientious of subjects to let her guard down and so, due to lack of awareness or effort, let cognitive biases have sway. It is here that getting subjects to understand, internalize, and regularly think about the concept of epistemological pornography might be useful.

Recent empirical work on moral psychology suggests that subjects who are exposed to "moral exemplars", other individuals who engage in particularly noble or praiseworthy actions, experience *moral elevation*, which consists in feelings of elevation and inspiration, positive or optimistic thoughts about humanity, and the desire to improve one's self or to improve the condition of others. Significantly, experiences of moral elevation have motivational and ultimately behavioral consequences (subjects who experience moral elevation tend to feel motivated to behave in ways consistent with this emotion, and this shows in at least some of their behavior) (Haidt 2000; Pohling and Diessner 2016). Research on moral elevation has thus far focused primarily on (i) positive moral exemplars and (ii) on relatively clear other-directed actions, actions that (a) are done primarily for the sake or good of some other or others and that (b) ignore or to some extent go against the interests of the person taking the action.

Linda Zagzebski has, however, suggested expanding the idea of a moral exemplar (and so of the moral emotions relevant to it) to include both positive and negative exemplars, and both moral and intellectual virtues (and vices). In light of the foregoing discussion, there is good reason to view epistemic pornography in this light. "Consumer of epistemic pornography" is (or at least should be) a negative moral exemplar, one for which the appropriate emotional response is not moral elevation, but *moral contempt*. Assuming that similar motivational and behavioral consequences follow from negative as from positive moral exemplars, possession of the concept of "epistemic pornography consumer" or something very like it could actually help individuals better fulfil their epistemic duties as they confront the bias-harnessing and rationalityundermining tendencies of the Internet and social media. To the advice "beware of fake news" we might add "don't be an epistemic pervert" or "don't indulge in epistemic pornography" as a short-hand guide for epistemic agents. Epistemic pornography condenses into a single concept the idea of gross indulgence of the "lower" or "more base" aspects of our humanity, potentially to the exclusion of "higher" and "more elevated" aspects of ourselves (objectivity, reason, and

virtue), and the concept as presented here is specifically framed in terms of avoiding cognitive biases. It may thus be a morally and intellectually useful concept for subjects to think in terms of as they make the effort to modify their discursive behavior and live up to their epistemic obligations. A subject who regularly asks herself, as she consumes or shares Internet and social media discourse, "am I enjoying *epistemic pornography*?" or "am I sharing *epistemic pornography*?" may be in possession of a condensed and useful way to regularly check and control for the operation of her cognitive biases.

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^{vi} While I take the following to be epistemic virtues, I would be equally willing to view them as epistemic duties, ways that we are normatively obliged to think if we wish to arrive at primarily true and impartial beliefs.

^{vii} At first, this last virtue might seem unnecessary insofar as someone who really possesses the first four would in fact, most likely anyway, typically believe and behave in warranted or rational ways. However, I think that second-order assessments of one's own evidence and epistemic abilities can themselves play a role in both belief formation and behavior. For example, a person might lack the virtue of intellectual imaginativeness and so fail to consider alternative possibilities to their existing beliefs. However, what they then do about this in terms of how strongly they continue to hold their existing beliefs may well depend on whether they themselves are a good judge of the extent to which they possess the virtue of intellectual imaginativeness. Thus, accurate intellectual self-assessment is itself an epistemic virtue, one the presence or absence of which can make a significant difference in the beliefs that an agent actually holds.

viii Contextual and especially social factors also seem to play a significant role in the extent to which individuals are epistemically sincere, unbiased, or otherwise virtuous.

^{ix} Further, while there are undoubtedly many actors who do intentionally try to exploit these features of the Internet to achieve persuasion and mobilize people on the cheap, no conspiracy is needed. Natural human tendencies interacting with the Internet as medium will naturally encourage and reward the irrationalities discussed above,

generating a kind of feedback loop in which human biases feed the growth of Internet and social media communities and behaviors just described, which in turn further feed, validate, and encourage human biases.

^x An additional reason, which I will not develop at length here, is that a "nudging" approach raises concerns about intellectual freedom and freedom of speech (Mill 1859/1961). Interventions in the content and flow of information to be found on the Internet and in social media do amount to interventions in what kinds of ideas and arguments are heard and disseminated in public discourse. The worry that this could easily transform into censorship, especially if the agencies responsible for such interventions are either government agencies or private companies with commercial interests, is thus a real and significant one not to be taken lightly. At the same time, traditional ideas and arguments concerning freedom of speech and expression are complicated by the digital environment, especially in light of the

ⁱ In particular on social and political discourse in all of its forms, including those involving basic facts, common sense, and seemingly established scientific theory.

ⁱⁱ They are thus plausibly seen as non-partisan constituents of Rawlsian *public reason* (Rawls 1993, Lecture VI; Wenar 2017, 3.1 - 3.6).

ⁱⁱⁱ The negative epistemic impact of Internet and social media is much less surprising when the image of human cognition that is to be found in recent social and evolutionary psychology is taken into account (Haidt 2001; Kahneman 2011; Mercier & Sperber 2011; McIntyre 2016). Human beings, it would seem, come pre-loaded with a suite of cognitive biases and predispositions whose connection to objectivity and truth are tenuous, and the Internet and social media exploit, encourage, and enable these (Sunstein 2018; McIntyre 2016, pp. 101-102).

 ^{iv} The classical virtue tradition envisions flourishing as the ultimate human good, and takes the possession of interrelated moral and intellectual virtues to be constitutive parts of this good. Thus, to live well or flourish means, in part, to cultivate, possess, and exercise virtues, understood as dispositions of mind and character (Aristotle 1984; McIntyre 1984; Slote et al. 1997). Contemporary "virtue epistemology" takes this tradition, largely, as its point of inspiration and departure for thinking specifically about issues of evidence, justification, and knowledge.
^v They are thus plausibly seen as non-partisan constituents of Rawlsian *public reason* (Rawls 1993, Lecture VI; Wenar 2017, 3.1 – 3.6).

extent to which information and ideas on the Internet and in social media are simultaneously units of discourse and *also* commodities, by the use of preference-responsive algorithms in search engines and social media platforms to tailor and adopt content to individual users, and by the way in which these things can be artificially manipulated for both profit and ideological ends (Cybenko & Cybenko 2018; Napoli 2018; Lombardi 2019). In briefly raising concerns about freedom of expression here I thus do not mean to be taking a dogmatic "marketplace of ideas" approach to the issue that would eschew any type of intervention or moderation of digital discourse environments as an unwarranted intrusion on rights to free speech. I would argue, however, that even if we grant that digital discourse environments require rethinking traditional assumptions about when and to what extent the right to freedom of expression can be regulated or restricted, even the most adequate possible regulatory regime will be, as I will argue for the strategy of nudging itself in section 4.2 below, necessary but not sufficient for addressing the pernicious epistemic effects of Internet and social media.

^{xi} One problem with "fake news" as a dominant cultural concept for thinking about the epistemic effects of Internet and social media is how easily it can be coopted (Bocher 2017; McIntyre 2019, 111). While I will not discuss the coopting of the "fake news" concept here, I think that part of what makes it readily possible is the way in which, as I do discuss here, the concept of "fake news" suggests passive victimhood and deception in those who consume it, rather than active agency and responsibility.

xii On the issue of nudging, manipulation, and autonomy, see Wilkinson 2012.

xiii For insightful discussion of such a case, see Sullivan-Bissett 2015.

xiv Following Gopnik (2000), epistemic pornography provides its consumer with a cognitive orgasm of the type appropriate to genuine understanding of an issue, but on the cheap and by providing, at best, a partial or pseudo-understanding.

^{xv} This definition of pornography is similar, though not identical, to that proposed by Joel Feinberg (1983).

^{xvi} I do not consider this to be a perfect definition of 'pornography', but one that is good enough for present purposes. In addition to definitional issues, there are both moral and political questions surrounding the issue of pornography, many of which I am not raising here (see e.g. Watson 2010).

^{xvii} Measurements of the location (Lykins et al. 2006) and duration (Imhoff et al. 2010) of attention as measured by how long subjects' eyes remained focused under controlled conditions suggests that sexually explicit or pornographic material does in fact both get and hold human attention quite readily. Taking the analogy with epistemic pornography one step further, it also seems to interfere with upstream reasoning and decision-making processes in at least some cases (Laier et al. 2014). There is also evidence that use of sexual material or appeals in marketing also tends to be rated by subjects as "more persuasive", even as such subjects are not necessarily able to give arguments or support for the choices made based on such appeals (Reichert et al. 2001).

xviii Discussions of the harmfulness of pornography fall, roughly, into two parts. A normative part where the question of just what constitutes a harm must be answered, and an empirical part where some type of causal relationship between pornography and the relevant harm must be established (Watson 2010). It is uncontroversial that rape is a kind of harm, so some who argue that pornography is harmful do so on the grounds that individuals who consume a lot of pornography, or a lot of certain kinds of pornography, are more likely to commit rape (see Linz & Malamuth 1993, Ch. 2 for discussion). Similarly, the question of whether there is such a thing as "pornography addiction" and whether or not it is harmful requires both a definition of the relevant harms (e.g. increased feelings of isolation, breakdown of intimate interpersonal relationships) and empirical support for the claim that excessive pornography consumption causes or contributes to such harms (rather than, for example, the causation going in the other direction, with excessive pornography use being a consequence rather than a cause of intimate relationship breakdowns) (Duffy et al. 2016). For my purposes here, what is most important is the analogy between traditional pornography and what I am calling epistemic pornography. Even in the case of traditional pornography, then, I am interested first and foremost in "epistemic harms", false or unwarranted beliefs about human sexuality and intimate relationships that subjects may come to have as a result of consuming pornography.

xix I think it is possible to consume epistemic pornography in other ways, for example, ironically. Or as part of research on a particular media environment or cultural or political group. However, in such cases, the psychological validation that epistemic pornography provides *qua* epistemic pornography will not be experienced by the individual consuming it. Researchers such as Vosoughi et al. (2018), who study the ways in which false information propagates across Internet and social media, are no doubt exposed to a great deal of what I would call epistemic pornography. However, given their interest and attitude in looking at this material, it is highly unlikely that they derive the psychological benefits from it that it would confer on individuals who do consume it *as* epistemic pornography.
xx I would invite empirical study of the claim being made here: that the psychological needs epistemic pornography appeals to – in particular the need to feel that one's beliefs are validated and that one is part of a community that

60

shares and affirms one's beliefs - typically cannot be (i) activated and gratified while (ii) the subject does not accept the truth or accuracy of the source of information doing the activating and gratifying. However, on the assumption that human beings generally seek to eliminate cognitive dissonance, and that feeling gratified by a piece of information or affirmation while simultaneously lacking confidence in its accuracy or sincerity would cause cognitive dissonance. I think the assertion is at least *prima facie* plausible.

^{xxi} Indeed, sharing epistemic pornography with others probably violates the other-regarding epistemic virtue of epistemic non-maleficence discussed in section 2 above.

^{xxii} For example, the merchant who charges all customers the same price, thus respecting them and treating them equally, may do so purely out of inclination or self-interest; if it became common knowledge that he charged different individuals different prices, this might cause people to trust him less and so not to purchase from him, thus hurting his bottom line. On the other hand, the same merchant could treat all individuals equally (charge them all the same price, not alter the scales, etc.) motivated specifically by his duty not to lie or by his duty to respect the dignity of all rational beings equally.

^{xxiii} Indeed, such maxims may contradict themselves outright. If the maxim of an agent's action is something like "avoid considering alternative hypotheses in order to be able to continue holding a preferred belief", and we assume that considering alternative hypotheses increases the likelihood of a belief being true and that what agents want of their preferred beliefs is not *merely* to continue holding them, but for them to be *true*, then what the maxim actually councils is to avoid a method that is necessary for ensuring one's beliefs are true in order to ensure that one's beliefs are true. So put, such a maxim seems to fail Kant's universalizability formulation of the categorical imperative as well.

xxiv As with all (act-) consequentialist prohibitions, the prohibition on consuming and sharing epistemic pornography must, of course, be qualified. From a consequentialist standpoint there may be extreme or outlier situations in which consuming epistemic pornography or, perhaps more likely, intentionally sharing it in hopes of influencing public opinion in order to prevent some disaster, might be morally justified. For example, widespread acceptance of antivaccine conspiracy theories could result in a public health crisis (widespread incidences of diseases such as measles) under conditions where, unfortunately, convincing the anti-vaccine community by rational means might not be feasible. Under such circumstances, using epistemic pornography or similar rhetorical strategies designed to exploit built-in cognitive biases and predispositions of anti-vaccine proponents for rhetorical or persuasive purposes may be the only way to forestall the developing health crisis. As such, sharing of epistemic pornography would seem to be not only permissible, but even obligatory by act-consequentialist standards. In response I would make two points. First, even if there are such cases, so long as they are not widespread and frequent in ordinary life, consequentialism will still typically and most of the time prohibit consuming and sharing epistemic pornography. Second, however, I take the foregoing point to be a limitation rather than a virtue of act-consequentialism itself. I take the primary worries about pernicious epistemic effects of Internet and social media to have as their context a liberal democratic political system dedicated to relatively widespread and non-negotiable respect for individual rights, and I take the idea of individual rights in a democratic society to be premised, in part, on the rights and abilities of citizens to think, deliberate, judge, and form beliefs for themselves. Widespread or systematic use of rhetorical instruments such as epistemic pornography to bring about consent to a particular view by manipulating built-in cognitive biases either amounts to a bypassing of the rights and abilities of individuals as citizens to form beliefs autonomously (which would be objectionable, at least prima facie, within the framework of liberal democratic politics), or amounts to a declaration that this ability is exaggerated or non-existent, which amounts to skepticism about some of the basic premises of liberal democratic politics and society itself. While such skepticism is a specter that haunts much of my thinking about these issues, my actual commitments remain to a liberal democratic political context, and so to the more Kantian (and to some extent virtue ethical) moral suppositions that underly it. As such, my tendency is to reject concerted violation of the citizens' rights to intellectual autonomy even when such violation might bring about 2 better overall consequences.