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Irrational Man Through Logical Design: The Age of Digital Reasoning

“Capitalism forecloses rational deliberations over ends, because it well knows that it cannot win that game: its ends are no match for critical reason. Hence, reason must be restricted in order to preempt the objective truths it would reveal. Ignorance is the result.” - Linda Martin Alcoff

1. Introduction

What happens when we become accustomed to an algorithm? Social networking sites curate content for their users through the use of algorithms. Users feed the algorithm data that will determine how it will filter and return content for consumption. This is achieved through a combination of the user creating a user profile and the system logging the habits of the user. However, the algorithm is designed to search, filter, and retrieve for the user without providing any visibility to the process of the options available and the choices that were made—the process is opaque. So, what happens when the algorithm makes a choice that is different from what the user would have made? The purpose of this paper is to explore how the algorithms that are designed to curate content for users of social networking websites create *regimes of ignorance*. The opaqueness of (the human designed) algorithms creates a system that strips users (humans) of the ability to rationalize and make informed choices, and, arguably, denies the user agency in their own reality. I will expand on how algorithms demonstrate the existence of systemic ignorance

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by presenting cases where a user would have made a different choice than the algorithm. The phenomenon of systematized ignorance strips individuals of their autonomy to make choices that are informed, to rationalize and construct knowledge in conjunction with experience. Thus, ignorance is established and the irrational man is created.

2. Theoretical Background

Social networking sites utilize algorithms to curate content for their users to consume. In order to demonstrate the existence of regimes of ignorance within social networking sites and other digital worlds, it will be necessary to review what rationality is, how ignorance is created, what are algorithms, and what is the structure of ethics in relation to algorithms. Linda Martin Alcoff defines the epistemology of ignorance through the illustration of the process of reasoning and rationality. In *Epistemologies of Ignorance: Three Types*, Alcoff describes knowledge as a series of judgment calls. (Alcoff, 2007) An individual is constructing knowledge through the complex process of combining epistemic situatedness, experience, and previously held knowledge. (Alcoff, 2007) Knowledge construction, then, is essentially an active process that the knower must be involved in. When the knower is removed from the process, ignorance is established.

Ignorance is achieved and maintained through oppressive systems. There is a dominating player and a submissive player in the establishment of ignorance. (Hoagland, 2007) Sarah Lucia Hoagland demonstrates how oppressive systems work and the necessity to rebel in relation to racism and slavery in *Denying Relationality: Epistemology and Ethics and Ignorance*. Hoagland takes a similar avenue of establishing ignorance as Alcoff and uses the denial of relationality to reinforce ignorance. In other

words, an individual is denied the ability to subjectively participate in epistemological practices of ignorance. (Hoagland, 2007) Furthermore, it is essential to rebel against these practices to reclaim autonomy.

Algorithms are designed by humans to perform computational processes. These processes will vary depending on where and how they are used, but there is a shared essence: retrieve data, review data, search for attributes that fit the functional profiles written into the code, and output information for consumption. Brent Daniel Mittelstadt et al review the functional aspects of algorithms in relation to social networking sites and meditate on what ethical responsibility algorithms and their designers have in *The Ethics of Algorithms: Mapping the Debate*. The primary ethical issue with algorithms is the process of decision-making—the algorithm is outputting content based on the data it was fed and not the context or details of the content. The issue here is that the algorithm is curating content for a user to consume, effectively determining what ideas or messages will enter the reality of the user, and can impact her reality or perspective with the world in which she participates. (Mittelstadt et al, 2016) Moreover, personalization algorithms homogenize information by filtering out content that does not fit the preferences or profile of the user. (Mittelstadt et al, 2016) This process is imperfect and presents an impoverished selection of information for the user, thus impacting what knowledge will be retained, through the elimination of the user’s participation in decision-making.

3. Context

The results of the 2016 United States presidential election have created many conversations in regards to how social media shapes individuals, and reinforces group

think and the presence of groups with ulterior motives to infiltrate and influence the thoughts and belief systems of the individual as well as the larger group. For example, the United States Senate is currently hearing trials in order to determine if Russia hacked the 2016 presidential election or influenced the decisions of American voters in any shape. This conversation is primarily held within the context of social media—namely Facebook, the tool to engage with users and feed specific information or ideas to alter beliefs. These conversations, however, do not blame the system that was utilized to allegedly infiltrate belief systems. Instead, blame is cast on those who abuse the system.

The absence of questioning the process of the social media algorithm is integral to uncovering the existence of a *regime of ignorance*. The algorithmic decision-making process is opaque and eliminates the possibility of human participation. When an individual is excluded from the decision-making process or knowledge construction, she has been stripped of the autonomy that is necessary in rationality and reasoning. This loss of autonomy is what manifests ignorance, and the algorithms systematically proliferate it. Subsequently, it will be necessary to highlight real cases of algorithmic failures to indicate the presence of a system, and the dangers of ignorance that it presents to individuals. Finally, if the algorithm failed to classify content correctly in the cases I present later, what are the other instances where failure has occurred?

4. Methods of Data Collection

This paper was constructed by reviewing a collection of secondary sources—scholarly articles and articles issued through popular publications. I reviewed a selection of scholarly articles with subjects that ranged from subjects such as algorithms and their

relationship to knowledge construction, the ethics of algorithms, and topics of ignorance and oppressive systems. First, the purpose of reviewing scholarly articles on what ignorance is, and its relationship to oppressive systems is to define what a regime of ignorance is, and to establish what reasoning and rationality are. Second, my review of algorithms within the context of social networking sites provides insight on their role in curating information for a user and the ethical implications this creates. There is a lot of literature on the topic of algorithms within the context of improvement, growth in the realm of algorithms that can learn, artificial intelligence, and how this can best serve, or improve, the experience of the user—all positive reflections on the presence of algorithms. However, when I structured my search on algorithms relative to ethics, I discovered articles that focused on where algorithms can fail, and the potential danger in this phenomenon.

I did not conduct any primary research for this paper, so I identified public cases that were reviewed, discussed, and published through popular publications. This review of cases represents real world examples where algorithms fail to adequately curate information. These algorithmic failures demonstrate that there is an active system in place making choices for the user. They also represent a clear process of incorrect conclusions—the algorithm processed the criteria in a biased manner and made a final selection that is different from what a human would have made, if presented with the same criteria.

These secondary sources aid in revealing a phenomenon of ignorance, but they do present limitations. In order to expand on this topic further, it would be necessary to conduct a study and survey users on their social networking habits, their self-awareness

of knowledge construction in digital worlds, and their views on ethics as they pertain to algorithms and their use in social networking sites. There is value in researching the role of self-awareness within the context of algorithms making decisions for individuals. If a lack of self-awareness is prevalent within the study, the presence of systemic ignorance can be validated. In light of these limitations, the following pages will define algorithms, their failure to replicate human reasoning, and the subsequent creation of the irrational man when the presence of this system is either unknown or fully accepted.

5. Analysis and Discussion

In order to demonstrate how social networking sites are regimes of ignorance, it is essential to define the process of creating ignorance and what algorithms do.

I will begin first with a review of ignorance. Ignorance is best defined by outlining the process of rational thought, or human reasoning. The process for reasoning is complex. It is not merely a process that references existing knowledge to come to a logical, computational conclusion. Reasoning, instead, requires a full assessment of knowledge that has already been constructed, beliefs that are currently held, and the epistemic situatedness of the individual—moreover, the process of knowledge construction is contextual, and requires personal experience. Linda Martin Alcoff discusses reasoning at length in her chapter *Epistemologies of Ignorance: Three Types* in order to highlight the importance of the individual. When the individual is stripped of her participation in the process of knowledge construction and rationality is abandoned. “Thus an adequate concept of epistemic situatedness must involve much more than the knower’s position in time and space and must include individual factors about her or his history and

McGowan – Irrational Man Through Logical Design: The Age of Digital Reasoning experience.” (Alcoff, p. 42) In other words, the epistemic process of an individual, or knower, is not simply referencing a list of known things to logically or computationally come to a conclusion. The knower is taking all of her past experience into context to come to a conclusion.

Knowledge construction is demonstrated through an assertion of experience and beliefs. Alcoff articulates this further by specifying knowledge construction as a series of judgment calls. In other words, the individual will take as many relevant details into consideration and come to a conclusion that is presumably the most sound based on experience. She provides an overview of four key principles that define reasoning.

“1. All knowers are situated in time and space, with specific experiences, social locations, modes of perceptual practices and habits, styles of reasoning, and sets of interests that are fluid and open to interpretation but that have some objective elements in regard to the conditions of the knower’s material reality.

2. This specificity of situatedness is relevant, at least in some cases, to the ways that a knower will make judgment calls about issues of coherence, consistency, relevance, plausibility, and credibility.

3. From this it follows that knowers are not, in fact, fungible or interchangeable.

4. Further, it must also follow that knowers are not all “epistemically equal.” As Code said, knowers are at once limited *and* enabled by the specificities of their locations.” (Alcoff, p. 42)

Human reasoning requires individuality, and more important, specificity. Conversely, the function of an algorithm is to compare many things, identify any possible similarities, and output the most generalized content that will be most suitable for the largest audience. “In denying relationality, an epistemology of ignorance denies agency,

subjectivity, to the oppressed even within liberal and progressive argument.” (Hoagland, p. 102) The avoidance of nuance, situatedness, relationality, and experience by an algorithm is epistemically impoverished.

Individuality and subjectivity play a key role in the process of reasoning and is required for sense making. A human can encounter a premise and perform logical steps, in conjunction with experience, to achieve a specific conclusion. “What I already know and believe will have a privileged place in my judgments by affecting my determinations of coherence, consistency, and plausibility, and this is in fact good epistemic practice.” (Alcoff, p. 44) An algorithm, on the other hand, must take all of the data that it is provided, analyze what information is available, and come to a predetermined conclusion: reveal content, or hide content. Moreover, a human can take limited information and seek out other information to formulate a specific conclusion. An algorithm can only use the information it is provided to come to its limited options of conclusions.

Algorithms blur the lines of individuality to create groups. The intention here is to remove nuance, and create generalizations to find the greatest number of relationships.

“The idea of a general epistemic situatedness developed in the first argument renders ignorance contextually dependent on the particular configuration—that is, the fit—between the knower and the known. The idea that group identity yields variable epistemic dispositions renders ignorance the result of an underprivileged set of experiences and motivations, so to speak. Finally, the idea of a cognitive model to ensure distortions of reality renders ignorance an effect of inculcated practices common to a group.” (Alcoff, p. 49)

In other words, when individuality is extirpated, ignorance is achieved. Algorithms are employed in social networking sites not to manifest and perpetuate individuality, but to

wrap its arms around the largest group with the greatest number of relative connections. Subsequently, systemic ignorance is created and promulgated through the erasure of individuality and the disbursement of generalization.

“There are worlds of sense-making purposefully excluded by dominant logic through an epistemology and ethics of ignorance. The problem is not only a lack of awareness when we find ourselves lodged in ignorance, a lack of self-consciousness, for example, an ignorance that is dispensed with by learning the facts and trying to widen our horizons or unlearn certain things.” (Hoagland, p.105)

Reasoning requires context, personal experience, and individuality to come to sound conclusions. When an individual is prevented from employing the diversity of her mind and her reality, ignorance is possible to achieve.

Now that I have defined how ignorance is achieved, it is necessary to define what algorithms are and what they do. Algorithms are computer codes that define a process. The algorithm is designed by humans to identify certain criteria that will determine the next steps it should take, or the conclusion it should make. In other words, algorithms are fed data and the design of their code determines the next steps it should take.

“Lay usage of ‘algorithm’ also includes *implementation* of the mathematical construct into a technology, and an application of the technology *configured* for a particular task. A fully configured algorithm will incorporate the abstract mathematical structure that has been implemented into a system for analysis of tasks in a particular analytic domain.” (Mittelstadt et al, p. 2)

An algorithm is designed to react to data in a particular manner specific to the platform it is designed for. This process determines the content an individual will consume.

There are a few characteristics of algorithms to identify and review. First, an algorithm is designed to process data to make a decision. It must know how to handle the

data it is processing, and it must have specific ends predefined, namely, to reveal content or to hide content. “Algorithms process data and are therefore subject to a limitation shared by all types of data-processing, namely that the output can never exceed the input.” (Mittelstadt et al, p. 4) An algorithm cannot come to a conclusion that is different from the available scenarios that were pre-designed within its coded schema. This is a key difference from human reasoning—a human can be presented with a premise and come to a conclusion that was not prescribed or predefined. An algorithm is designed to achieve a known, finite series of conclusions, dependant upon its mathematical coding, whereas a human can achieve an unknown amount of conclusions based on context, experience, and previously held knowledge.

The next characteristic of an algorithm is opaqueness. Users do not have any visibility to the functional process of an algorithm. There is no visibility to see which criteria an algorithm was designed with, what content was reviewed, and why it made the selection to reveal content to a user. The danger in the opaqueness of algorithms is that an individual does not know why she is seeing the content. However, it has been presented to her to consume, and it can influence her beliefs and inform her construction of knowledge.

“This is because algorithms can affect how we conceptualise the world, and modify its social and political organization (cf. Floridi, 2014). Algorithmic activities, like profiling, reontologise the world by understanding and conceptualizing it in new, unexpected ways, and triggering and motivating actions based on the insights it generates.” (Mittelstadt et al, p. 5)

The danger of algorithmic opaqueness is further compounded by advent of personalization filtering algorithms. Social networking sites such as Facebook employ personalization algorithms to curate the content specific to the user’s taste and habits. The

user creates a profile that indicates basic information that a personalization algorithm would use to filter content; e.g. gender, age, ethnicity, geographic location, education, favorite TV shows, books, or movies. Then, the user profile is further refined by her activity. When she likes a particular post, shares a specific video, or even hides or unfollows a specific user, this activity is logged and the profile is further refined for the algorithm to select content that reflects activity of her habits. The process of personalization filtering, however, requires that content that does not fit the profile of her activity will be filtered out. She will have a reduction in diversity of content, information, and beliefs of other users. The homogenization of content eliminates the need for an individual to rationalize why she will or will not accept it into her reality. Instead, content is entirely prevented from entering her reality on behalf of the function of the algorithm.

“Personalization algorithms reduce the diversity of information users encounter by excluding content deemed irrelevant or contradictory to the user’s beliefs (Barnet, 2009; Pariser, 2011). Information diversity can thus be considered an enabling condition for autonomy (van den Hoven and Rooksby, 2008). Filtering algorithms that create ‘echo chambers’ devoid of contradictory information may impede decisional autonomy (Newell and Marabelli, 2015).” (Mittelstadt et al, p. 9)

Ignorance is achieved through the absence of context, personal experience, and considering of previously held knowledge. Algorithms cannot incorporate context, personal experience, nor can it consider any previously held knowledge of an individual. Instead, algorithms process content or data through the lens of preprogrammed criteria and land on predetermined conclusions—again, to reveal content or to hide content. An individual is not part of this process, nor can she witness it. Therefore, algorithms can

create systemic forms of ignorance, because the user is completely removed from the decision-making process.

At this point, I have demonstrated what ignorance is, what algorithms are, and how algorithms can create systems of ignorance, but how can there be certainty that this is the case? In order to encourage a sense of certainty, I have identified three cases that were published in popular articles. These cases reveal the presence of a system through the failure of algorithms. The first two examples are clear-cut algorithmic failures on YouTube, and the last example is a more complex algorithmic failure on Facebook.

In March of 2017, it was reported that YouTube, a video-sharing website, restricted access to music videos by Canadian pop-duo Tegan and Sara. (Ellis, 2017) YouTube offers a content-filter mode called Restricted Access. When the Restricted Access mode is activated, an algorithm filters out content that it considers to be potentially inappropriate for certain age groups. The issue with this algorithmic filter that Tegan and Sara brought to light is that their music video content was *not* inappropriate for any age group. The algorithm flagged their content as inappropriate because it was tagged as LGBTQ+, not because it reviewed the actual video, the audio, and any messages it may convey. If a human had reviewed the videos to determine whether or not the content was appropriate for younger audiences, she would have determined that it was in fact appropriate and would not have blocked the content and prevented access in the restricted mode. In this case, the algorithm was searching for key terms to make filtering decisions because it is not capable of reviewing the nuance of video and the messages those visuals may convey.

At the 2012 Democratic National Convention, Michelle Obama gave a speech that was live streamed Online via YouTube. (Kravets, 2017) After the live stream was complete, the video was incorrectly blocked for copyright infringement by YouTube's algorithm. YouTube was actually the official partner for live streaming videos for the DNC. When the content originated as a live stream video on YouTube's platform, it was, inherently the broadcasting copyright owner. The YouTube algorithm incorrectly flagged its *own* content for copyright infringement. This particular algorithmic fail would have been prevented by a human, and, in fact, was corrected by the intervention of a human. Again, here is an example where if a human would have reviewed the content in the first place, she would have considered the copyright rules of the platform, considered the details of the content and the situation, and came to a different conclusion than the algorithm.

In August 2016, Facebook updated its trending topics section to indicate the count of views and shares of popular topics. (Lecher, 2016) Previously, Facebook was relying on its human staff to identify the trending topics (through share and view counts) and summarize it. This change was implemented to remove the interaction of humans to eliminate any potential for bias. However, this update did not prevent the proliferation of topics that were false. Shortly after the update, an article made the trending topic ranks claiming that Megyn Kelly was fired from FOX News for supporting Hillary Clinton. This article was later proven false; Megyn Kelly was not fired, but the algorithm managed to promote an article completely void of validity for Facebook's users to consume. This case is slightly more complex than the previous two because it reveals the inability of the algorithm to decipher validity. A user that is privy to the employment status of Megyn

Kelly would know that the article was false, but the user that has no private knowledge of or relationship with Megyn Kelly would not necessarily know to question the validity of the content. The algorithm is unwittingly feeding its users invalid content, and the users do not have enough information to question it because they do not have visibility of the process that allowed it to be presented to them in the first place.

6. Conclusion

Social networking sites use algorithms to curate content for their users, but it is at the expense of human agency and rationality. Algorithms are designed to execute data reviews and output content that fits the parameters of the predetermined conclusions—to reveal, or hide content. Social networking site users blindly accept the power of personalization filters at the expense of their own agency in the sense-making process. When a human is prevented from the subjective process of reasoning, ignorance is achieved.

The aim of this paper was to contribute to the conversations of the ethics of social networking site algorithms and how they create regimes of ignorance. I provided cases that reveal the presence of a system and its inability to be precise, and accurate, and the limitations of making complex decisions. This review, however, did not include primary research to discover any user self-awareness of the system, its effects, and the creation of ignorance. It will be important to further highlight this phenomenon to begin the discussion of rebellion against regimes of ignorance. Algorithms are replacing human agency in the sense-making process, and should this continue, it would impact the

shaping of culture, belief systems, alter the process of knowledge construction, and further establish the reality of the irrational man within a regime of ignorance.

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8. Appendix

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