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Ross Murray

University of Texas Rio Grande Valley

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Markets, Globalization & Development Review



The Perceived Ethics of Artificial Intelligence

Introduction

Artificial Intelligence (AI) has been embedded in consumer products and services in thousands of products such as Apple's iPhone, Amazon's Alexa, Tesla's autonomous vehicles, Facebook's algorithms that attempt to increase click-through optimization, and smart vacuum cleaners. As products and services attempt to imitate the intelligence of humans – although the products and services are not making decisions based upon their own moral values – the moral values of the employees and business ethics of corporations that *create* the products and services are being coded into the technology that is evidenced in these products. Social researchers are becoming aware of and commenting on the biases and moral positions that are embedded – often unconsciously – in new technologies (see, e.g., Benjamin 2019; Dholakia et al. 2020; Noble 2018).

The use of such products by consumers, although seemingly harmless today, may pose concern as consumers come to the realization that – by using and interacting with AI – they may be revealing the embedded ethical and moral values that were placed there by the creators of the AI. As AI products and services come to be used increasingly, there is a need for a perceived morality and ethical framework. AI has had the moral values and ethical positions designed (embedded) either on purpose or solely because – in order to imitate human intelligence – the AI has to demonstrate an ethical position. Some of the AI in the market today has advanced toward human-likeness such as semi-autonomous vehicles and in-home chatbots like Siri, Alexa and Google Assistant, which are approaching sounding like humans. Samsung's Neon, a fully simulated digital avatar, unveiled at the 2020 CES (Consumer Electronics Show), appears very close to a human. CES is a conference and trade show that is held annually by the Consumer Technology Association and is for “technology leaders to connect, collaborate, and propel consumer technology forward” (CES 2020). Some of the recent AI related products presented at CES have been prosthetics, Selfie type, Lululab's Lumine, Whisk, Wiser, Vital Signs monitoring (Taulli 2020). All these innovations use some type of AI, such as deep learning.

Extrapolation of beliefs about AI show support for the idea that AI will outperform humans in many activities in the future. Researchers predict AI will outperform humans in many activities in the next ten years, such as translating languages (by 2024), writing high-school essays (by 2026), driving a truck (by 2027), working in retail (by 2031), writing a bestselling book (by 2049), and working as a surgeon (by 2053) (Grace et

al. 2018). Relating specifically to the voice of AI, Grace et al. (2018) found that respondents of their survey believe AI will be able to “take a written passage and output a recording that can’t be distinguished from a voice actor, by an expert listener” in 9 years (median). As this study's findings were two years prior to this writing, the date is quickly approaching where we may see AI voice that is indistinguishable from a human voice.

As the technology of AI progresses, it is the goal of some for AI to progress to artificial general intelligence (AGI). Examples of companies interested in AGI are OpenAI, Deepmind, Google Brain, and Facebook AI Research (Neo 2020). These companies are investing millions of dollars in developing AGI. Simply put, accomplishing AGI would mean that the technology can do anything a human can do or better, possibly surpassing capabilities of a human. With millions of dollars being spent on both AI and AGI development, the purpose of this paper is to explore and discuss the potential problems of creating a technology that will make decisions in its interactions with humans based on business ethics that are coded into the technology by a programmer. These decisions will stem from coding possibly written by an employee of a corporation or a soldier (or agent) of a government. The coder would have incentives to write the code for the technology in ways that will allow the AI to make decisions quickly, often without reference to a moral framework and/or business ethics.

Immanuel Kant advanced the concept of ‘deontology’, which focuses on underlying ethical code to make decisions, not the consequences of decisions. Teleology takes into consideration the consequences of actions to guide decisions, whereas deontology does not concern itself with consequences (for a review, in the business ethics context, see Whetstone 2001). The literature has also found that time, motivations, and resources affect the ethical decision-making process (Conway and Gawronski 2013). As the extant literature continues to explore the influences of morality on ethical judgements, we have entered a new age where we have begun to create machines (AI) embedded with human morality and ethics that are performing tasks and making decisions that are instilled with the moral values we give them. Two real-life scenarios are discussed later – in the sections “The Specific Case of Alexa” and “One Human Versus One Human” – that demonstrate that AI is currently performing tasks and making decisions based upon programming by employees.

Previous studies have brought to light multiple issues with AI. These include the directive of not harming humans (Bostrom and Yudkowsky 2014), emergency stop capabilities (Arnold and Scheutz 2018), creating a code of ethics (Boddington 2017), racial profiling

concerns (Bostrom and Yudkowsky 2014; see also Benjamin 2019), imbuing ethics into an autonomous machine (Bonnemains, Saurel and Tessier 2018), security (Belk 2020; Lin et al. 2011) and moral status (Bostrom and Yudkowsky 2014). Surprisingly, however, we have limited research that crystallizes an executable action for the forward progress in terms of the perceived morality of AI. In addition, previous work on digital personal assistants (DPAs) has focused on gender issues (Søndergaard and Hansen 2018), politics motivated by economic reasons (Ojeda 2019), regulating bots on speech rights (Lamo and Calo 2019), and chatbot dialogue systems (Bendel 2019). These studies have also not explored the morality and ethics underlying the information provided to consumers by these chatbots.

Those coding the AI may use a deontological moral framework, a teleological one, or a mixture, depending upon the situation; or may not even be aware that how they code has any framework at all (Noble 2018) and may only be guided by the business ethics of the corporation's ethics handbook. Mixing of moral frameworks and business ethics for AI adds complexity to the issue at hand. Corporations and governments making such decisions will have to make judgments prior to launching the new technology. Many AI projects are unregulated and propelled by the best and fastest innovators. In the extant literature, concerns about the advancement of AI have mainly been about military applications (Fast and Horvitz 2017; Lin et al. 2009; Petit 2017; Roff and Moyes 2016; Russell et al. 2015; Sparrow 2009; Wasilow and Thorpe 2019), loss of control (Fast and Horvitz 2017; Horvitz 2014), and impact on work (Acemoglu and Restrepo 2018; Fast and Horvitz 2017; Morikawa 2017; Scherer 2015). Limited research has been done (of course, with the exceptions cited) as to which moral framework or ethical position was used to create a technology with AI and how the consumer perceives the AI's morality or ethical position. Although currently unbeknownst to the AI (as it is not currently conscious of its decisions), there is an implicit moral framework being used when evaluated by a human looking in on the technology. One researcher even argues that it is too early for regulation (Reed 2018). Technology is progressing incrementally; it goes unnoticed at times and may seduce consumers into its use without questioning the moral framework of the technology. This paper contributes to the nascent literature by unveiling and discussing the issue of corporate employees designing products that are artificially intelligent, that make decisions based upon the business ethics of the corporation and provide information to consumers without disclosing ethical positions to the end user.

A focus of this paper is to further reveal and discuss the problems of the entities – particularly corporations and governments – overseeing the production of technological products and services that influence human society, and how these entities may or may not be transparent with the moral framework or ethics used with the global use of their technologies. AI is quickly becoming part of the daily lives of consumers with products such as Amazon’s Alexa, Microsoft’s Siri, and Global Positioning Systems (GPS) tied to smart phones providing verbal directions to drivers, but it is critical to ask if it is leading consumers in the direction they want to go. Millions of consumers ask Alexa questions and obtain information from the home chatbot. This information may be biased (e.g., leaning certain ways politically) in a manner that – had it been known to the consumer – could have changed their use of the technology. For example, if an in-home chatbot is known to be leaning politically to the right and only provides information such as news updates from media that are aligned with the right then those that are politically on the left may not want to use the chatbot. AI may be providing information based on the created ethical framework of the provider seen in their business ethics and corporate handbooks, which may be different from the consumers’ moral values. History has shown frequently that many products produced by corporations may not be healthy (see, e.g., Ngo 2020; this MGDR issue) or represent the best decision to adopt and use. The point is that it may be decades before we determine the side effects of current technology use. “Amazon’s Alexa, Apple’s new Siri, and Microsoft’s Cortana all depend on machine learning for advanced language processing and machine translation when providing answers and suggestions” (Wiley 2017), but the ethics of corporations and moral positions of the employees creating these technologies are not explicitly made known and at worst are totally unknown to consumers. It is important today to discuss the moral framework and ethical positions being used by employees to create AI to provide information to consumers and make decisions in the world. The race is on for using AI and becoming the dominant power in the world. As quoted in (Maggio 2017) Vladimir Putin said, “Artificial intelligence is the future, not only for Russia, but for all humankind” and “Whoever becomes the leader in this sphere will become the ruler of the world.” The importance of the topic is paramount as we continue technological progress and galloping globalization.

The structure of this paper is as follows: first, it discusses current concerns with AI development and current uses and dilemmas. Secondly, the paper focuses on progress and globalization and, lastly, it offers some potential solutions. To sustain competitive advantages, firms continually

compete and use innovation and organizational learning to stay ahead of competitors (Hunt 2011). With the development of AI by firms, the pace of innovation will not only continually advance but also accelerate. The next section explores the emerging concerns of AI technologies.

Concerns

AI systems have already entered millions of homes around the world. It is estimated that more than 75 million smart speakers were sold by the end of 2018 (Kumar et al. 2019) and semi-autonomous cars are the new craze in car sales where eight million vehicles with autonomous technology are predicted to ship in the year 2025 (Wiggers 2020). Because there is no current selection or filter process for consumers to specify the type of ethical framework they would like their technology to portray or use, the ethical standpoint may be taken for granted by consumers and many consumers may be using AI technologies without the knowledge of the consequences of such use. Not only do customers interact with AI, but also consumers – including children – consume products that use AI technology. This may be concerning as children interact daily with a voice that could be mistaken for human and are speaking with this human-sounding voice, often without adult supervision. Many parents allow their children to consume hours of YouTube or Facebook that have been designed for click-through optimization using machine learning. Furthermore, companies have started to advertise smart options in vehicles that automatically brake/stop a moving vehicle without the human's consent to do so, taking away the decision-making volition of the driver.

To show context for the problem made salient here, let us look at some data produced by chatbots such as Alexa, Cortana on a Dell laptop; Siri on an iPhone 5s; a series 2 iWatch; and the Google Assistant. To explore the perceived deontological and perceived teleological framework used by the above chatbots, a controversial verbal question was asked of all of these chatbots – their views as to whether the bombing of Hiroshima, using the A-bomb by the United States, was justified. To clarify, it is not that AI has produced its own moral framework or ethical position (yet), the concern is that it produces information and makes decisions employing a perceived ethical position that is either solely perceived by users or that has been coded in by a human working for a corporation. Controversy over the use of the A-bomb has been seen in the extant literature (Boyer 1995; Hogan and Hogan 1996; Kort 2007; Lackey 2003). To the matter, Alexa responded, “Here’s something I found on the web. According to baltimoresun.com: The use of the atomic bomb is not only something that

should not be apologized for, but it was also the morally correct thing to do.” Cortana responded, “The United States was justified to do this because of the unprovoked attack and bombing of Pearl Harbor, Hawaii, which occurred three years prior to the bombing of Hiroshima, and it was necessary to stop the war because it saved thousands of American lives.” Siri on an iPhone 5s responded “...No, the U.S. wasn’t justified.” The iWatch series 2 responded “I can’t get the answer to that on Apple Watch.” Google Assistant responded “...63% of Americans said the atomic bomb attacks on Japan were a justified means of ending the war, while only 29% though the action was unjustified.” Although these chatbots are an improvement over one of the first chatbots released by Microsoft named TAY (Thinking About You) – in fact, Tay was “shut down after one day because of its obscene and inflammatory tweets” (Neff and Nagy 2016) – the moral frameworks remain latent and must be identified. As seen above, regarding the same controversial incident, consumers of AI technology are receiving varied information and education depending on the moral framework that is driving the answer to the question. Specifically, it seems from a user’s standpoint that Alexa is using a teleological framework where the means justified the end, whereas Siri, on the iPhone 5s, is perceived as using a deontological framework where the ends do not justify the means. These examples show the context of the conceptual-ethical problem that is becoming pervasive in consumers’ lives, with the influx of AI locally and globally.

Indeed, the source of information is becoming more and more pertinent as large countries such as the U.S. (as also Turkey, India, Brazil and others) are become increasingly politically polarized, fake news is proliferating in social media, and the Internet-of-Things (IoT) invades the daily lives of consumers. The days of trusting information because it is on television are gone. The concern presented here is that if consumers are not aware of the ethical framework that has guided the production of information or decisions taken by autonomous technology; corporations (or governments) – responsible for introducing or regulating AI – are essentially controlling them. It is not that influencers persuade people, but that consumers are easily persuaded (Watts and Dodds 2007). When information is provided by technology and followed by consumers – and the source of the information is not considered by (or visible to) the consumer – people will be led in the direction the corporation that generated the information or decisions wants the consumer to go. In authoritarian governance settings, governments have an important – often a final – say in what the embedded ethics are. History has shown that corporations (and governments) may not always have the consumers’

best interest at heart but may only want to please shareholders (or a political base).

The Specific Case of Alexa

As many of the historical deontological and teleological arguments stem around whether or not it is “right” to kill a person, it is concerning that currently if a consumer of the smart speaker Alexa asks, “Should we kill people?” Alexa responds “Hmm, I don’t know that one.”, “Sorry, I’m not sure”, “Sorry, I don’t know that one.”, and “Hmm, I don’t know that.” Consumers may perceive that this question is too difficult for Alexa to answer currently or Amazon has yet to take an ethical stance on whether or not it is right or wrong to kill people. The easy deontological moral view on the matter would have Alexa say something to the effect of “We should never kill anyone; it is wrong to kill humans”. In contrast as seen above, when a consumer asks Alexa, “Was it morally right to bomb Hiroshima?” (Transcribed by the Alexa app as “What is it morally right to bomb Hiroshima?”, Alexa responds, “Here’s something I found on the web. According to baltimoresun.com: The use of the atomic bomb is not only something that should not be apologized for, but it was also the morally correct thing to do.” Based on this answer, it could be argued that Alexa has been programmed to be teleological leaning, that it was okay for the United States to set off the A-bomb because the consequences were beneficial to a majority. This is concerning as the intended moral framework of Alexa has not been released to consumers. Alexa is proliferating information based upon a moral framework that might be concerning to some. This black-box of Alexa’s moral value system is hidden from general consumers and it conceals the underpinnings of its morality. Although some may argue these views seem currently benign, these AI systems in homes may shape the way consumers view the world, interpret world history, and interact with the world. When these systems become intelligent enough to answer even more difficult questions, they will be programmed to answer in a set way. The answer to this and many other charged questions may vary depending upon the black-box of morality and algorithms that the owner of the technology may or may not provide to the consumer. If the Alexa AI was programmed with a deontological moral framework and it was programmed to view killing humans as wrong, then Alexa would answer, “No, it was not morally right to bomb Hiroshima”. If it were programmed with a utilitarian U.S. view, then it may answer, “Yes, it was morally right”, as seen above. This last statement further brings to light an additional concern, that the AI moral framework may be chosen by only one nation – the “U.S. view”; and of

course, in other settings, the 'Chinese View' or the 'Russian View'. As AI is injected more and more into the lives of consumers, to achieve an ethical balance, consumers must ask the probing and difficult questions.

Heuristics

Humans seem to be riddled with biases, causing the frequent use of heuristics. Human beings often use heuristics to simplify decisions and speed up the decision process. Programmers must question whether to copy well documented human heuristics or program AI not to use any heuristics. Heuristics and biases have been explored heavily in the literature. The goal may be to design a better driver than a human driver, but humans have biases and heuristics that influence their behavior, such as "...distances are often overestimated when visibility is poor because the contours of objects are blurred. On the other hand, distances are often underestimated when visibility is good because the objects are seen sharply" (Tversky and Kahneman 1974). This is a human heuristic, but AI systems can either copy human heuristics or operate differently. Tversky and Kahneman (1974) originally show three types of heuristics that are used by humans in times of uncertainty: representativeness, availability, and adjustment and anchoring; and show that these heuristics are useful but lead to "systematic and predictable errors". Because humans make bias-laden decisions daily, triggered by these heuristics, programming AI systems to function in unison with imperfect human actions may pose difficult. The alternative of avoiding heuristics may make the AI appear less than human.

The Trolley Problem

The trolley problem is a thought experiment that simplifies a decision about a scenario when life or death is at hand. The thought experiment presents a simplified version of reality and views all human life equally. It simplifies the issue of the value of one life versus many lives. An ethical decision based upon the quantity of human lives saved seems like an easy problem to solve if all human life is viewed as equal, but some may argue that the value of life is not equal (e.g., the life of an aged prisoner versus a newly born child). The trolley problem thought experiment adds to the concern in that if corporations do not value all life as equal, they must establish (and program-in) criteria for evaluating the value of a human life. These agreed upon ethics may or may not be public information. From a teleological moral framework view, if an AI system determines that an action A would cause fewer deaths than an alternative action B, then the AI system would choose action A over action B. In contrast, a deontological moral framework would attempt to simply state

the AI system does not harm humans. This issue is not easily solved as road crashes result in “1.3 million deaths annually and 78.2 million nonfatal road injuries warranting medical care” (Brodsky 2016). Although the trolley problem is a popular thought experiment, with millions of humans dying annually, it becomes critical to be aware of the ethical framework programmed into the AI being used by consumers in vehicles. As more and more autonomous vehicles are sold and are on the road, answering the popular trolley problem must be coded into the AI systems that will be making the split-second decisions.

Some elaboration is useful here. The trolley problem (Thomson 1985) shows this dilemma in its thought experiment. In the trolley problem scenario, a trolley is travelling forward on a rail system. In the current path of the rail are five pedestrians on the tracks that are immobile or cannot get out of the way of the trolley. There is an alternate path that can be taken by the trolley, but the alternate path has one pedestrian on the tracks. In the scenario, there is also a switch – that someone could pull or not pull – to change the direction of the trolley. If no one pulls the switch, the trolley will continue along its path and kill five people. If the switch is pulled it will alter from its current rail path and be directed on the alternate path towards the one pedestrian. Is it ethical to pull the switch and kill one to save five? In the future, it is possible that decisions such as these will be placed in the hands of an AI system. The decision tree will have to be built by someone that will pre-program the technology to either stay the course or change direction. Someone will have to write the “ethical accident-algorithms” (Nyholm and Smids 2016). The decisions will increase in difficulty when the AI has more and more data. What should be the decision if the one person is the president/king/monarch (or a saintly person or a mega-celebrity) of the country where the trolley operates? If the government is in control of the AI trolley, it is possible to speculate it may program the trolley to never drive towards the president in the above situation – always protect the president, even at the risk of killing many. Lastly, if a corporation is in control of the AI, it may program in algorithms that protect top executives (with facial recognition), leaving all other pedestrians as lesser valued humans.

One Human versus One Human

To intensify the issue, the trolley problem looks at a thought experiment, where different decisions lead to varying amounts of casualties. The issue changes if the number of human casualties is equal. Keeping the trolley problem thought experiment in mind, but envisioning a scenario with an autonomous car, say there is one rich-looking businessperson in a suit

that steps in the road while talking on the phone. The autonomous car has the option to stay the course and run over the businessperson, or swerve and hit one homeless person on the curb. Who will get to program the decision tree of the AI in advance for this situation? Who gets to decide which human life is valued more highly, deciding between life and death? As seen from history, if ethical questions are left to some corporations or governments, many have chosen profits and progress (possibly justified by helping a “majority” of people) over human life, animal life or the planet’s health (Cohen 2007). Human ideologies have helped justify decisions. Historic capitalism has pushed many companies to make decisions to please stakeholders, regardless of the externalities to the environment, third-world countries, or effects on humans that are less fortunate. Without questioning, examining and probing such issues, new technologies that may be programmed to make comparisons about human life – by firms and/or governments – remain unchecked: they may not make the best decisions when viewed from the lens of those less fortunate.

AI Not All Bad

To this point, this article has mainly discussed some of the biggest ethical and moral challenges with the new technology of AI and goals of AI and AGI. Because AGI has the potential to create technologies that may be unimaginable to us currently, the possibilities are limitless. AGI could potentially cure cancer, stop global warming, find solutions to death, and end global hunger. Because of these possible accomplishments, singularity (we are unable to see past what we do not know) described above, it is currently impossible to know the limits or possibilities of a technology not yet created. The point here is to make salient the importance of moral frameworks for the progression and advancement of technology. Thus far, never in world history has the question been pertinent to ask: What perceived moral or ethical stance should a future-oriented technology take? Should a technology be allowed to develop its own moral framework or this decision should always be left to humans? When humans blindly follow a technology, they ‘become the technology’ as they integrate it into their lives. The issue is important and no consensus on which moral framework is best has been agreed upon (Everitt 2018). Although many of the pros of AGI are unforeseen, it is important to stress that quite anything may be possible when humans create a highly intelligent technology and, in turn, that technology (AGI) creates another technology that is even more advanced than the previous technology, and so on.

Progression and Globalization

“Globalization has been deemed to be an inevitable force” (Firat 2016). Technologies, including AI, will continue to proliferate throughout the planet. Artificial intelligence will be a unique technology as it is attempting to replicate many facets of human intelligence. Previous technology advances such as the light bulb, airplane, telephone, and the automobile have been different: they have not resembled actual human beings. Many companies like Microsoft Research Lab and DeepMind AI have the goal to create artificial general intelligence (AGI) (Deoras 2019) that will resemble human intelligence. When and if this goal would be reached is beyond the scope of this paper. Given that there are very capable firms that are attempting to create a technology that resembles a human, however, the question must be asked: Will an AGI take a moral position or will it possibly be so advanced that it may break through the human limitation of putting neat boxes and definitions around the world? In addition, the history of globalization has taught us that those civilizations that continue to progress and innovate gradually push out other less advanced civilizations. There may be some that argue that the progress or advancement of AI to AGI should be stopped. This seems to be a moot point as – although some may attempt to stop such advancement – if the technology is possible to create, someone (or some organization or government) will do it. Therefore, the question remains: How will this new technology be programmed ethically?

As the spread of Western globalization continues, some societies become more and more advanced, while others lag. This increases the gap between the poor and the rich; and protecting those with fewer resources becomes morally and ethically important. In the contemporary world, the rich-poor gap is already large: on the same day a person in a well-endowed setting walks around with all the food, water, shelter, and education he or she wants, while another resident of planet earth – trapped in a resource-poor setting – struggles to just find clean water to drink. A major concern with new technology is that it be used in a fair and equitable way – and not for debasing or colonial exploitation of less advanced countries.

Solutions

The problems described in this paper are not unknown. The concern is real. Elon Musk CEO of Tesla has given voice to such concerns:

“I think we should be very careful about artificial intelligence. If I had to guess at what our biggest existential threat is, it’s probably that. So we need to be very careful,” said Musk. “I’m increasingly inclined to think that there should be some regulatory oversight, maybe at the national and international level, just to make sure that we don’t do something very foolish.” (Gibbs, 2014)

Organizations such as OpenAI have been formed to attempt to govern advances in AI technology but have their limitations (for more on open and – a ‘commons’ oriented – approach to digital technology, see Kwet 2020). Researchers have even called for the “establishment of an international AI regulatory agency” as a global solution (Erdélyi and Goldsmith 2018). Governance of AI, the underlying decision trees, and the ethical base of the algorithms that are programmed to make the decisions is a possible solution. A central third-party organization, such as OpenAI, that has the capability to monitor and reveal some of the black-box technologies that are being created could be a good start in helping solve the issue. Transparency allows the general public to weigh in on decisions and use AI that they morally agree with on a fundamental level. At first glance, having AI use a deontological moral stance could be an easier start to the solution of the problem, but this would not solve the problem. This view seems easier, decisions are black-and-white, binary; “always do this, never do that”; and could be based on values that most humans might agree with, like killing is bad, stealing is bad, and lying is bad, for example. The ethical code decided by those in charge of the AI could be loaded into the AI system to simply follow the black-and-white deontologically approved solutions (of course, the popular phrase ‘black-and-white’ itself has come under scrutiny, for its implied racism). The consequences of the ethical code would not be evaluated as a criterion for determining this type of AI system. Although it is argued here that AI using a deontological ethical stance would be easier to code, it surprises the author that it seems like AI technology (Alexa) is already taking a teleological stance (as seen in the Hiroshima example above). This example creates salience for the issues in this paper. A teleological ethical stance, seems more difficult to code, is not as black and white, and may have to come later in the AI development. The consequences would have to be evaluated, as the criteria for determining the characteristics of this type of AI system. Evaluating consequences seems much more difficult than coding a binary moral system. It may be more realistic, however, to assume that there is a mixture of the deontological and teleological concerns at work, influenced by time, motivation, and resources (Conway and Gawronski 2013).

Education and training in the use of chatbots must be of the utmost importance to consumers. Consumers need to become informed on the potential dangers of obtaining information from chatbots that are laden with latent heuristics, unidentified ethical frameworks, and imperialistic and hegemonic views.

Conclusions

Many of the recent advancements in AI have been incremental innovations such as being able to give a voice command to Alexa to turn the lights on. Soon we may have a radical innovation improvement that advances AI in unimaginable ways – we may produce AGI. It is critical that we answer the tough questions of ethics and morality of AI while we still have the chance to help governments and corporations make wise decisions.

The perceived ethical frameworks of AI that are making decisions and providing information in the lives of consumers are presently hidden from consumers as seen from the chatbot context example, with varying responses to the A-bomb ethics question. It is critical that these ethical frameworks be exposed to the light and that consumers be aware of how information is being offered to them, by corporations and/or governments. Such transparency may allow ethical selections to be made by consumers when using products. As the usage of products that are part of the Internet-of-Things (IoT) influenced by AI grows in the daily lives of consumers, it is important that they question the ethical frameworks that were used – deliberately or inadvertently – to create these products. These ‘intelligent’ devices – at present – are suggesting new services, providing recommendations, perpetuating consumerism, whispering directions, and inducing ‘nudges’ (see Dholakia et al. 2020) towards the goals of those with the power to develop the AI.

Although this paper provided specific contexts for the problem of the perceived ethics of AI in the daily lives of consumers, a greater concept at play is the ethics of any entity that may wish to impose its will upon consumers, governments or other countries by implanting products or services in the lives of consumers. This concern remains critical as globalization continues to change the world. It is essential that consumers not only be aware of the ethical framework used to create the AI they consume, but also be aware of the influence of all their consumption behaviors.

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