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ETHICAL DILEMMAS IN THE ARTIFICIAL INTELLIGENCE SCENARIO

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ETHICAL DILEMMAS NON-CENARIO OF ARTIFICIAL INTELLIGENCE

Mario González Arencibia[1]
Dagmaris Martínez Cardero[2]

Summary

The importance of the treatment of the issue associated with the malicious uses of the results of artificial intelligence is marking the current debate of the studies carried out by academic institutions, due to its negative implications in the social scenario. In this sense, the purpose of this article is to rethink the ethical dilemmas that are occurring within the framework of the digital society. For this purpose, the question is the following: How to eliminate the risks of negative use of technological development? The study allows us to identify the critical points that are affecting society, with the idea of promoting debate around their solutions. The central conclusion is that the epistemology for solving the social problems that the inadequate use of technology is generating is above the technical nature, and requires reevaluating this phenomenon from a multidisciplinary approach, with emphasis on the cultural component.

Keywords:artificial intelligence; Ethical dilemmas; autonomy of technology; moral

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[1]Full Professor at the University of Computer Sciences, Cuba. Economist, PhD in Economic Sciences. Email: mgarencibia@uci.cu ORCID:https://orcid.org/0000-0001-9947-7762
[2]Assistant professor at the University of Computer Sciences, Cuba. Degree in psychology. Email: dagmarism@uci.cu ORCID:https://orcid.org/0000-0001-9526-1112

Abstract

The importance of analyzing the malicious uses of artificial intelligence results is leading the current debate of studies conducted by academic institutions because of their negative implications in the social field. The purpose of this article is to rethink the ethical dilemmas under a digital society framework. Consequently, the important question here is how to eliminate the risks of the negative uses of technological developments. This study allows to identify the key points affecting the society in order to promote debate around the solutions. As the main conclusion, using epistemology to solve the social problems generated by the inadequate use of technology is above the technical nature and requires reevaluating this phenomenon from a multidisciplinary approach, mainly focused on the cultural component.

Keywords:artificial intelligence; ethical dilemmas; technological autonomy; morality

Summary

The importance of the treatment of the topic associated with malicious uses is the result of artificial intelligence, which marks the current debate in two studies carried out from academic institutions due to its negative implications in social dinners. The meaning or objective of this article is to rethink the ethical dilemmas that currently arise in the framework of digital society. For this purpose, the question is: how to eliminate the risks of negative use of technological development? The study allows us to identify the critical points that are affecting society, with the idea of promoting the debate around its solutions. The central conclusion is that the epistemology for the solution of two social problems that the inappropriate use of technology is generating is above the technical nature and requires a reassessment of this phenomenon from a multidisciplinary approach, with an emphasis on the cultural component.

Keywords:artificial intelligence; Ethical dilemmas; autonomy of technology; moral

Introduction

Concerns about ethical dilemmas in the framework of artificial intelligence (AI) constitute a widely debated aspect in current conditions (Mourelle,2019) and (Carreño,2019). According to Shaw (2019), these concerns focus on the use of Big Data tools, and the political risks that arise from their ill-intentioned use, when they are used to promote the manipulation and distortion of social processes.

The fact is that the illegitimate application of AI is questioning ethical precepts in the field of ideology and politics, disturbing the legitimacy of democratic processes. This is particularly expressed in the manipulation of electoral campaigns and political systems that do not respond to the aspirations of capital hegemony.

Of particular importance in this scenario is the interest on the part of academic committees, governmental and non-governmental organizations in the topic.[3], due to the increasingly social character they generate. However, the uncertainty and the main threat is in how its private nature from the centers of world power uses these advances to cause conflicts that generate ethical distortions (Samaniego,2018a ,2018b) and (Knaus,2017).

The effect is that the problems that the inadequate use of technologies has been generating show the lack of preparation for the examination of the negative consequences of the errors caused by computer program designers. The notoriety of the topic has led the IEEE[4], a world-renowned entity, is advancing in the creation of work teams to confront the social contradictions that are emerging in the context of AI (Torrero,2019).

Among the main threats that, from an ethical perspective, are currently being debated in the digital environment is that related to privacy, in a context where the trend has been that privacy is increasingly eroded by the invasion that has occurred. been subjected. This phenomenon has been accompanied by the use of information systems, which human nature has imbued with the power to autonomously make executable decisions that are sometimes risky, presenting a moral dilemma (Shaw,2019).

The point is that the positive and negative characteristics inherent to human beings are being reflected in the results of the scientific revolution derived from advances in computing. These are moral decisions in people's digital environment, about how they use them and the way they relate to each other (Ramos,2018). The other argument is that

[3]Ismail, N. (2019)
[4]Institute of Electrical and Electronics Engineers

A vision for the development and implementation of AI requires clarity and consensus about the values to be considered, for its application in the new technological scenario (Berberich, & Diepold, 2018).

A key question in this context is the following: How to eliminate the risks of malicious use of technological development in the field of artificial intelligence? The proof is that, from the conception of ethics and morality, working on the conscience of its developers is essential. In response to this concern, the purpose of this research is to reflect on the ethical dilemmas of technological developments within the framework of the digital society.

Ethical dilemmas

In general, ethics is a philosophical discipline, which has a normative and practical nature, about how to act in the social environment, where the individual is inserted, applies ethical principles to reconcile morality.[5], the desires and capacities of people to act coherently. In its consequentialist dimension, a person is ethical if in each action he performs he measures the effects that his actions can produce, selecting those that have results in favor of morality.

From deontological ethics, a person is ethical only if he respects the duties, obligations and rights related to certain situations. People with deontological ethics (known as ethics of obligation or duty) act in accordance with established norms. On the other hand, virtue ethics states that a person is ethical only if he or she thinks and acts coherently from moral values, whose actions must arise intrinsically as a factor of credibility (Cointe, Bonnet, & Boissier,2016) and (Boissier, Bonnet, Cointe, De Swarte, & Vallée,2018).

The principles are the axis of reference on which ethical dilemmas are faced, so in any analysis associated with the topic it is important to start from them. According to a study on: “27 Fundamental Principles of Bioethics”, every application of science and technology must start from respect and protection of people, considering them autonomously, avoiding harm to them, and maximizing benefits, reducing risks. damages, which translates into the importance of considering the bases of beneficence and non-maleficence, that is, that, if good is done, it is not logical to cause harm. (OPE Andalusia Course,2019).

[5]Morality consists of a set of rules that describe compliance with a given behavior, according to the customs of a group or a single person. These rules associate a value or a disvalue to some combinations of actions and contexts. They can be specific or universal, that is, related or not to a period, a place, a town, a community, etc. (Cointe*et al.*,2016).

Consequently, generating good is an obligation of ethics, which is why this fact conditions the need for standards, which require that the risks of any research be avoidable, that it be adequately thought out, and that researchers be competent to do so. carry them out, guaranteeing the well-being of its participants.

From these statements, it is concluded that an ethical dilemma arises when the professional faces two or more possible alternatives for action, in a context in which ethical values and principles are present; that, if these premises are violated, the professional involved is in a situation in which he is punished to commit arbitrariness: no matter what he does, he will do something "wrong" or fail to fulfill a duty or obligation, generating an ethical problem (Kvalnes,2019 , p. 11) and (Castillero,2016).

From the above, it follows that the ethical dilemma is of a moral nature, which requires guaranteeing respect for the fundamental principles, which are those that facilitate decision-making, because it requires analysis, reflection and thinking. What is best for the person. Thus, an ethical dilemma generates an ethical problem, as values and principles are violated, which generate a situation in which moral values together with duties are in conflict, so that any possible response is morally intolerable.

Consequently, an ethical dilemma becomes an ethical problem, as it contributes to altering the norms and the system of social values, and these, at the same time, transition and become a social problem, when they begin to affect a society. an important part of society, and this assumes a critical position towards it, demanding a solution.

Artificial intelligence as a concept

According to collective, Sara Mattingly-Jordan, Rosalie Day, Bob Donaldson, Phillip Gray, L. Maria Ingram, (2019 , p. 8), in his glossary of terms,*Ethically Aligned Design*, artificial intelligence refers to: "The ability of computers or other machines to simulate or show intelligent behavior", that is, it is a system of symbols that simulates human behavior, from computer programs.

This concept is contrary to the assumption of human intelligence expressed according to Macías B., Fernández, A., Méndez, C., Poch, J., & Sevillano (2015), the mental capacity that allows planning, reasoning, thinking abstractly, understanding and solving complex problems, using experience and learning rationally, as an activity that allows transforming the social environment.

The concept of human intelligence proposed is contrary to that of artificial intelligence, to the extent that intelligence is conceived in its multiple dimensions, which go against

consider technology as a phenomenon that can make reasoned decisions. The question would be, what to think of the criterion of Berberich, N. & K. Diepold, (2018), in his article *The Virtuous Machine. Old Ethics for New Technology?*, who propose that ethics could be a factor inherent to machines, an issue that is being rooted in the current debate on the ethical aspects of artificial intelligence.

It is important to delimit several issues from the above: first, artificial intelligence as a conception is based on problem solving with the aim of imitating human behavior from a cognitive perspective, and not from an emotional perspective. The definition of the term intelligent technologies has caused conflicts in their application, due to the attempt to give them functions inherent to the ability to manage emotions as human beings do, entering into a contradiction between moral duty and circumstances. where it is implemented.

This questions the argument as to whether, in fact, the adjective intelligence should be used for the current uses of digital technology. Identifying difficulties is the first step in overcoming them; this indicates the need to address this debate considering an ethical approach, which places the aspects associated with emotional intelligence at the center. This exam should delve into the potential of so-called intelligent technologies to generate empathy and social skills to face everyday tasks.

Second, artificial intelligence systems themselves are not autonomous, they are guided by people and their use depends on their human nature. It is inconsistent in this sense that these systems will come to control the world. Malevolence lies in the inappropriate behavior of those who organize these processes. That is, it is the designers of algorithms with inadmissible objectives who manipulate what are called autonomous weapons and maneuver presidential elections with political objectives.[6]Therefore, it is significant to confront power groups linked to the misuse of technology (López de Mántaras,2019).

Third, the concept of autonomy of technology is insufficient; essentially this term refers to the ability of people to make decisions and solve problems independently and rationally, using the tools of emotional intelligence. Simulating data through human behaviors imitated by technology is not equivalent to the ability to think from theory and practice experienced by man. The closest adjective that could be added to the topic of technology with autonomy is that of automaton, which

[6]The results of the US presidential election and the UK referendum on joining the European Union were influenced by the use of AI to detect and target undecided voters (Bryson & Winfield,2017 , p. 1).

refers to a process that uses technology to imitate the figure and movements of an animated being.

Fourth, artificial intelligence systems as technologies in themselves are amoral, they do not have the ability to distinguish between good and evil, they assume the nature of their creators (Bossmann,2016). It will not be technology itself that will end human misery, nor will it dominate the world, much less from a catastrophic vision will it end the planet, the Internet of Things is not the one that will put individual privacy, weapons and The so-called autonomous and intelligent systems are programmed by humans.

Fifth, an evaluation of the questioning that is made of the ethical dilemmas that are generated from artificial intelligence, suggests reflecting on the very content of this category in its philosophical expression, which suggests that the social contradictions that are generated from its inadequate use, are not in the technology itself, but in the actor that generates the algorithmization processes of the human components. This forces us to rethink from ethics the subject-object relationship that produces these results.

Malicious uses of artificial intelligence that become ethical dilemmas

The study of a group of authors from various North American universities[7], titled:*The Malicious Use of Artificial Intelligence: Forecasting, Prevention, and Mitigation*, carried out by Brundage, M., Avin, S., Clark, J., Toner, H., Eckersley, P., Garfinkel, B., ... & Amodei, D., (2018); highlights positive aspects that could be transformed and used for harmful purposes that are difficult to prevent, which can be observed in four fields: identity, invasion of environments, intimacy and security.

Environment invasion

- AI has new unresolved vulnerabilities, such as information poisoning attacks (introduction of training data that causes a learning process to make errors), contradictory examples (inputs designed to be misclassified by learning systems automatic), and the exploitation of flaws in the design of autonomous targets.

- Daily life in the physical environment requires frequent communication, as well as making decisions based on the social behavior that is appreciated, with automation.

[7]Miles Brundage, Shahar Avin, Jack Clark, Helen Toner, Peter Eckersle, and Ben Garfinkel, Allan Dafoe, Paul Scharre, Thomas Zeitzoff, Bobby Filar, Hyrum Anderson, Heather Roff, Gregory C. Allen, Jacob Steinhardt, Carrick Flynn, Seán Ó h Éigeartaigh, Simon Beard, Haydn Belfield, Sebastian Farquhar, Clare Lyle, Rebecca Crootof, Owain Evans, Michael Page, Joanna Bryson, Roman Yampolskiy, Dario Amodei.

Of these tasks, AI systems allow actors to maintain their anonymity and experience a greater degree of psychological distance from the people they impact. For example, someone who uses an autonomous weapons system to commit a murder, instead of using a gun, obviates both the need to be present at the scene and to look at his victim.

- The ability to produce new dangers, due to the possibility that these technologies have to easily track frailties and take control of vehicles, devices, robots or any digital infrastructure, is transcendent. And, on the other hand, it makes us think about how these weaknesses could worsen, by providing the possibility of employing *software* malicious, to a group of people, or to isolated individuals, who did not previously have access to this technology.

  One of their essential characteristics is that they are efficient and scalable systems,[8] That is to say, the more they are used, the more knowledge they incorporate into their way of acting. exist *software* malicious and *ransomware* intelligent that, with these learnings, spread, coordinating global cyberattacks with advanced data analysis to personalize these, with the implicit consequences of this danger.

Privacy

- Programs that look for weaknesses in devices and networks can be applied to attack and exploit these vulnerabilities, for example, the ability to produce images can lead to identity replacements or the publication of false content.

- The automation of tasks makes it impossible for psychological factors such as empathy to come into play when making decisions, to which is added that anonymity is reinforced in this context.

- The ability to generate synthetic images, text and audio could be used to impersonate others online, or to influence public opinion by distributing AI-generated content, via social media channels. ZeroFox researchers demonstrated that a *phishing* of automated could reproduce *tweets* on the social media platform Twitter based on

[8] The efficiency of an AI system is that once trained and deployed, it can execute a task faster than a human. Scalability is determined by the possibilities you have to complete a greater number of actions, increase the computing power you have access to, or make copies that would allow you to develop more activities. For example, a typical facial recognition system is efficient and scalable; Once developed and trained, it can be applied to many different cameras for much less than the cost of hiring human analysts to do the equivalent work (Brundage *et al.*, 2018).

interests of a user, achieving a high click rate on a link that could be malicious.

- With data management, predictions can be made about people's behavior and preferences, which, at the same time, increase the possibilities of persecution or control (Bryson, & Winfield,2017).

Security

In relation to security, the malicious use of artificial intelligence threatens:

a) Digital security: for example, through machines training criminals to hack or socially manipulate victims into human or superhuman levels of performance.

b) Physical security: for example, non-state actors weaponizing consumer drones.

c) Political security: for example, through the elimination of surveillance, profiling and privacy repression, or through automated and targeted disinformation campaigns.

Identity

- Precise facial examination can be implemented in autonomous weapons systems, which is significant when considering its potential, due to the fact that AI in image recognition has gone from correctly conceptualizing around 70% of photographs to almost identical identification. 98% perfect, higher than 95% human accuracy (Brundage,*et al.*,2018).

Therefore, Brundage's study,*et al.*, (2018), on the malicious uses of artificial intelligence –in the fields presented above–, synthesizes potentialities that could be harmful to society, about which it is important to think about any alternative, given the damage they may cause. This suggests permanently rethinking the scenarios of physical security and cybersecurity, with the aim of protecting the national sovereignty of States, avoiding the possibility of threats appearing that affect countries and regions.

Regarding the risks of malicious uses of technology, the case of the*Deepfakes*,[9] fake to perfection**,**whose unethical content consists of managing procedures of

[9]Videos are made of state leaders, like the one in the Obama case, who seem to make comments that were never actually made, with the implicit consequences of this fact**.**

deep learning to invent false situations, which can be developed in audiovisuals and texts. For example, writing is used based on predictions of the event that could occur later (Paniagua,2019).

Neural networks, and techniques such as*deep learning machine*, and the*learning* Advanced, they enable artificial systems to decipher and reveal patterns that can create ethical vulnerabilities. It is in this scenario, in which the risks associated with the construction and execution of human biases that take shape in algorithmic systems can be identified, which, improperly used by artificial intelligence, cause harmful effects for society.

In this situation, the*Deep Fake*(deep fakes) through the manipulation of images converted into videos, which have brought dangers to the national sovereignty of entire countries and regions, creating multiple information disorders, to the point that these impacts are being manipulated ideologically, for the reframing of thoughts such as end of truth, an issue that is aimed at attacking beliefs, convictions, feelings, symbols, all based on great economic and technological capacity. The purpose is to ideologically subdue the opponent and build a remote battlefield, with powerful and precise AI tools, which reduce defense awareness.

From these examples, one could partially conclude that the failures produced by inadequately programmed AI technological developments put human dignity and life, freedom of expression, the right to employment and even health at risk. Take, for example, the case of Arkansas (USA), where a coding error in an algorithm caused an unjustified decrease in health coverage for patients with cerebral palsy, assigning them fewer hours of intensive care, those that actually had to be planned (Lecher,2018).

Jonnathan Penn, specialist at the Berkman Klein Center at Harvard University, at the HUMAINT Seminar: “Ethical, legal, social and economic impact of artificial intelligence”, organized by the Joint Research Center of the European Commission, in February 2019, in Sevilla, presented evidence of breach of privacy on Facebook, stating as an example that an examination of 1000 Android applications carried out by the organization*Privacy International*, revealed that 61% of this research is reproduced instantly, for any social media user, regardless of their interest.

Also, Google discloses sensitive data of subjects with medical difficulties associated with cancer, impotence, and drug addicts. These events have been reported in the European region, at the request of University College London, the private web browser Brave and the Open Rights Group, organizations that accuse this company of violating the General Regulation of

Data Protection (GDPR), for favoring the mass exodus of intimate information (Paniagua, 2019).

Added to all these analyzes are concepts of obtaining supremacy through the use of monopolistic domination of technology that propose: "Whoever leads Artificial Intelligence will govern the world" (Gigova R.,2017). This phrase could have an optimistic or catastrophic connotation. The first aimed at eliminating humanity's most pressing problems (hunger, poverty, environment, social inequalities), the second, based on unethical actions, such as cyber attacks on countries. Unfortunately, world leaders highlight the possibilities that artificial intelligence has to threaten the interests of companies, cities, countries and continents, as an exercise of dominance to unbalance the global balance of power (Samaniego,2018b).

Technology developments currently require regulatory frameworks in relation to confronting its malicious uses; therefore, the integration of these into the arms race raises questions that question this use: Is this use of technology correct? Is it moral?[10]How much insecurity does it generate? This questioning is connected to the idea of developing ethics in AI advances. (Scherer,2016). From this arises the urgency of solutions that must be found in the face of the ethical dilemmas raised.

Debate around ethical solutions in the AI scenario

What does the debate about ethics raise in the given context? Regarding the solution of the social problems generated by the malicious uses examined, there are different criteria:

A group of authors Laichter, L. (2019), Yu, H., Shen Z., Miao, C., Leung, C., Lesser, V. & Yang, Q., (2018), Boissier, O.,*et al.*, (2018), Varangaonkar, A. (2018), Conitzer, Sinnott, Schaich, Deng & Kramer (2017), Cointe,*et al.*, (2016), focuses attention on generating alternatives from the technology itself, dedicating itself to building ethical variants from it. That is, the role of correcting the dilemmas is given to the artifactual component. This position raises an exaggerated technological fetishism, based on the belief that artifacts will solve the problems generated by human biases that generate malicious behavior. A critical analysis of this vision indicates the need to assume technology as a complement, and not as a center to resolve the negative uses of science.

Another aspect of the debate raises the following question: Does solving the problems generated by the inadequate use of AI have a political solution? Samaniego (2018a). In this sense, it

[10]Astobiza Monastery, A. (2019).

assumes that the solution is political, at a level in which security and prevention are the axes that should promote the debate. In this direction, Brundage,*et al*. (2018), in his research indicates that legislators and academics must act cohesively, based on the fact that technological research must be consistent with the aspects that generate positive and harmful effects from artificial intelligence.

From a vision with greater comprehensiveness than the previous edge, the Institute of Electrical and Electronics Engineers (IEEE) (2019), in its Report Ethically aligned design. A Vision for Prioritizing Human Well-being with Autonomous and Intelligent Systems, promotes the following ideas:

- Involve civil society, manufacturers and governments as collaborators, to establish and recommend standards and ethical codes in all spaces.
- Establish standards and regulatory bodies that monitor the development of AI.
- Transfer the legal obligations of current societies to the world of artificial intelligence.
- Ensuring that AI is always guided by human control and judgment, and never the other way around, requires control and evaluation mechanisms, creating organizations, that certify that an algorithm system is fair before distributing it.

To achieve the above, the Ethically aligned design Report suggests: (IEEE,2019)

- Control AI activity: it is recommended for experts to have access to data from autonomous systems that clarify their intentionality, how they work or how they interact with the human user.
- To developers: bring their results closer to the diversity of laws, norms and cultural principles that exist in the world.
- To legislators: work with transparency in aspects such as responsibility, obligations and accountability, in a scenario in which the*software* You must know what to adjust to.

Finally, the Ethically aligned design report recommends (IEEE,2019):

- Educate legislators and governments so that society as a whole faces the challenges clearly, leaving aside baseless confusion.
- Involve the most credible personalities in the debate and give it the maximum possible dissemination.
- Educate in ethics and security, to raise society's awareness about the risks of misuse of technology.

Readings to consider

The actions aimed at counteracting the problems examined indicate that a proactive awareness is being assumed in the digital space for the search and improvement of solutions: companies such as Facebook and Google are working to specify and perfect their moral principles and codes. Microsoft has organized the AI Now Research Institute, with the purpose of ensuring that systems respond to social demands. Governments such as the United Kingdom, Spain, and the European Union have advocated the organization of research projects to confront the difficulties derived from the misuse of technology (Paniagua, E.,2019).

From the above, it follows that the key to confronting the malicious uses of technology is to assume a comprehensive approach, which includes cultural, historical, moral, political, and philosophical aspects, with the educational component as its center above the instructional one. This undoubtedly requires a sense of belonging with the human approach that must be derived from the sciences that give rise to technological development, in a social context in which values are not interfered with in the applications offered in this space (Alves,2020).

This induces us to rethink the technological practices that distort reality, recognizing and facing the contradictions and ethical and epistemological uncertainties from a critical and analytical thinking, for the benefit of the formation of an axiological position, and that this allows us to gain moral credibility and leadership. of those who are in charge of designing software for social purposes, in a scenario where privacy, confidentiality, privacy and the national sovereignty of entire countries and regions are protected.

The effect is that the scientist develops as a moral subject, in empathy with and linked to society. Guided by a civil code that is specified in its technological proposals, in an area that does not alter nature, its environment, and where social subjects are not affected. Becoming aware that algorithmic construction in the digital scenario must be aimed at improving society and not affecting it. May it always be the individual, the subject responsible for the performance of the technology, regarding its objectives, selection and final operation. That is, social control is significant. So AI should not replace the decisions of social beings, when it comes to ethical issues.

Final comments

The applications of artificial intelligence have great potential for social development and are revolutionizing the industry.*software*However, due to their dual use, this requires regulated and responsible use of them, a fact that is increasingly important because

They are raising ethical questions about the way technology is being used, and how it is affecting society.

The new realities offered by technologies are showing the need for a transformation in legal, ethical and moral standards, which must become an activity and modes of action guided by the social practice that each individual, and society in general, must assign. . This should contribute to facing the threats of the current context, so data science should be rethought in terms of protecting human interests, and against commercial purposes that deteriorate human behavior.

Technological risks are the result of ethical deficits, which shows the inability to connect science with human beings in a civilized manner; as well as, the lack of social skills to compromise on this connection, thinking globally and acting locally, and at the level of individuals.

The reality examined is indicating new tasks for ethical thinking, so the risks to which society could be subjected require placing our gaze on a different trajectory, to which the malicious use of technologies is guiding. This affects the way in which the digital ecosystem is built and managed, as well as the way in which its results are designed and distributed, which requires government policies and institutional and humanistic responses.

The natural sciences are being used to distort social values, which requires alerting them so that the results of their research are not oriented towards the servility of ill-intentioned practices, and preventing actions with negative impacts on society from being legitimized. The fact is that the practice of science from AI, intended to hinder events, is becoming a brake on thought, an issue that discredits it.

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