

# EPISTEMIC INJUSTICE AND VIRTUES IN THE DIGITAL WORLD

## INJUSTIÇA EPISTÊMICA E VIRTUDES NO MUNDO DIGITAL

**Alexander Safonov**

Kazan (Volga region) Federal  
University, Russian Federation  
[chelovek-3000@yandex.ru](mailto:chelovek-3000@yandex.ru)

**Anastasia Mayakovskaya**

Kazan (Volga region) Federal  
University, Russian Federation  
[anastasya9999@mail.ru](mailto:anastasya9999@mail.ru)

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**Corresponding author:**

[chelovek-3000@yandex.ru](mailto:chelovek-3000@yandex.ru)



mundo moderno. A digitalização cria um espaço epistêmico sobrecarregado de informações, que tem a característica de excesso hermenêutico. O excesso hermenêutico é o polo oposto da injustiça hermenêutica, que se caracteriza não por lacunas nos recursos hermenêuticos, mas por seu excesso. Com base nisso, pode-se concluir que a digitalização é uma fonte de injustiça hermenêutica. Argumenta-se que uma estratégia epistêmica adequada em um ambiente de informações sobrecarregado deve pressupor que o agente tenha uma virtude intelectual especial. Conclui-se que é possível superar a injustiça do excesso hermenêutico se o agente cultivar a virtude intelectual do progresso epistêmico associado a uma manifestação moderada de prazer intelectual.

**Palavras-chave:** Injustiça epistêmica. Injustiça hermenêutica. Excesso hermenêutico. Virtudes epistêmicas. Virtudes intelectuais. Digital. Digitalization (digitalização). Internet. Responsabilismo.

**Abstract:** The article explores epistemic injustice and epistemic virtues in the context of the digitalization of the modern world. Digitalization creates an epistemic space overwhelmed by information, which has the characteristic of hermeneutic excess. Hermeneutical excess is the opposite pole of hermeneutical injustice, which is characterized not by gaps in hermeneutic resources, but by their excess. Based on this, it can be concluded that digitalization is a source of hermeneutical injustice. It is argued that an adequate epistemic strategy in an overwhelmed information environment should assume that the agent has a special intellectual virtue. It is concluded that it is possible to overcome the injustice of hermeneutical excess if the agent cultivates the intellectual virtue of epistemic progress associated with a moderate manifestation of intellectual pleasure.

**Keywords:** Epistemic injustice. Hermeneutical injustice. Hermeneutical excess. Epistemic virtues. Intellectual virtues. Digital. Digitalization. Internet. Responsibilism.

**Resumo:** O artigo explora a injustiça epistêmica e as virtudes epistêmicas no contexto da digitalização do

## 1. Introduction

The active development of digital technologies is significantly transforming the epistemic environment. New ways of producing, distributing and storing information greatly simplify the agent's access to knowledge. At first glance, it seems that this should contribute to the reduction of epistemic injustice. Digital technologies provide equal access to the production and consumption of knowledge, regardless of belonging to social groups. However, at the same time, new forms of epistemic injustice arise, which are associated not with gaps in hermeneutical resources, but, on the contrary, with their excess. An excessive hermeneutical environment, of which the Internet is a prime example, can also be a source of epistemic injustice.

We suggest that the answer to the problem of epistemic injustice in the context of total digitalization can be found in the epistemology of virtues. After analyzing the nature of the hermeneutical redundancy of the digital environment, we find that it is possible to overcome epistemic injustice if the agent possesses special intellectual virtues. After analyzing the nature of the hermeneutical redundancy of the digital environment, we find that it is possible to overcome epistemic injustice if the agent acquires special intellectual virtues.

The first part of the article analyzes the process of total digitalization through the lens of hermeneutic injustice. We find that the digital environment is a hermeneutical redundant epistemic environment.

The second part explores digitalization as a source of hermeneutical injustice. It is found that in the modern digital reality of redundant information, contradictory data can coexist in a single epistemic space. It is argued that the intellectual virtues of an agent are not suitable for situations of information excess, since they were formed for an environment with information deficiency.

The final part of the article explores the intellectual virtue that allows the agent of the epistemic environment to overcome hermeneutical injustice. It is argued that the agent is not able to implement the strategy of choice in the environment of hermeneutical excess, because the agent is prone to epistemic vices of excessive and insufficient intellectual pleasure. It is proved that a special property that an agent should have in the conditions of digital reality is the virtue of epistemic progress.

## 2. Epistemic injustice and digitalization

Epistemic injustice is an injustice shown to the agent in the field of creation, dissemination and assimilation of knowledge. Miranda Fricker (2007) defines epistemic injustice as wrongful actions against some person in the role of a knower, i.e., agent in an epistemic environment. Obviously, this term is the intersection of epistemic and ethical issues, which is why it is closely related to the issue of epistemology of virtue (Kwong, 2015).

Fricker identifies two types of epistemic injustice: testimonial and hermeneutical. Testimonial injustice manifests itself in the form of discrimination of an agent's opinion or knowledge due to his belonging to a certain social group. This type of injustice lies in the relationship of agents within the epistemic environment. Often this type of injustice is in the nature of a lack of trust in the evidence of agents due to their social affiliation (Wanderer, 2012).

Hermeneutical injustice is a characteristic of the epistemic environment itself, when the lack of some knowledge and the restriction of access to it creates unfair conditions for a certain social group. Such injustice characterizes the epistemic environment itself. An example is the lack or restriction of access to gender studies, which create a situation of dominance of biased theories that do not reflect the real state of affairs. Therefore, the digital environment, in particular the Internet, can be considered as an epistemic environment that can show signs of hermeneutical injustice. Hermeneutical injustice has a fairly wide range of studies within the framework of applied ethical theory. With the help of this concept, the problems of oppression of women (Churcher, 2011), exploitation of child labor (Abakedi et al., 2020), ethical attitude towards animals (Podosky, 2018) are analyzed. On this basis, it can be argued that it is a rich conceptual blueprint with which to explicate and analyze many different forms of epistemic injustice.

At the same time, it is noted that the frame of definition of hermeneutical injustice given by Fricker is not complete. Hermeneutical injustice can be spoken of not only as the absence of some knowledge in the epistemic environment, but also as the repression and ignorance of certain hermeneutical resources (Crerar, 2016; Falbo, 2022; Nguyen, 2020). As an obvious shortcoming of Fricker's definition of hermeneutical injustice is that it does not take into account the situation of completeness of hermeneutical resources. In other words, different epistemic environments can provide different instances of hermeneutical injustice. If we consider the digital environment as epistemic, then it is obvious that it must have the characteristic of the completeness of hermeneutical resources. Moreover, the digital environment is not just

informationally complete, but informationally overwhelmed. Epistemic resources presented in digital form, such as on the Internet, may be redundant or contradictory, but nevertheless they continue to coexist in a single epistemic environment. We argue that epistemic environments with information overwhelm have the characteristic of hermeneutical excess.

Hermeneutical excess is the opposite pole of hermeneutical injustice, which is characterized not by gaps in hermeneutical resources, but by their excess: "... hermeneutical injustice does not solely take the form of conceptual gaps, but also conceptual excesses, concepts which exist in our collective hermeneutical resources but which fail to aptly describe any real phenomena in the world" (Dular, 2023, p. 2). Therefore, an excessive epistemic environment can also be a source of hermeneutical injustice.

Thus, digitalization creates an epistemic environment overwhelmed by information, which has the characteristic of hermeneutic excess. Based on this, we can conclude that digitalization is a source of hermeneutic injustice.

### **3. Digitalization as a source of Hermeneutical excess**

Digitization and the mass dissemination of Internet technologies turn out to be a false ally in the fight against hermeneutical injustice. By eliminating seemingly gaps in conceptual representation, the Internet creates a space saturated with information in which the voice of excluded social groups is lost. Digital technologies have made it possible to freely create, exchange and distribute information, but this has also led to information devaluation.

Information and new knowledge are of less value in the Internet age due to the easy accessibility of an unimaginably large amount of data. If in the pre-digital age, epistemic injustice was caused by the absence of certain concepts, then in the modern digital world, injustice arises largely due to the fact that concepts are ignored in the redundant information space. One can partly agree that this is a manifestation of intellectual imperialism (Dular, 2023), when concepts representing the interests of a minority are overshadowed by the interests of the majority. However, we believe that the causes of epistemic injustice in the conditions of hermeneutical excess lie not only in the field of social relations, but also in the field of epistemology. In other words, the injustice of the hermeneutic excess is created by the peculiarity of human thinking in conditions of information abundance.

For example, some scholars note that an abundance of information results in a lack of intellectual virtues:

The age of abundance of information is paradoxically marked by a deficit of wisdom. It seems that, the more information we have, the less wise we are in managing and controlling it for our individual and collective well-being. The problem is that there is too much information and not enough time to absorb it, understand its implications, and judge the best way to use it for our individual and common good. (Elliott and Spence, 2017, p. 181).

From our point of view, the problem is not so much that the agent lacks wisdom in the context of global digitalization, but that the intellectual virtues he has were formed in the pre-digital era. The intellectual virtues of an agent are not suitable for situations of information excess, since they were formed for an environment with a hermeneutical deficiency. Using Aristotle's theory of wisdom, it can be said that practical wisdom (phronesis) was defined in relation to theoretical wisdom (sophia) (Whitcomb, 2010). This classical (pre-digital) epistemological strategy implicitly assumed that any new knowledge has practical value. The usefulness of new information is undoubted for this strategy, since it presupposes objectivity and unity of theoretical and practical knowledge. The goal of this strategy is to establish an objective and only true theory. New information either confirms or refutes existing concepts, therefore, the main strategy is the constant process of cognition and the search for new information, the lack of which can lead to the fact that in its practical activity the agent will rely on false theoretical ideas. New information in the classical epistemic strategy is the result of a non-random, purposeful search.

In today's digital reality of redundant information and conflicting data can coexist in a single space. Consequently, contradictory theoretical ideas no longer compete for the status of the only objective representation, but exist as alternative theories. Therefore, in an environment of redundant information, it is easy to find new information that will confirm your theory, but it is impossible to find information that will disprove it once and for all. In an overwhelmed information environment, such as the Internet, contradictions do not cancel each other, but exist as alternatives, therefore, no new information can refute the theory, since there is alternative information confirming it. Thus, in an environment of information excess, it is possible to adhere to a falsified theory, since any theory refuted by new information becomes simply alternatively verified.

For example, if some new information  $i$  refutes a theory  $T$ , then this does not mean that  $T$  is discarded as a falsified theory. It is possible to formulate an alternative theory of  $T^*$  that will take  $i$  into account, but this does not mean that the agent will necessarily abandon  $T$  in favor of  $T^*$ . In a situation of excess,  $i$  is already present in the information environment, new information

does not get there as a first discovered fact, in accordance with which it is required to revise the existing theoretical positions. However, the mere presence of *i* in the information environment does not necessarily force all agents to change their views. Therefore, the change of beliefs in the redundant information context occurs in accordance with the choice of each agent to accept or ignore the already available information. A striking example of ignoring already available information is the modern belief in a flat earth.

The classical epistemic strategy assumes that the agent is an unbiased researcher whose main task is to refine theoretical understandings according to established data. The classical epistemic agent is at the mercy of fact, since it is the facts that determine the theory to which he must adhere. The agent does not choose facts, he discovers them as an objective state of affairs. Therefore, the main goal of this cognitive strategy is the search for new information and new facts to clarify and revise existing theories. If in the classical epistemic strategy, the agent searches for new information to verify or falsify the existing theories, in the situation of excessive information environment he is forced to make a choice. Since the information already exists in the information space, the agent's task is limited to accepting or not accepting it.

The agent needs to possess certain intellectual virtues, which will act as criteria of the choice being made. This is especially important if the choice is made in a situation of epistemic injustice. An overloaded information environment can create a situation of hermeneutical excess, where it is psychologically (or otherwise) more convenient for an agent to ignore this or that information or concept. This is not a restriction on the agent's access to knowledge or concepts, but hermeneutic excess makes it almost impossible to make a justice choice.

Obviously, it is impossible to limit environments to only the right information, as, for example, it is impossible to limit digitalization and the dissemination of information on the Internet, as this threatens the epistemic injustice of limiting access to knowledge. Digital technologies are indeed a benefit, as they make it possible to overcome information limitations. However, the agent must develop intellectual virtues that will avoid the epistemic injustice of an information-saturated environment, which arises as a natural consequence of total digitalization.

Thus, digitalization creates an overwhelmed information environment, which is a condition of epistemic injustice of hermeneutical excess. The new digital reality requires a different epistemic strategy, in which the agent does not search for new information, but chooses information that is already available. Epistemic injustice arises from the fact that an agent tends to avoid information that requires him to reject or revise the theories he holds even if they are a form of justification for various kinds of social injustice. Hence, the injustice of hermeneutical

excess is reduced to the agent's justification of the beliefs he has (or that are favorable to him). We argue that an adequate epistemic strategy in an oversaturated information environment should presuppose that the agent has a special intellectual virtue that would allow him to falsify socially unjust theories given the available information. Let's take a closer look at epistemic virtues for overcoming the injustice of the hermeneutical excess of the digital world.

#### **4. Epistemic virtues in the context of digitalization: epistemic progress**

The aretic approach in epistemology involves shifting the focus of consideration from the cognitive activity to the properties of the agent in that activity. We regard an areté or virtue as some superior quality of anything (MacIntyre, 2007). Accordingly, the notion of virtue transferred to the field of epistemology problematizes the superior qualities of the cognitive agent. In other words, the central issue is not the characteristics of a successful cognitive act (truthfulness, validity, reasonableness, etc.), but the qualities of the agent capable of a successful cognitive act.

There are two main approaches in the epistemology of virtue: reliabilism and responsibilism. While the reliabilism approach is an aretic approach to solving traditional epistemic problems (Sosa, 2007), proponents of responsibilism focus on the nature of the cognizing agent (Code, 1987; Zagzebski, 2020). In this sense, responsibilism brings epistemology and ethics closer together. Therefore, when considering the problem of intellectual virtues in the context of epistemic injustice, we will follow the responsibilism approach.

The problem of intellectual virtues in the context of the development of computer and online technologies is actively studied in modern epistemology. Digitalization and the rapid development of computer technology has both positive and negative effects on cognitive processes (Smart et al., 2017). The active development of Internet technologies becomes a challenge for epistemology and requires the agent to exhibit particular online intellectual virtues (Heersmink, 2018; Miller and Record, 2013; Pritchard, 2007). At the same time, the internet is a source of incorrect and false information that maintains and increases the bias and misinformation of epistemic agents (Lynch, 2016). This creates an ethical problem of spreading biased and stereotypical perceptions that reinforce social injustice (Noble, 2018).

Global digitalization creates an oversaturated information space in which contradictory theories exist not in conditions of mutual exclusion and competition, but as coexisting alternatives. This digital reality requires the agent to have special epistemic virtues that would

allow him to choose and adhere to the most justice alternative. In line with virtue epistemology, we do not consider the properties of the theories' fairness, but the agent's qualities, realizing which the agent held the most ethically acceptable theories.

From the argumentation in the previous section, it is clear that the epistemic injustice of hermeneutical excess arises when an agent is unable to accept some present information that falsifies the agent's existing beliefs. Consequently, the agent's presumed epistemic virtue should favor the agent's falsifying her own beliefs in the first place.

According to Aristotle's scheme (Aristotle, 2020), to define virtue it is necessary to identify a related feeling or action and determine its moderate manifestation. In turn, the excess or lack of this feeling will be the manifestation of vices.

If we look at the Aristotelian list of feelings and virtues, the most appropriate one to define the intellectual procedure of falsification is the feeling of pleasure or satisfaction. However, this feeling must be presented in an intellectual form, as intellectual pleasure or intellectual satisfaction, such as in the case of a completed proof or a convincing argument. It is not uncommon for a completed, convincingly constructed proof to be accompanied by a sense of intellectual satisfaction.

A moderate sense of intellectual satisfaction provides the virtue of epistemic progress. This virtue of the agent ensures the application of the principle of falsification. Knowledge develops through the search for falsifying information, hence an agent's moderate dissatisfaction with an existing explanation, proof, or theory leads him to seek refutation.

Lack and or excess of intellectual satisfaction turns to epistemic vices. A total lack of intellectual satisfaction leads to a rejection of all knowledge. Excessive skepticism turns to a critical rejection of any theory, thus threatening epistemic injustice. Even if some information or theory will contribute to the reduction of hermeneutic injustice, it will be ignored by the agent because of the lack of intellectual satisfaction. An oversaturated information environment, which forms in agents a lack of intellectual satisfaction (for example, with an excess of knowingly false information) will create conditions for epistemic injustice. An agent in such an oversaturated information environment will be restricted from certain interpretations and theories, as he will have an epistemic vice of intellectual rejection.

When intellectual satisfaction is excessive, there is an unjustified confidence in the unshakeable truth of some theory. The agent does not feel the need to continue the research because he has no need for a more accurate and true description of reality. An imaginary confidence in the possession of a perfect theory arises. This intellectual vice is the cause of



dogmatization of some knowledge. If some theory is considered as the final and absolute truth, then no new information can refute it, and every new fact will be just another confirmation. In the situation of oversaturated information environment, when an agent needs to realize epistemic strategy of choice, it can become a condition of epistemic injustice. Hermeneutical excess forms in the agent a tendency to confirm the beliefs that are comfortable for him, ignoring the available information. The agent can no longer implement the classical epistemic strategy of a scientist-researcher in order to revise his beliefs; in the space of information redundancy, he chooses information in accordance with his own beliefs.

At first glance, total digitalization and technological advances in information technology should seem to contribute to the reduction of epistemic injustice. Digitalization does indeed contribute to the reduction of hermeneutical injustice by allowing access to and creating mechanisms for the dissemination of under-represented forms of knowledge. However, at the same time, digitalization opens up other forms of epistemic injustice that are bound up with hermeneutical excess. Redundant information environments, such as the Internet, create conditions in which contradictory theories coexist as alternatives. In such an environment, hermeneutic injustice is created not because of lack of access, but because of the redundancy of choices. In a redundant information environment, an agent is more inclined to confirm his beliefs (even if they are based on prejudice) than to refute them and revise them, taking into account the available alternative information. Redundant information environments, such as the Internet, create conditions in which contradictory theories coexist as alternatives. In such an environment, hermeneutic injustice is created not because of lack of access, but because of the redundancy of choices. In a redundant information environment, an agent is more inclined to confirm his beliefs (even if they are based on prejudice) than to refute them and revise them, taking into account the available alternative information.

Our conclusion is that the agent is unable to implement a choice strategy in an environment of hermeneutic redundancy, and is prone to the epistemic vices of excessive and insufficient intellectual pleasure. In turn, these vices create the epistemic injustice of the information surplus environment. Consequently, it is possible to overcome the injustice of hermeneutical excess if we cultivate in the agent the intellectual virtue of epistemic progress associated with a moderate manifestation of intellectual pleasure.

## 5. Conclusion

Digitalization forces us to look at the problem of epistemic injustice in a new context. Created by the rapid development of digital technologies, the oversaturated information environment requires an agent to possess special intellectual virtues. We have determined that the special quality an agent should possess in the conditions of digital reality is the virtue of epistemic development. The cultivation of this virtue is one of the most important tasks of modern education. Traditional education aimed at acquiring the skills necessary for the realization of the classical epistemic strategy of searching for new information should be supplemented with the cultivation of qualities for making choices in the conditions of information excess. Otherwise, there is a risk of epistemic injustice of neglect, when information is in full access, but falls out of the agent's attention. This situation is also dangerous because it creates an external illusion of justice.

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