

General Attitudes Toward Artificial Intelligence

Csák Zolta

Eötvös Loránd University
csakzolta@gmail.com

Dr. Saáry Réka

Obuda University, Keleti Károly Faculty of Business and Management
saary.reka@kgk.uni-obuda.hu

Abstract: In the last few years, digitalization has experienced a rapid growth with the help of artificial intelligence. Many fields such as healthcare, education, customer service and data analysis benefited from the use of AI. AI is often associated with major promises about what humanity can achieve with the help of AI. For example, it is often considered to improve efficiency, associated with faster decision making and expected to provide more convenient services. Nevertheless, there are voices warning us about the unknown societal consequences of AI, which may negatively affect everyday people. These concerns include data privacy, reduced human control, job transformation, ethical uncertainty and lack of transparency. This paper aims to broaden our view of general attitudes toward artificial intelligence based on a secondary analysis and synthesis. The reviewed studies showed that the general attitudes towards AI are not simply positive or negative, reflecting a tension between its innovative potential and ethical concerns.

Keywords: artificial intelligence (AI), societal impact, ethical concerns, public attitudes, digitalization

1 Introduction

The use of artificial intelligence (AI) has become an everyday phenomenon in recent years, ranging from a key tool for business growth and innovation to an important part of public services [3], [6]. AI-based solutions are used in many fields such as healthcare, education, customer service, data analysis, content creation and in many automated decisions [6], [7]. The technology has gained increasing attention because of the faster decision making, convenience and the promise of innovation [6]. Meanwhile, concerns are also becoming increasingly prominent,

such as effects on society, data privacy, reduced human control, job transformation, lack of transparency and ethical uncertainty [2], [7], [8].

Based on the literature attitudes towards AI are not simply positive or negative, reflecting a tension between its innovative potential and ethical concerns [2], [6]. According to Schepman and Rodway [2], the positive and negative dimensions of general attitudes toward AI are distinct, meaning that people can simultaneously recognize the usefulness of the technology while also raising issues about it. This is particularly important because the societal perception of AI is not just a technical issue, but a cultural and ethical one [2], [6].

The acceptance of AI depends strongly on the field in which it is applied [2], [8]. Previous studies have shown that people are more likely to accept AI in areas that involve data analysis, automation or technical support, but less likely to accept it in areas that need ethical decision-making [2], [8]. For example, healthcare decision-making, law enforcement, military applications, and the handling of personal data [2], [8].

Another key determinant of social acceptance is the weighing of risks and benefits [6]. According to Brauner et al. [6], people form their opinions about AI mainly based on how useful or risky they think a given application is.

Trust is another key factor in the acceptance of AI [4], [7]. People do not only consider that the technology is efficient, but if the decision is understandable, whether they can be checked and whether the organizations behind the technology can be held responsible [4], [5]. This is the reason why the focus is not only on the technical aspects [3], [7]. Need to be considered transparency, human control, data security, regulation and institutional safeguards as well [3], [7], [8].

This paper examines how the literature explains the ambivalent nature of attitudes toward AI, the role of context, the weighing of risks and benefits, and the importance of trust and ethical issues [2], [4], [6]. It argues that the social perception of AI cannot be understood simply as support or rejection, but rather as a conditional, multidimensional phenomenon that depends on the specific application [2], [6], [8].

2 Methodological approach

The study is based on a targeted literature review, aiming to summarize the main patterns in the academic literature on general attitudes toward artificial intelligence. The chapter is not intended to be a comprehensive systematic review, but rather synthesizes findings from selected peer-reviewed studies that are directly related to the social perception of AI, the evaluation of risks and benefits, ethical concerns, and issues of trust and transparency [2], [6], [7].

The selection of the literature was based on studies that do not view AI simply in a positive or negative way, but examine it as a multidimensional and context-dependent phenomenon [2], [6], [8]. In this regard, the literature review focuses on studies that analyze the positive and negative aspects of general attitudes toward AI, the role of application areas, the relationship between risks and benefits, and the conditions for trust in AI [2], [4], [6].

The eight studies were selected based on their direct relevance to the main themes of the review. Only peer-reviewed studies were included, focusing on general attitudes toward AI, context dependence, risk and benefit perceptions, trust, transparency, and governance. Together, these studies provide complementary perspectives on the main factors shaping the social acceptance of AI.

The analysis follows a thematic logic. The review is based on four main themes, which are, the ambivalent nature of attitudes toward AI; the role of application context; the evaluation of risks and benefits; and the importance of trust, transparency, ethical considerations, and the regulatory environment. This structure allows the study to not present the literature as a simple list of isolated studies, but rather as a coherent and integrated whole, where each theme is examined in relation to the others [2], [3], [6], [8].

3 The ambivalent nature of general attitudes toward AI

The most important feature of general attitudes regarding AI is that they cannot be described simply as positive and negative approaches [2]. According to the literature, people sense both the opportunities and risks of AI: for example, they recognize the effectiveness, convenience, and innovative potential of the technology, whilst they express concerns about data security, transformations in workplaces, reduced human control, ethical dilemmas, and lack of transparency [2], [6], [7]. According to Schepman and Rodway [2], a recurring pattern in earlier studies is that professionals, the public, and the media present both positive and negative narratives of AI at the same time, meaning that the social perception of AI is fundamentally dual in nature.

The empirical research of Schepman and Rodway [2] is particularly important from this perspective, because during the validation of the General Attitudes towards Artificial Intelligence Scale (GAAIS) they identified two distinct attitude dimensions. The positive subscale mirrored the excitement, societal usefulness and personal benefit towards AI, while the negative subscale captured the concerns and doubts. This suggests that the perception of AI is not placed between two endpoints but positive and negative rates may be both present in an individual's way of thinking [2].

This ambivalence also appears in the perceptions of specific application areas. According to the results of Schepman and Rodway [2], respondents evaluated more positively those AI applications that were related to processing and automation of greater amount of data, or technical tasks. In contrast, they felt less comfortable with applications addressing human judgement, personal decision-making and other sensitive social scenarios, for instance in case of a medical treatment or psychological counselling.

The ethical aspects further strengthen this ambivalent nature. According to Ikkatai et al. [8], public attitudes toward AI ethics differ markedly depending on what application context is in question. The military use of AI elicited a particularly high anxiety in the research, which indicates that concerns regarding AI are raising in scenarios relating human life, control and responsibility.

In conclusion, according to the literature, AI-related general attitudes have an ambivalent character [2], [6]. People do not simply support or reject AI, but evaluate its expected benefits, potential risks, societal consequences, and ethical conditions [2], [6], [8]. Thus, the societal perception of AI can be interpreted as a multidimensional phenomenon, in which technological utility, risk perception, human control, and application context all play a role [2], [6], [8].

4 Context dependence in AI acceptance

The social acceptance of AI depends on the field of application and the context in which it is used. Based on the literature, individuals do not generally reject or support AI as a whole, but rather form their opinions about AI based on the context. This means that the same technology can be perceived as acceptable in low-risk, technical or data-driven contexts, while it can be perceived as unacceptable in high-risk, human-centric contexts [2], [8].

Schepman and Rodway [2] examined this context dependence. They found that individuals' attitudes were likely higher if AI was used for huge scale data analysis, automation or technical based tasks. In these cases, AI was used for efficient and effective tasks, which were make the process faster and more accurate or more comfortable. On the other hand, individuals' attitudes were likely lower if AI was used for human-centric tasks such as healthcare, psychology or other sensitive areas. This could be mean that the acceptance of AI depends not just on the technology itself, but also if it is considered appropriate for a specific task by the user [2].

Context dependence is particularly important in ethically sensitive applications. Ikkatai et al. [8] examine the public's views on the use of AI in ethical contexts in four different scenarios. Based on the results, people's reactions differed significantly in different scenarios. For example, use in customer service or creative tasks were perceived as more acceptable, while use in military contexts was

perceived with anxiety. This means that the more directly AI affects human life, safety, responsibility, or control, the more critical its societal evaluation becomes [8].

A more specific example of context-dependent attitudes can be found in higher education. Toktosunova et al. [1] examined the use and perception of ChatGPT among university students in Hungary. The results showed generally positive attitudes, as 95.7% of the respondents who had used ChatGPT considered it helpful in their studies, while 61.7% preferred using it for learning over traditional methods. At the same time, the authors also highlighted ethical, privacy and security concerns related to its use. These findings further suggest that attitudes toward AI depend on the specific context and on the benefits and concerns associated with its application.

The role of context is further supported by the findings of Brauner et al. [6]. The authors examined 71 different AI scenarios and found that people do not have a uniform assessment of future applications of AI. Some applications are considered useful and socially valuable, while others are considered risky or less acceptable. The evaluation is therefore not by the mere presence of AI, but by the benefits, risks, and societal consequences associated with a given application.

Overall, the adoption of AI is strongly tied to the application area. People are generally more open to AI when it provides technical support, processes data, or performs automated tasks. They are more cautious when the technology is involved in sensitive decisions, processes that affect human lives, or situations that involve ethical responsibility.

5 Risk, benefit, and perceived societal value

One of the most important factors in acceptance is understanding the risks and benefits [6]. Based on the literature, people do not only consider whether an AI-based solution is technologically advanced or how likely it is to become widely adopted, but also what advantages and possible harms they associate with it [6]. This approach is important because the value of AI is not determined by technological novelty, but by what consequences users and citizens expect from it [6].

Brauner et al. [6] examined this question on a nationally representative German sample. In their research, 1,100 respondents evaluated 71 different AI scenarios, including in the fields of autonomous transportation, healthcare, art, politics, warfare, and social inequality. For each scenario, participants were asked how likely they considered the application to be, how much risk and benefit they saw in it, and how socially valuable it was.

One of the most important findings of the research is that the perceived social value of AI applications was primarily explained by perceived benefits and risks. According to Brauner et al. [6], benefits had a positive effect on value judgment, while risks had a negative effect. In the model, the effect of perceived benefits was stronger than that of perceived risks, with coefficients of $\beta = +0.672$ and $\beta = -0.490$, respectively. The two factors together explained 96.5% of the variance in value judgments, while the perceived likelihood of a given AI scenario did not prove to be a significant factor [6].

Variable	Std. $\beta = B$	SE	T	<i>p</i>
(Intercept)	0.012	0.011	1.125	.265
Perceived Risk	-0.490	0.033	-14.722	< .001
Perceived Benefit	0.672	0.046	14.564	< .001
Perc. Risk $\times$ Benefit	0.138	0.134	1.035	.305

Table 1.

Multiple regression analysis predicting the average overall value of the 71 AI-related topics from perceived risk and perceived benefit

Source: Brauner et al. [6]

This means that people do not necessarily accept or reject an AI solution because how close or distant they perceive it to be. What matters far more to them is the specific benefits the technology promises, and the social, ethical or personal risks associated with it [6]. In other words, an AI-based solution can be acceptable if the benefits are clear, and the risks are manageable and institutionally controlled [3], [6].

This finding also aligns well with the ambivalent nature of general attitudes toward AI [2], [6]. People do not take a stand for or against AI in itself, but rather consider what value a given application creates, whom it benefits, whom it may negatively affect, and the extent to which it remains under human or institutional control [3], [6]. For this reason, social acceptance cannot be taken for granted [6].

6 Trust, transparency and governance

The acceptance of AI is not only a question of attitude or utility, but also of trust. Users do not only consider whether AI can function effectively, but it is also important how trustworthy, clear, verifiable and responsibly applied AI is. It is particularly important, because AI systems often make decisions or give recommendations, whose operations are not fully transparent to users. Therefore,

trust does not arise automatically, but it is linked to the operation of the technology, application context and the environment standing behind it [4], [7].

According to research of Choung et al. [4], trust in AI is a multidimensional phenomenon. Authors distinguished two main dimensions of trust: human-like trust and functionality trust categories. Human-like trust refers to AI's similar characteristics to humans such as helpfulness or communicative nature, whereas functionality trust applies to the system's capabilities, reliability, security and performance. Based on results trust-related to functionality may have a greater impact on the intention to use AI, than human-like features. This suggests that for the users, seeming to be human-like is not necessarily the most essential, but to function reliably, accurately and predictably [4], [7].

Afroogh et al. [7] also highlight that AI reliability is not only a technical matter. Some of trust's technical factors are for example accuracy, safety, resilience, transparency and interpretability. However, non-technical factors are also significant such as ethical responsibility, data protection, fairness, accountability, and legal regulation. This is important because an AI system cannot be automatically accepted, even if it performs well technically. The operation of the system must be perceived fair, safe and responsible to be socially accepted [7].

Transparency is a particularly essential trust-building factor. According to Park and Yoon [5], algorithmic transparency may lower the impact of negative attitudes regarding AI and strengthen trust not only in AI's system but in the organization using it. It means that transparency does not only mean technical explanation, but it is also communicational and institutional signal. If users see that an organization communicates clearly about AI's operation, limits and accountability structure, that can improve the technology's acceptance [5].

Lahusen, Maggetti and Slavkovik [3] look at the issue of trust from an AI-governance point of view. They think that reliable AI cannot only be interpreted only at the level of algorithms. AI applications, institutional practices, and regulatory systems also need to be considered. This is essential in public services and in governmental decision-making, where AI directly affects citizens' rights, access, or opportunities. In situations like this trust does not only mean a system's effective functioning, but that there are oversight, accountability and redress mechanisms [3].

In conclusion, according to the literature, one of the fundamental requirements of accepting AI is trust. However, trust cannot be built solely on technological achievement. There is a need for transparent operation, auditability, data protection, human oversight, institutional accountability, and regulatory safeguards. Thus, AI's social acceptance does not depend only on what the system is capable of, but also on how responsible, clear, and accountable its use appears to be [3], [4], [7].

7 Discussion

Based on the reviewed literature, general attitudes towards AI can best be understood as a conditional and multidimensional phenomenon. Positive perceptions of AI can be strengthened if the technology is seen not only as effective, but also as socially beneficial, safe, and responsibly applied. People are not simply pro-AI or anti-AI. Rather, they form their opinions based on the specific context of application, the perceived benefits, the potential risks, and the conditions of trust [2], [6].

A common finding in the literature is that acceptance of AI is stronger when the technology serves a specific, understandable and socially useful purpose. In contrast, concerns are heightened when AI is used in sensitive decision-making contexts, situations requiring human oversight, or areas involving ethical responsibility [2], [8]. This is especially evident in applications related to healthcare, law enforcement, the military, or personal data.

Trust is another theme that connects the findings in the literature. Trust in AI depends not only on the system's performance, but also on whether its operation is transparent and auditable, and whether the organizations behind it can be held accountable [4], [5]. Therefore, the social acceptance of AI cannot be treated as a purely technological issue. Transparency, human oversight, data protection, accountability and regulatory guarantees are also part of the conditions for acceptance [3], [7].

Overall, the literature suggests that the social perception of AI is not stable or uniform, but rather situational. Positive attitudes can be strengthened when the benefits of AI are clear, its risks are manageable, its operation is understood, and its application is surrounded by appropriate human and institutional controls. The acceptance of AI is not an automatic consequence of technological development, but a process linked to social trust and responsible application [2], [3], [6].

Conclusion

The literature suggests that social acceptance of AI is not uniform but conditional. People are more likely to accept AI when its benefits are clear, its risks are manageable, its operations are transparent, and its use remains under human or institutional control [2], [6].

Positive attitudes therefore do not stem from technological advances themselves, but from how useful, safe and responsibly AI is perceived to be. This is particularly important in situations where AI affects human decisions, personal data or socially sensitive areas. In such cases, trust, transparency and accountability are not additional aspects but rather fundamental conditions for acceptance [4], [7].

Future research should examine in more detail which AI applications people are more likely to accept and which ones they continue to distrust. It may be particularly important to compare applications in healthcare, education, customer service, the labor market, law enforcement, and generative AI. Future studies should also consider cultural differences, levels of knowledge about AI, previous user experience, and the extent to which transparent communication and human oversight can reduce concerns [3], [5], [8].

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