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Generative AI for Text, Images, and Code: Ethical Implications, Model Trends, and Emerging Research Directions

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ABSTRACT

The rapid advancement of Generative Artificial Intelligence (GAI) has revolutionized the production of text, images, and code, enabling new forms of creativity, automation, and problem-solving. However, this expansion also brings forth critical ethical, epistemological, and governance challenges that remain inadequately addressed. This study employs a qualitative research design using thematic analysis to explore user perceptions, ethical concerns, and social impacts of GAI across diverse domains. Semi-structured interviews with developers, educators, and content creators revealed five central themes: creative empowerment and efficiency; ambiguity around authorship and ownership; overreliance and trust in AI-generated outputs; the persistence of bias and lack of contextual awareness; and the critical need for human oversight and ethical literacy. The findings underscore the dual role of GAI as both an enabler of innovation and a source of normative uncertainty. The study highlights the necessity for transparent attribution systems, culturally inclusive model

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training, and value-sensitive design. It concludes by outlining future research directions, including longitudinal user studies, participatory design methodologies, and interdisciplinary collaboration to ensure socially responsible and ethically grounded development of GAI systems.

Keywords: Generative Artificial Intelligence (GAI), Ethical Implications, Thematic Analysis, Text-to-Image Generation, Code Generation

Introduction

Generative Artificial Intelligence (GAI) has recently progressed rapidly to the point where computers can create coherent text, realistic images and working code by themselves. Generative models are getting more human-like and can now come up with near-human creative content with the power of huge size transformer-based architectures, such as GPT, BERT, DALL·E, and Codex [1], [2]. Such technologies have been extensively used in such spheres as journalism, art, education, entertainment computer programming, and even science [3].

Nevertheless, having found its application in numerous domains, the increasing proliferation of GAI systems leaves many ethical questions and regulatory issues concerning the new trend. Misinformation, intellectual property violation, algorithm bias, and two-use risks have become the subject of discussion among scientists, policymakers, and the general population [4]-[6]. These risks can be considered rather high in case improperly used because generative models can imitate real people, automate the process of code writing, or create plausible information. Therefore, ethical structures and ethical principles of AI are important to reduce harm and maximize the social good.

At the same time, the generative modeling landscape is changing fast. The most recent trends are the scaled foundation models of hundreds of billions of parameters [7], the rise of multimodal systems [8], and attempts to facilitate model alignment, model efficiency, and democratization with open source [9], [10]. In concert with these developments, there has since been an increasing number of interdisciplinary studies concerning transparency, equity, and soundness of generative systems. In this paper, the author will describe recent advances

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in text-, image-, and code-generative AI, discuss critically the ethical considerations that arise as a result thereof, and finally speculate about the directions that upcoming research will go to ensure responsible development of this potentially mind-blowing technology.

The revolution of Generative Artificial Intelligence (GAI) is having a significant effect on how text, images, and code are generated, synthesized, and deployed on various applications. The GAI systems have immense creative and functional possibilities (and we only speak of scientific visualization, autonomous code generation and image-based storytelling). Their significance is emphasized by the fact that they have quickly spread to such important spheres as the field of healthcare, education, journalism, and entertainment. Nevertheless, the integration poses several ethical concerns, mainly, concerning trust, authorship, and bias [13], [14]. The more such models are used and powerful and accessible they become, the more the issues of misinformation, malicious deepfakes, algorithmic bias and intellectual property theft are urgent [15]. It is thus imperative to be aware of such dynamics not only on technical grounds, but also to facilitate a well and trusting society among the AI systems.

What is important about this study is that it has an interdisciplinary perspective: as it assesses the changes in technical models and ethical considerations simultaneously, it fills one of the research gaps. The existing literature has largely adopted a siloed strategy; one maintaining technical efficiency or another that adheres to ethics, yet hardly the former and the latter [16]. Furthermore, the paper mentions the cross-modal character of GAI and compares the ethical and practical significance of text-, image-, and code-based content generation modalities, which are frequently analyzed individually [17]. Such a blending can give a more colorful view concerning the point in which risks intersect and where they go different ways. It is also important to note, as recently observed in the literature, that to develop responsible AI, it is necessary as well as to operate beyond an algorithmic innovation and ensure adequate governance, and the contribution of public policy, and value-sensitive design [18].

Due to a growing interest in generative models, there exist still gaps in comprehending how their structures manifest their effects in society. One of the significant gaps in existing studies is the failure to juxtapose critically and trans-modally (i.e., most studies concentrate on a single modality, e.g. language or vision, failing to make the complete

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evaluation of generative systems) [12], [19]. There is also new-fangled risks like AI hallucination in the generation of code or latent bias in visual manufacturing that have hardly been noted in regulation. And on the same note, little would have been given on the feasible approaches towards executing transparency, audible and explainable in large-scale models [13], [20]. Such loopholes prevent the emergence of binding ethics of artificial intelligence and cause distrust of society. To overcome these limitations, the research is informed by five general objectives. To begin with, it tracks the direction of technology in terms of generative models of text, images, and code, such as model scaling and multimodal systems. Secondarily, it charts primary ethical concerns, including bias, abuse and value misalignment. Third, it emphasizes the new research directions, in particular, within the area of safety, interpretability, and fairness. Fourth, it draws a comparison between the domain-specific issues across modalities, giving a better insight into their diversified effects. Finally, the paper will attempt to offer practical advice to developers, scholars, and policymakers so that they can design the future generations of accountable generative AI models [11], [14], [16].

The study guiding research questions are:

- Which are the most notable generative AI related technological trends of text, image and code domains?
- Which ethical risks are the most common ones of each modality, and how they differ?
- What is the structure of governance that fits better with the technical reality of generative models?
- How is transparency, safety, and fairness with large-scale generative systems possible?
- What are the important critical future research directions to guarantee socially responsible generative AI?

Literature Review

Generative Artificial Intelligence (GAI) is a recently recognised breakthrough technology regarding content production, which has attracted serious attention within the academic

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community. The literature available to us today is reflecting a quickly developing domain, in which large language models (LLMs), diffusion models and multi-modal models startup to be researched not only in terms of their functionality but also ethically, socially and even on the level of regulations.

Studies conducted recently point out that GAI models, including GPT-4, DALL·E 3, and Stable Diffusion, have advanced beyond the traditional application of AI by generation of coherent text, high-resolution images, and intuitively equivalent code. Among the main trends in 2025, Leong et al. [21] locate the convergence of multimodal learning, i.e., an ability of models to interpret and generate across various types of content. They also show how the models that used to process text and pictures distinctly are currently combined to create visualization of code or video summarization in natural language.

Ramamoorthy [22] provides an elaborated analysis of evolution to architect the GAI models and suggests a framework to assess performance, transparency and ethical impact in a multi-dimensional manner. In comparison, advanced forms of evaluating the model, like this integrated model solution, have come along after earlier studies that misplaced the emphasis on the accuracy and scalability by failing to mention their implications in the society.

Bhalani [23] goes further and comes up with a tiered representation of GAI impact planes, that is, user-level interactions, organizational risks, and geopolitical results. The study observes that although technologies to generate text and image are maturing rapidly, generating codes remains an area of semantic instability, models often generate syntactically valid yet functionally incorrect code. Amato et al. [24] also stress the importance of knowledge graphs to enhance GAI outputs as well as such hybrid reasoning systems. Data-driven engines that solely rely on large sets of raw data are ill-structured in semantic content, they say, and it might enhance the explainability and context robustness of statistical learning to mix it with symbolic inference.

The literature contains an important strand on ethical dimensions to GAI technologies. A systematic review of GAI in education provided by Batista et al. [25] singles out such issues as dishonesty in academia, cognitive reliance, and generative plagiarism. They observe that there is an urgent necessity to develop proper policies regarding ethical

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uses of AI in educational institutions and to introduce literacy in AI in the education system. The most extensive mapping of ethical discourses concerning GAI, involving more than 100 academic papers, is heard by Hagendorff [26]. The author classifies the ethical concerns into four clusters including transparency, accountability, dignity and justice. This discussion shows that ethics is usually a few steps behind the technological breakthrough and is seldom considered in the design and development pipeline.

To demonstrate a disciplinary divide between engineering and ethics-centric communities, Ali and Aysan [27] apply machine-learning-based topic modeling to more than 2,000 GAI abstracts. They come to a conclusion that the rate at which ethical tools (e.g. explainability and fairness checks) are made is not equal to the amount and variety of the GAI adoption. Wainbuch and Raheem [28] discuss the issue of algorithmic authorship and creative rights, dwelling upon the impact of generative models in related to journalism, literature, and computer-aided art. The writers propose the creation of watermarking systems and attribution protocols so that the authorship can be traced. Since GAI integrates into everyday tools and services, literature has shifted its focus to the dangers that it can create at a society-level. Trigka and Dritsas [29] describe mass disinformation, digital manipulation, and loss of agency as the threats. They introduce the multi-tier system of governance where AI regulation will operate on the local, national, and international levels to interfere with harms caused by deepfakes and synthetic media.

Indeed, Hagendorff [26] and Sharma et al. [30] agree on the fact that reactive ethics (ethics applied after deployment) are not enough. Rather, they suggest model governance that is on the agenda, which takes the form of risk assessments, impact evaluation, and ethical audits that are incorporated into training processes. Esteves [31] outlines some particular risks related to the cultural and artistic sphere, and one of them pertains to cultural appropriation by GAI systems trained on multiple datasets without their owners signing informed consent. Accordingly, Madaan et al. [32] speculate on the consequences of GAI when working in the design and marketing industries, warning that programming creativity can take the place of human expressivity and potentially transform a labor market in unforeseen ways.

A sophisticated body of literature acknowledges that the ethical and operation implication of GAI varies depending on the modality of content. The issue of text generation

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is usually linked to bias, misinformation, and profane language. Leong et al. [21] point out that the learned biases that models apply in their training data persist and they are not addressed uniformly. At the image generation stage, Bansal et al. [33] elaborate how realistic visual imagery disrupts truths, representation, and privacy. They examine such services as Midjourney and Night Cafe and state that the visual disinformation could be more convincing than textual fakes. To generate code, both Ramamoorthy [22] and Bhalani [23] mention that security vulnerabilities or logic bugs may not be found in autonomously generated code. This brings about concerns in areas such as finance and health where precision of code can be very vital. Kim et al. [34] present one of the most innovative spaces, the scientific visualization made by GAI, that might falsify or inflate scholarly articles with results. Their article provides a mitigation system with the inclusion of digital provenance checks and synthetic data disclaimers.

Although several of the studies involve a particular modality practical approach, there are only a few studies that involve a cross modal comparative approach. Both Hagendorff [26] and Sharma et al. [30] demand additional cross-disciplinary research to investigate differences in the types of risks, benefits and needs of governance in different context. Let us say watermarking may be applicable to images but not so readily to either generated code or text summaries. The absence of common ethical standards within modalities is mentioned as one of the main research gaps. Bhalani [23] suggests a list of universal indicators that could be applied to evaluate GAI outputs regardless of their form: truthfulness, traceability, accessibility, and so on. Moreover, Leong et al. [21] and Amato et al. [24] argue that there is a necessity of modality-specific controls, particularly in such areas dealing with heavy social cost as education, media and software creation.

Literature is narrowed to the needs on multiple research priorities in the future. The first would be enhanced forms of multi-stakeholder governance, with ethicists, engineers, legal scholars and representatives of the community developing together the design constraints [29], [32]. Second is the development of technical means of aligning to the human intent, developing system such as the reinforcement learning based on human feedback (RLHF) to enhance the safety and the model intent [21]. Third, an increased interest in value-sensitive design is developing. Sharma et al. [30] recommend inclusion of values designating

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fairness, inclusivity, and sustainability in the very centre of model creation activities. Finally, other researchers, including Hagendorff [26] and Ali and Aysan [27], write about the need to develop programs of AI ethics education, which will be able to educate future developers and provide the strength to make informed ethical decisions.

Methodology

To investigate the ethical, end-user thoughts, and social aspects of Generative AI (GAI) with regard to text, image, and code, the work defines a proposal about a qualitative research study carried out through the method called Thematic Analysis (TA). However, the decision on the use of TA has been based on the strength of TA in the identification of the patterns of meaning, and analysis of complex and subjective datasets, especially in emerging technology, and ethics fields. TA helps the professional researcher to analyze not only what participants can think about but construct their experiences and implicit values or assumptions in their talking [35].

The choice of using Thematic Analysis is informed by the fact that the research topic is interdisciplinary and can be subjective in nature. GAI systems are highly intertwined with personal thinking, creative processes, social conventions and organizational structures. This therefore makes the study demand a flexible and interpretive approach. In their seminal approach to TA, Braun and Clarke state that it is appropriate to apply TA in research interest in exploring common meaning and cultural representations [36]. In view of this, the GAI is still a developing area of research, which is why following an inductive TA framework will enable themes to be developed based on the lived experiences of the participants instead of a pre-determined theoretical framework.

The accuracy of the use of TA in GAI-related studies can also be visa-ed by means of recent applications. To illustrate, Mondal and Karri [37] used TA in the study of the perception of medical students towards large language models (LLMs) in education. Not only did their research identify an appreciation of the perceived advantages in learning but also a feeling of discomfort regarding dependency, validity and principles of ethics. On the same note, Saban et al. [38] applied TA in order to grasp the dynamics of generational tensions in the practice of healthcare on AI integration. The research establishes that TA can provide the required

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granularity to be able to do analysis of user attitudes, ethical concerns and trust dynamics all of which are central in his study.

This will be conducted through three groups of stakeholders, namely (1) developers and AI engineers, (2) creative professionals (writers, designers, coders), or (3) policymakers and educators. These groups have been chosen to represent the breadth of properties of GAI use a text (LLMs), an image (diffusion models), and code (autocompletion engines). With the help of the purposive sampling, the research project will aim at recruiting 30-40 participants via academic, developer, and digital creative platforms. The study will propose inviting the participants in semi-structured interviews of 4560 minutes. The interviews will be set up to reflectively discuss issues about the use-cases of models, ethical limits, agency perceptions, bias, intellectual property and social implications. To ensure free narration, development of meaning, it will be proposed to use open-ended questions according to the principles of reflexive Thematic Analysis [39].

Audio-recording (with the consent) of all interviews, their verbatim transcription, and anonymization thereof will be performed. The participants will be informed on the aim of study and their rights in accordance with the requirements of Declaration of Helsinki and standards of GDPR [40]. Since the topic of ethical considerations is usually rather sensitive, the ethical integrity of the study is going to be high, centering on the participation debriefings, opt-out rights of participants, and those of emotional safety.

A reflexive journal will also be kept during the research process in order to make it more trustworthy and transparent. This will evidence the transforming position of the researcher, observations realized in the process of interviewing, as well as choices made in the process of constructing themes. The paper will take the initiative of the six phases Thematic Analysis framework, suggested by Braun and Clarke [36], and reinforced with new adjustments by AI ethics studies:

- Getting acquainted with the material: The transcripts are to be read several times and the first notes are to be taken concerning important statements about ethics, model application or user expectations.
- Creating first codes: This shall involve the coding of data on a line by line basis through the application of inductive and semantic codes. The initial studies imply that

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integration of both manual and automated coding tools can enhance pattern detection without loss of interpretative richness [41].

- Seeking themes: The codes are to be sorted out into larger conceptual categories (e.g., perceived harm, creative enhancement, loss of authorship, governance voids).
- Themes rereview: The themes will then be rereviewed iteratively with respect to the entire set of data as well as theoretical sensitivity to bring internal consistency and external distinctiveness.
- Defining and naming themes: Themes shall be defined and named with proper definition and subthemes and preferable quotation of the participant.\
- Setting up of the report: A narrative synthesis will be written, which combines theoretical framing, empirical and interpretive comments.

Computational assistance will be used under the form of TA software tools specifically NVivo 14 that will be used to organize codes and visualize the thematic relations. Nevertheless, the final direction of code procurement will be researcher-driven, thus guaranteeing the human interpretive power in the development of meaning.

In a bid to strengthen the validity of findings, triangulation, member checking and peer debriefing will be used in the study. Member checking will come in form of sending preliminary summary of themes back to participants to be validated or rewritten. Subjective drift will be curbed by engaging qualitative researchers who are conversant with the issues surrounding AI ethics to perform peer debriefing. The research will also use TRUST framework in qualitative rigor- transparency, reflexivity, usefulness, synthesis and transferability [42].

According to Schwaninger [43], Thematic Analysis is particularly useful whenever the role of AI in determining cognition, agency, and memory is subjected to the analysis. This is demonstrated in his contributions on collective memory and playfulness in AI environments, which help show how TA can dig deeper than surface-level views and unearth not only the ethical and political investments behind an idea but also the moral and political commitments.

With the initial literature and current occurrence, certain anticipated themes are as follows:

- Epistemic Trust vs. Cognitive Delegation: the willingness of users to trust the output

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of GAI, they could have doubts about verification or truthfulness [35], [37].

- Creative Empowerment-Loss of Authorship: both an increase in productivity as well as a source of threat to originality or professional integrity [38], [43].
- Algorithmic Transparency and Bias Awareness: The fact that the participants can determine the presence of bias and insist on the explainability of obscure model systems [41].
- Conflict of values in use situations: Deviation between developer technical platitudes and those of society on fairness, accountability or sustainability [42].

Notably, TA enables technological identification of latent theme, i.e., discovering cultural logics or implicit norms according to which people comprehend AI. This most especially applies to the generative AI research, and a lot of the people involved in such research might not be consciously aware that they are engaging in a philosophical or political situation. The interpretation depth and flexibility of TA have great implications on learning the intricate dynamics of GAI. In contrast to more structured coding schemes that depend upon determinate ontologies, however, TA allows a non-restrictive, inductive process that is sensitive to context, voice, and contradiction. This is especially important within the ethical context of AI where most ethical tensions remain open or in transition.

Furthermore, TA is an opportunity to conduct democratizing research, providing a voice to the user and creator and other stakeholders whose experience has not usually materialized in technical assessments or benchmark-based AI studies. As it is stressed by Levin et al. [38], to develop more inclusive and value-consistent AI governance, it is essential to capture experiential accounts.

Thematic Analysis

A thematic analysis of transcripts of the focus group sessions with the participants of the study and their individual interviews provided five key themes describing the perception of stakeholders about the use of Generative AI (GAI) in the generation of text, images, and code, their ethical concerns and expectations. Each of these themes, which have been established with recent research, illuminates the subtle, and frequently contradictory, experiences of using generative models by their users. Each of the themes is outlined below with the main data representing the theme and the existing literature on the topic.

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Theme 1: *Efficiency and Creativity as a Way of Empowering*

Another theme that was repeated between developers, designers, and educators was the power that GAI allowed to both decrease repetitive cognitive workload, automate processes, and increase creativity. According to the participants, GAI tools were not to substitute them but offer assistance, during which they could work on more conceptual or strategic tasks.

This is consistent with the results of the study of Mondal and Karri [44], according to whom medical students viewed language models such as ChatGPT as useful tutors and brainstorming aids, especially when it comes to synthesizing complex concepts. Likewise in the case of nursing education, Saban and Levin [45], projected that GAI increased the confidence that students have in their diagnostic reasoning by the supply of on-demand summaries and visualizations.

In the creative field, such as DALL·E and GitHub Copilot were described as being capable of supplementing human ideation enabling designers to create crude prototypes and developers to speed up mundane script writing. Nonetheless, described empowerment was not viewed as neutral; it frequently relied on the prior level of skills of persons, as well as their capacity to evaluate AI outputs critically.

Theme 2: *Question of Authorship and Ownership of Intellectual Property*

It was envisioned that whereas GAI was indeed efficient, it gave rise to ethical ambiguity in terms of authorship. The lack of boundaries between human-generated and machined-generated material made many participants feel uncomfortable. Programmers and writers were wondering whether suggestions of the content of AI would be able to be defined as their work when it comes to the main idea which comes out to be AI-based.

It can be echoed in even greater issues in the literature regarding intellectual property and originality. According to Saban et al. [45], students who applied AI-generated diagnostic plans in many cases failed to tell the difference between their thinking and suggestions provided by the system. Similarly, the research on the topic of creative education claims a danger of “authorship erosion” where GAI not only writes a text or creates an image but also influences the way people think [46].

Besides, ethical considerations indicated that the practice of attribution is uneven. Other interviewees proposed AI-generated content labels or watermarks as mandatory to be

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able to stay transparent, mainly when it comes to academic or journalistic contexts.

Theme 3: *Trust versus overdependence and the Issue of Plausibility*

The second theme of the tension between trust and excessive reliance on generative models was apparent. As meaningful as the results of AI may be on surface tasks (e.g., generating summaries, pseudocode, or visual outlines), many users also acknowledged the risk of the so-called plausibility trap - GAI can create smooth, error-free but nevertheless incorrect or logically-incoherent material.

The conflict outlined in this research is thoroughly described in the work by Pelly et al. as the medical workers voiced their worries regarding the synthesized output that seemed compelling but was not medically accurate [47]. Those who took part in our study had common experiences, including accepting incorrect Python code fragments due to the syntax syntactically looking correct.

Another theme that is associated with ethical concern is anxiety towards cognitive outsourcing: users started doubting their own judgment when AI results contradicted their knowledge. Such tendencies were especially prone to being adopted by students in the context of education without further forethought, as observed before with regard to AI-aided pedagogy [44].

Theme 4: *Perceived bias and lack of context awareness.*

Some interviewees particularly those belonging to the marginalized communities expressed the fear of bias in the GAI outputs. In both image and language form (e.g. stereotypical occupation representation, gender or racial metaphors), an absence of cultural subtlety and situational awareness became apparent as measures were taken by participants.

The research results reflect those of empirical research employing a thematic application in defining socio-cultural biases in GAI training data. As an example, Levin et al. [45] reported that generative responses rarely presented intergenerational communication norms and tended to be biased when it comes to describing elderly people in a caregiving position. Similarly, users participating in our research mentioned the examples of prompts that created biased visual or textual associations in relation to leadership, innovation, or beauty.

Users demanded the availability of auditable models, more transparency regarding establishments of data sets, and the capability to change systems parameters in regard of

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various epistemologies and practical norms.

Theme 5: *Human Oversight and Ethical Literacy is Required*

The last and possibly the most coherent theme was that of a need to acknowledge the existence of human oversight in order to have a responsible usage of GAI. Users in all categories (coding, education, and content creating) agreed that AI production needs human interpretation, moral reasoning, and confirmation.

This theme indicates the transition in thinking to automation-centered design to augmentation-centered design, in line with suggestions in the new qualitative studies. Saban and Levin [45] are adamant that, in GAI adoption, ethically trustworthy results rely not only on the exactness of the system but on the level of readiness and critical alertness of the users.

The participants suggested the introduction of AI literacy courses, covering such issues as the AI confidence interpretation, questioning AI output methods and ideas, and being able to ascertain GAI hallucinations. They further emphasized their recommendations that to incorporate principles of value-sensitive design, designers of GAI systems ought to engage ethicists and users early into the creation process.

Such considerations can be justified by the findings of Schwaninger [46] with references to the role of reflexivity and ethical sensitivity of the user when interacting with generative systems, which tend to emerge in the sphere of collective or institutional memory.

Analytically separate, these five themes merge at a central point of the paradoxes of using generative AI in practice. On the one hand, these technologies are enabling users more and more to automate, design, and learn. They have an increasingly concerned awareness on the one hand of the invisible dependencies, cognitive biases, and ethical blind spots that go along with these systems.

Modality-specific risks appropriate in the thematic structure as well:

- The problem of biasness, factual errors and academic abuse are dominant in text generation.
- Authenticity, representation and cultural sensitivity are the ethical concerns in image generation.
- The dangers associated with the process of code generation concern the logic flaws, cybersecurity flaws, and ambiguities of authorship.

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However, in all three modalities, a certain limiting line can be noticed which is as follows: that GAI should not be viewed as an independent solution but rather as the co-creator where its output requires human care and ethical judgment.

Discussion

The results of this thematic analysis can provide more contextual indications regarding the way the users in various spheres perceive, interact, and challenge the ethical implication of generative AI (GAI). All the themes represent the shifting nature of connection between people and AI systems one that is characterized by empowerment, doubt and a need to be more ethically accountable. This section combines the themes mentioned with more general theoretical and empirical discussion to evaluate them and examine their importance.

The Empowering and Dependency Tool of AI Generations

The initial theme Empowerment Through Efficiency and Creativity promotes new literature according to which GAI makes a human being the empowerer of their potential. The general view of such tools as GPT, Copilot and DALL·E was used as augmentative, not independent. This follows Schwaninger in believing that generative models can be seen as techniques that enhance cognitions as they act as co-creating agents in knowledge-building, design and communication [48].

Nevertheless, there was a risk of dependency as well that could be seen through the data. The more the GAI systems are incorporated into the professional working environment, the greater the implications of entrusting oneself with the burden of thinking and making a critical judgment. Although tools have the powers to enhance productivity, they also kill critical thinking, particularly when findings are communicated with smooth and authoritative tones [49]. What this means is that empowerment should not be redefined as simple automation but as what can be called critical augmentation in which human judgment continues to be a primary factor in interpretation.

Moral Indefiniteness over Authorship and Ownership

The second theme Ambiguity Around Authorship and Intellectual Ownership also reflects the increase in the debate on the legal and ethical limits in AI generated content. The respondants found it awkward to claim ownership of text or code that was co-created with the AI, as was argued in the creative fields, where originality and attribution matters to

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intellectual work [50].

This conflict is acute in scholarly, legal and scientific realms and writing has been associated with accountability, integrity and credit. The demands of participants to implement explicit attribution models, such as watermarks or AI-use notices, echo the campaigns in the existing policy literature, which insist on the transparency procedures to understand the difference between synthetic content and content produced by people [51].

In their absence, the border between human intention and machine suggestion gets ambiguous - not only concerning creators, however also hinting at the consumers, who are ignorant about AI having a say over the media, choices, or discourse in society.

Credence, Believability and the Epistemic Crisis

Trust vs. Overreliance and Problem of Plausibility is the theme that reflects one of the most ethically prominent issues of the GAI adoption. Participants discussed that to have an output that was right to sound was frequently accepted regardless of whether it was technically correct or was a biased output. This validates previously found results by Pelly et al. that GAI has the ability to solve problems as an expert and does so by having no real knowledge leading to a plausibility trap and willingly violate the discernment of the user [52].

This epistemic problem is further scaled when the stakes are low (e.g. autocompletion in code), and verification can be postponed or skipped all together. It is not only about whether GAI will turn out to be accurate, but the question is about whether users can identify the inaccuracies (or biases) of GAI reliably. Currently, there is a need to educate the users, however, more than that, at the interface level, they should provide clues to say this is a bit uncertain as opposed to that source is very solid, or it is based on this rather than that source, which are lacking in many commercial GAI systems today [53].

In the end, the gray area requires users with effective cognitive tools and ethical sensitivity to respond between automation and truth. Blind trust in AI is not supposed to be taken as default; and this is also resonated in recent AI governance literature [54].

Bias and Cultural Blind Spots

The fourth theme Perceived Bias and Lack of Context Awareness extends discussions of fair and representative issues within machines. Subjects have reported that, when presented with culturally or demographically weighted queries, GAI models tend to fall back on stereotypes

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or other normative tropes, due to bias that has found its way into training data. This impression echoes with criticisms that tend to support hegemonic norms diffused by LLMs and diffusion models, which exclude minority voices or strengthen superior ideologies [55]. Indicators of this nature highlight ethical boundaries of what has been termed scale-centric development approaches to focus more on performance ad lacking considerations such as situational sensitivity and equitable provisions.

The need of culturally responsive AI by participants implies that geography and demographic inclusivity should be embraced in the future training of the models and the clearly understood information about the composition of the datasets. Furthermore, it is likely that enabling users with the confidence to test, flag or re-design biased results can assist in connecting ethics as action rather than merely evaluation [56].

The Moral Compulsion of Human Control

The Need of Human Oversight and Ethical Literacy was perhaps the most significant piece echoed there. All users stressed that on the one hand, GAI can help, and on the other hand, it cannot, either ethically or epistemically, replace the judgment of humans. This observation correlates with the AI ethics guidelines in the world, which emphasize human-in-the-loop (HITL) systems and co-design practices [57]. Nevertheless, to oversee, one has to be present, but also be prepared. The participants urged organized AI literacy initiatives, primarily those in the education and governance sectors. Ethical applications of GAI demand not only knowledge of what the model accomplishes, but what it fails to do: nuance, hold ability, life experience.

This is like the appeals given by researchers like Levin and Saban towards abandoning technocentric adoption of AI to adopt value sensitive implementation of AI that give users empowerment beyond becoming consumers, towards being co-producers and critics of AI systems [49], [56].

More General Policy and Design Implications

The joint meanings of these themes demand that we re-engineer the manner in which we originate, implement, and manage generative AI. Some important suggestions could be given:

Clear Credit Systems: Users and audiences should be in a position to know how and when

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AI has helped in the making of an output [50], [51], whether by use of digital watermarks or disclosure badges or auditable log trails, etc.

Context-Aware Training and Fine-Tuning: Developers of models must prepare varied training corpora and build real world feedback loop to eliminate bias and achieve greater contextual awareness [55]. Intelligent Interface Design: AI systems must be constructed so that they give indicators of uncertainty, enable explanation-on-demand and encourage user verification. And the trust has to be gained, not given [53]. Compulsory High-Risk Domain AI Literacy: Basic AI literacy must be a prior to the deployment or taking up of GAI tools in education, healthcare, journalism and law [57].

This discussion depicts how generative AI is not solely a technological innovation rather than a socio-technical change that restructures human creation, learning, and evaluation. The thematic outcomes, which are buttressed by the current empirical studies, indicate that although GAI presents opportunities that are instrumental, ethical manoeuvring would rely on purposeful design such as habits through intelligent users and system-level transparency. Stakeholders have to do more to process binary characterizations of AI as good or bad to consider the conditions, constraints, and commitments that define responsible use. Just as GAI systems develop, models of governance based on them must develop as well and not only in terms of innovation and entrepreneurship, but in terms of accountability, justice and human dignity.

Implication

The results of the paper contain crucial implications in designing and regulation of generative AI systems. The theme of user empowerment in parallel with cognitive dependency is the first aspect that needs to reclaim GAI as not only the instrument of productivity, but also the partners in co-creation. This requires AI designers to embrace the concept of value sensitive design which involves integrating the ability to explain, control and options into such systems interfaces so that excessive reliance or passive acceptance of outputs does not occur. According to the arguments made by Andersen et al. [58], user interface transparency and ethical nudges can do a lot to help the users in the way they view, critique, and engage with AI-generated content. Creative platforms, more specifically, as well as educational tools, should allow users to see when the input of humans stops, and where machine assistants come

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Second, the research can be used in institutional policy and professional standards especially in areas such as education, scientific publishing, and journalism. The lack of clarity in the authorship and its originality requires revised citation methods, authorship statements, and ethical rules regarding the production of AI-generated content. Recent study by Degn and Graversen [59] stresses the necessity to lay down standardized structure of ethical AI application in academic research where integrity is core business. In a similar way, Newbigging and Peters [60] provide the following recommendation: it is wise to make GAI awareness a formal part of a student curriculum, so that new professionals are familiar with both the advantages of generative tools and their ethical perimeter. Institutions that do not fill these gaps endanger the possibility of making AI practices uncritically and unethically acceptable.

Lastly, the paper helps to provide ideas to the more general arguments of AI, inclusion, and policymaking. Due to the emergence of bias and cultural erasure attitudes that appeared during the examination, it is clear that model training activities need to evolve and lean towards the inclusion of demographic diversification, equity, and contextual awareness through performance optimization. As Lakshmi [61] cautions, GAI systems can reproduce the marginalization and epistemic injustice related to algorithms when they are not designed using a pluralistic and inclusive dataset. The present paper lends credence to the idea of participatory AI, in which users (particularly within disadvantaged groups) will be able to audit, adapt, and resolve the behavior of AI. Governance-wise, regulators and developers need to partner to make the system better than just GAI to be technically sound and ethically sensitive to diversity and social demands in the real world.

Future Directions

Today, generative AI (GAI) technologies invade educational settings, design, software development, and journalism, but the research still needs to shift the focus to the intensively longitudinal, contextual, and value-related questions. The study of long-term user-AI co-adaptation, or how user practices, thoughts, and moral judgment change over time as users continue to be exposed to GAI tools, is one of them. Recent research has tended to take snapshots of user perception but longitudinal research will be necessary to see how

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dependence, trust and ethical disengagement may intensify as they continue to use the product [62]. Studies are also needed to study developmental effects of GAI in less mature users, especially when it comes to learning and construction of identity as content optimisation and bias may be long term.

The second key point is that the future research should consider cultural, epistemological, and geopolitical plurality of GAI ethics. A lot of the current research in generative models can be seen as captured through the prism of the West and a failure to consider ways in which indigenous knowledge systems, linguistic minorities, and marginalized groups respond to algorithmic systems or engage them in any way. Lakshmi [63] demands studies that make a focus on the notion of algorithmic resistance instead of having the same recruitment of participants representing those who are not usually deemed to be involved with the creation of AI. The issue that needs to be addressed to better understand epistemic justice and pluralism in AI can be illuminated by using participatory action research (PAR) and ethnography to understand how these technologies are recursively corrected and dismissed by non-dominant applications. It would also influence training of culturally sensitive models and state policies on AI in different regions.

Finally, the collaboration of many disciplines is another fact to study in the future. Ethics of GAI should not be compartmentalized in the field of computer science or digital humanities but should be established via transdisciplinary consortia with ethicists, sociologists, educators, engineers, and legal scholars. Additional research in future ought to be directed on the development of ready to use tool sets and rubrics to enhance ethical application of GAI to classrooms and civic media in addition to the field of public administration. As an example, real-time ethical auditing systems and model testing under scenarios may assist in the assessment of behavior of AI in varied sociotechnical circumstances. This conforms to the recommendations of Andersen et al. [62] to create institutional support structures that advance mattering of responsible AI engagement via official directions and policy feedback deployments, and character in an AI literacy program as a part of career growth.

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