Some Considerations on the Integration of AI Applications in Audiovisual Practices[1]

Felix Rebolledo Palazuelos [2]

Abstract

This exploration delves into the expanding role of Artificial Intelligence (AI) across various facets of film production and audiovisual practices, underlining its profound influence on creativity, craft, and cost-effectiveness. The use of AI in filmmaking extends from the conceptualization phase to distribution and marketing, impacting pre-production planning, set design, music composition, post-production editing and finishing, and more. Despite the transformative strides in creativity, the integration of AI in audiovisual (AV) practices brings forth ethical, legal, and communication challenges to all aspects of filmmaking as well as epistemic implications.

The discourse surrounding the infusion of Artificial Intelligence (AI) into diverse realms of film production underscores its potential to revolutionize filmmaking. As this technological collaboration is in its infancy, understanding its mechanisms and cultivating the necessary skillsets for effective collaboration between digital filmmakers and AI applications and platforms becomes paramount. AI's revolutionary impact on audiovisual production expands creative horizons through innovative ideation, text generation, imaging, and musical composition tools. These tools effortlessly translate textual prompts or output

descriptions into compelling and surprisingly coherent AV products, overcoming barriers of expense, time, and artistic complexity.

AI's pervasive influence currently spans all aspects of filmmaking, from conceptualization and scriptwriting to pre-production planning, location scouting, virtual design, music composition, and post-production finishing and editing. Despite these creative breakthroughs, ethical considerations, legal hurdles, and communication challenges pose intricate problems at the intersection of audiovisual creativity and AI's technicity. The article stresses that unlocking the full potential of AI in filmmaking goes beyond the demands of off-the-shelf, plug-and-play applications and requires a practical understanding of machine learning concepts, programming skills, and access to specialized hardware—an expertise that often falls beyond the traditional scope of audiovisual creatives. Hence, collaborative efforts and transparent communication between filmmakers and AI professionals are deemed indispensable for optimal outcomes in order to customize AI to meet the specific needs of filmmakers and AV creatives.

The complexity of the study is compounded by the inherent compositional heterogeneity within both AI and filmmaking. AI comprises diverse components, including Machine Learning, Natural Language Processing, Neural Networks, etc., each with its applications and methodologies. Similarly, filmmaking is characterized by a myriad of disciplines, practices, and creative approaches spanning distinct phases of the filmmaking process. Recognizing this dual heterogeneity becomes crucial for a nuanced exploration of the subject, necessitating clarity on the specific AI components involved in distinct filmmaking tasks.

The article discusses the concept of AI's *technē* as an 'art of revelation', in accordance with Heidegger, urging the individual AV creative to conceive and function conceptually on a more abstract level and to operate with a different set of foundational

considerations and capabilities. The essence of AI's *technē* becomes apparent through the vastness of ideas it generates, embodying profound potentialities that unveil a transformative process. When implemented in practical terms, this process projects the very purpose for which AI exists. for AI, the activity of generation as becoming is the unfolding essence of AI, and can be referred to as the 'revelation', and whatever output it generates as the 'manifestation'. This distinction might at first seem innocuous and irrelevant, but the implication is that essence is now a narrative explication as opposed to a static identitary construct and moves the conception of thought into the realm of the processual. Further, and possibly more important, the manifestation, the output of a generative model, is a string of highly composed, probable statistical sequences within a select context where meaning arises when 'interpreted' or 'compiled' by an intelligent human reader — in this sense, the AI-created object has a questionable "thingly character". In generative language models, AI generates a probable coherence revealed through the statistical plausibility of the sequence based on patterns of words it has learned from textual materials of all kinds, from varied and sundry sources. This is why it is so challenging to attribute specific phrases, sentence segments, or blocks of text that sound as if they have been conceived together when written by an author — the sequence of words is an emergent optimized collage of probabilities of coexistence within a given conditioning context or training environment.

if we understand that meaning arises in film at its most fundamental sense as a result of the cinematographic effect as postulated by Bergson, or as a result of montage as classically theorized by Soviet filmmakers as the (intenso-affective) effect arising from the cinematic collision, juxtaposition, or conflict of two shots, the defining constructive dynamic of AI produces "montage" diachronically and synchronically: on the discernment of patterns within vast and diverse data sets composed of various media and content styles, and builds on generative adversity to produce hybridity on qualities distilled as common

notions. Critically, a generative model produces a sequential, relational concatenation that is ultimately structurally coherent and self-standing, but not as a mode of discursive understanding that can be considered thought, nor as a conceptually- or affectively- guided doing.

Drawing historical parallels, the article underscores the potential democratizing effect of AI applications in filmmaking, akin to the transformative impact of personal computers on digital productivity. Joel Mokyr's perspective on technological progress as a catalyst for economic growth is invoked, suggesting that AI could herald a transformation comparable to the Industrial Revolution. Nevertheless, the paper delves into human-centric concerns, addressing potential job displacement and the risk of devaluing essential human creative skills in the face of AI efficiency. In essence, the paper prompts nuanced reflection on the nature of knowledge generated by AI in filmmaking, encompassing attribution challenges, temporal transformations, and the necessity of a collaborative, transdisciplinary perspective to navigate the evolving landscape of AI in audio-visual creativity.

The paper explores the epistemic considerations arising from the integration of AI into the realm of filmmaking, emphasizing the intricate and multifaceted nature of AI-generated content. It underscores the complexity of characterizing these outputs as epistemic entities, given the absence of conscious understanding or conceptual thought in the AI creation process. While AI applications show immense potential for creative endeavors like fiction writing, image creation, and musical composition, their limitations in academic work are still apparent, particularly in citation and source attribution. Attribution and authorship challenges come to the forefront, particularly in academic contexts reliant on traditional citation practices, raising questions about the authenticity and reliability of knowledge produced by AI.

Moreover, anthropomorphizing AI terms like "semantic understanding" misrepresents their functionality, as AI lacks true understanding, analysis, or reasoning capabilities, serving currently as an untiring assistant fostering invention and creativity in the more creative aspects of filmmaking and AV creation. As with any novel hybrid media, AI appropriates and assimilates the media and technologies which it surpasses, resulting in new relationships between the various underlying media components — as well as users — but with emphasis on the temporal acceleration of material discovery and productivity.

The temporal implications of AI in filmmaking are thoroughly examined, highlighting the acceleration of creative processes and proposing a potential redefinition of our understanding of time in creative endeavors. Within the context of technology and technical processes, AI affects the celerity of certain productive processes as a result of its more efficient technicity — we can do more, faster. The temporal effects of AI can be understood in terms of the internal leveraging of computational processes, as well as the external implications of the technology on practices, and the individual's subjective temporal experience of work. AI's computational prowess is portrayed as accelerating the temporal dimension by expediting tasks and processes. Filmmakers and AV creatives stand to benefit from the automation of mundane tasks, affording more time for creative contemplation. The recently released OpenAI's ChatGPT-4 Turbo is spotlighted for its processing capacity, supporting up to 128k token context length, roughly the equivalent of 300 book pages of text, compared to the 8k it permitted before. These capabilities are game-changing as they grant a substantial foundational homogeneity to the source of generational transformation as a one-shot 'movement.'

In conclusion, the article posits that neglecting the development and deployment of AI in filmmaking will not mitigate the ethical, social, and economic challenges it poses. The multifaceted impact of AI on higher-level phenomena necessitates a transdisciplinary

approach. Cinema, with its hybrid nature as a thinking art form, is positioned as a pivotal domain for exploring and addressing these complex issues. The article advocates for a nuanced understanding of AI's role in filmmaking and emphasizes the imperative for collaboration, open communication, and transdisciplinary exploration to harness the full creative potential of this evolving partnership.

Keywords

Artificial Intelligence; communication; cinema; filmmaking; audio-visual production.