Authenticity of AI Pop Art on the Space Race in Education

Authenticity in the production of art is characterized by factors such as the origin of the artwork, the expression and reflection of the artist's values, and the response of the audience. The development of Artificial Intelligence in generating images using a dataset of pre-existing content has influenced authenticity in art in numerous ways. With personal experience in producing authentic images in the process of creating an educational graphic novel, AI's growing popularity in art is particularly significant to me due to its impact on education in the future. AI's production of art is inherently inauthentic due to its lack of personal ideas and its production of generic artwork that does not reflect the precise demands of the prompt.

To evaluate the accuracy of AI in generating artwork based on a text prompt, I chose a prompt that combined an event in history with a style of artwork. The prompt I fed into the AI

"Open art" was "Generate an image of the Space Race in the Cold War in the style of pop art". Pop art is an art form that gained popularity during the time of the Space Race (1950s) and was widely influential during this period.[1] It was used as a means to portray mundane, everyday objects and imagery from mass culture. The Space Race was an arms race between the militaries of the United States and the Soviet Union.[2] An event like this would typically not be depicted using the art form of pop art, but adding this detail to the prompt clarifies the time period that the image is meant to depict.

The AI art portrayed a futuristic rocket and UFO in space with bright colors in the style of pop art. Although the AI produced an image that followed the specifications of the prompt, it created a generic image that did not capture the true essence of the historical event of the prompt.

The image lacks accuracy in its historical depiction and does not have specificity in following the prompt which undermines its authenticity. Since the prompt specifically mentioned an event during the Cold War, one would expect the AI to create an image with rockets showing the US and USSR to contextualize the image. However, to an external viewer who is unaware of the prompt, the artwork does not make it clear that is it meant to depict the US and USSR's race to space during the Cold War as the artwork has no details about the historical context of the Cold War. Due to this, the image is not truly authentic to the subject of the prompt which

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[1] "Pop Art | MoMA." *The Museum of Modern Art*, www.moma.org/collection/terms/pop-art/consumer-goods-mass-media-and-popular-culture. Accessed 25 Sept. 2023.

[2] "What Was the Space Race?" *Airandspace.si.edu*, airandspace.si.edu/stories/editorial/what-was-space-race. Accessed 24 Sept. 2023.

decreases the value of the artwork as it comes across as a vague portrayal of space in a pop art style.

Contrary to the historical inaccuracy of the image, the AI seems to be trained well in terms of art styles as its depiction of pop art is accurate in comparison to a lot of other art created in this style. The bold and bright primary colors and the one-dimensional abstract animated imagery in the artwork are characteristic of pop art. Although the AI portrays the prompt of the race to space during the Cold War in a fairly accurate art style of pop art, it fails to depict the true nature of the space race.

To examine the authenticity of the image, Dennis Dutton's concepts of expressive and nominal authenticity are important to consider. According to Dutton in his publication "Authenticity in Art", Nominal Authenticity is defined as "the correct identification of the origins, authorship, or provenance of an object, ensuring that an object of aesthetic experience is properly named" while expressive authenticity is related to the "object's character as a true expression of an individual's or a society's values and beliefs" and has a personalized aspect to it.[3]

The image possesses nominal authenticity as it is not a forgery of a pre-existing image, but rather takes inspiration from other artwork and information related to the prompt. The three strands of the image's origin are the AI used (Open Art), my prompt for the image, and the external sources that enabled the AI to compile this image. As long as the origin of the image and the tools used to produce it are correctly identified, AI art is nominally authentic. However, since the expressive authenticity of a piece of art is related to the motives of the artist, personal experiences, and the intention behind the art, AI art is not truly genuine as it does not have its

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[3] Dutton, Dennis. *Authenticity in Art*. 15 Sept. 2004.

own lived experiences or meaning behind each piece of art it creates. Although AI art is not expressive in the sense of its values behind the art, the art itself is unique and no replica of it exists which suggests that AI is the only entity that could have created such an image. This leads to the argument that the artwork has some amount of expressive authenticity as it consists of the "emergent value possessed by works of art."[4] However, there is a lack of attachment and purpose in the artwork as it is a mere extrapolation of pre-existing work, which causes AI art to overall be expressively inauthentic.

Furthermore, the image has potential repercussions if it is used as an educational source. In my own experience of publishing a graphic novel, there was an intention behind each panel I created in terms of the target audience, the content of the image, and its overall connection to the storyline. This contributed to the authenticity of the novel which is beneficial in education as the main factor it took into consideration was the reader. However, AI's lack of this sophisticated view and its inaccuracies diminish the instructional value of the AI-generated image. For instance, the image has a slight indication of the USSR's involvement as one of the rockets has the symbol "Z" inscribed on it. However, this symbol was only recently used by Russia in the war against Ukraine and is not historically accurate for rockets used in the Space Race. This in turn homogenizes different time periods in history which can be problematic if the image is used in an academic context. As explained by Sigal Samuel, "generative AI could have a homogenizing effect" and this can reduce diversity in historical knowledge through the use of AI

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[4] Dutton, Dennis. *Authenticity in Art*. 15 Sept. 2004.

art in education.[5] Thus, the authenticity of an image is important in such cases and the precise and thoughtful creation of art for educational purposes is valuable.

Authenticity in art directly correlates with the thought behind its production which is an aspect of expressive authenticity that AI inherently lacks. Although AI possesses nominal authenticity, the absence of expressive authenticity could have wider implications as it risks homogenizing knowledge and spreading inaccurate information. As opposed to the utilization of AI art in education as a stand-alone source of knowledge, AI art has value if it is reviewed for inaccuracies and used in conjunction with other sources. AI art will serve as an aid to teaching only if it is modified to serve its true purpose, become less generic, and gain accuracy by the addition of human expression and intention in the artwork.

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[5] Samuel, Sigal. *What Happens When ChatGPT Starts to Feed on Its Own Writing?* 10 Apr.
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Works Cited

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