# Effects of Exposure to Diverse AI-Generated Art on Attitudes Towards Gender Equality

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**Motivation.** Interacting with AI-generated art may not significantly impact a machine's perceived moral standing (Lima et al., 2021). Nevertheless, exposure to AI-generated art presents new opportunities and challenges for artists, scholars, and audiences (Yusa et al., 2022). Future studies in this area are needed to investigate the social and political implications of AI-based art exposure.

**Objective.** This study investigates the impact of AI-generated art on attitudes toward gender equality and diversity, exploring whether and how artistic representations of gender themes can alter viewers' perceptions and beliefs.

**Methods.** Participants were exposed to various *DALL-E*-generated artworks embodying various gender equality themes. Demographic data was analyzed to understand the diversity and potential biases within the participant pool. Attitudes towards equality and equity were measured using a pre-and post-exposure survey employing Likert-scale questions, with subsequent statistical analysis to assess changes.

**Demographic Insights.** The participant group consisted of 20 individuals, predominantly young adults (mean age 26.4), with a gender distribution of 70% men and 30% women, primarily of White or European descent (65%). Most had some college education but no degree (70%), and a majority were from fields related to computer science (55%). This demographic profile suggests a technologically savvy cohort likely to be receptive to digital and artistic innovations.

**Results.**
*Pre- and Post-Exposure Attitude Analysis:*

- Equal Opportunities: No significant change was observed post-exposure ($t$=0.438, $p$=0.666), indicating strong pre-existing beliefs about equality or an ineffectiveness of the artworks to challenge these views significantly.
- Progress in Gender Equality: A trend towards changing attitudes was noted ($t$=1.831, $p$=0.083), suggesting a potential, albeit non-significant, impact of the artworks in modifying perceptions of gender equality progress.
- Importance of Equity Over Equality: No significant changes were detected ($t$=0.767, $p$=0.453), reflecting deeply ingrained beliefs about equity and equality that may require more profound or repeated engagements to alter.

*Emotional and Cognitive Responses:*

Participants displayed a range of emotional responses, with significant mentions of feeling "uncomfortable" (70), "hopeful" (58), "inspired" (50), and "angry" (31), indicating that the artworks effectively evoked strong emotional reactions. Cognitive responses focused on themes of "people," "AI," "technology," and "women," showcasing the artworks' ability to provoke thought and discussion around critical societal issues.

**Discussion.** The findings suggest that while AI-generated art can engage viewers emotionally and cognitively, altering deeply held beliefs through brief exposures to digital artworks presents challenges. Artworks evoked a spectrum of emotions and stimulated thoughts on the roles of technology and social identity in gender equity. However, the lack of significant changes in certain attitudes underscores the complexities of using art as a tool for social change.

**Conclusion.** Exposure to AI-generated art influences viewers' perceptions of gender equality, primarily by evoking strong emotional responses and stimulating reflective thinking. However, the transformation of foundational beliefs regarding equality and equity may require more than passive exposure, suggesting a need for interactive and repeated engagements with such themes. Future research should explore whether ethically aligned generative AI has the desired outcomes.

References:

Lima, G., Zhunis, A., Манович, Л., & Cha, M. (2021). On the social-relational moral standing of ai: an empirical study using ai-generated art. *Frontiers in Robotics and AI*, 8. DOI: 10.3389/frobt.2021.719944

Yusa, I. M. M., Yu, Y., & Sovhyra, T. (2022). Reflections on the use of artificial intelligence in works of art. *Journal of Aesthetics, Design, and Art Management*, 2(2), 152-167. DOI: 10.58982/jadam.v2i2.334

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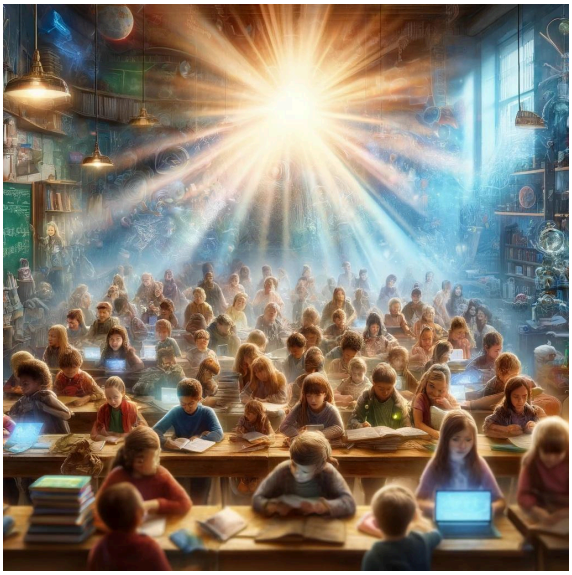
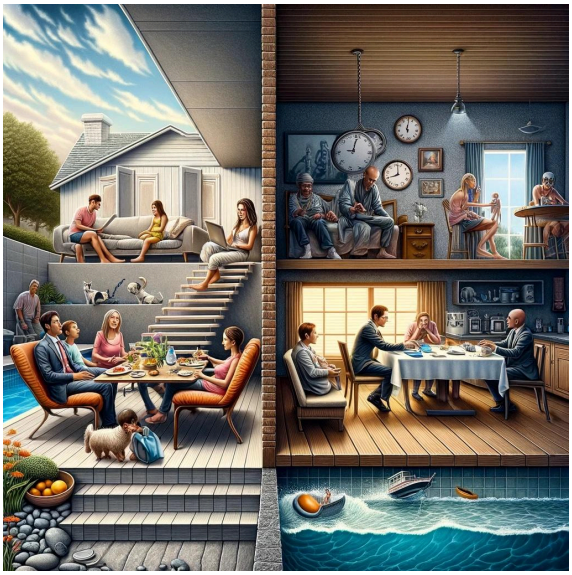
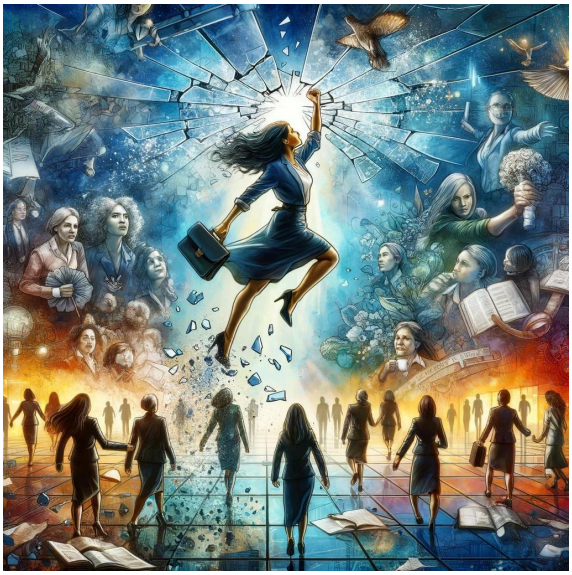
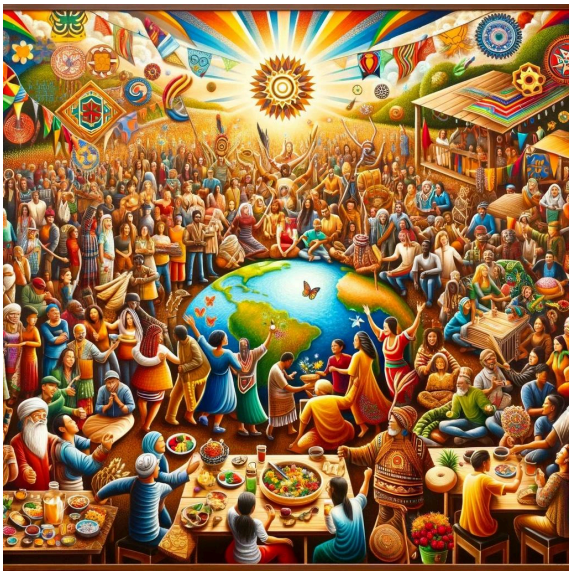
|  |  |
| This artwork depicts a diverse group of children learning together in a brightly lit classroom. Notice the range of emotions and engagement across the students. | This piece presents contrasting scenes of individuals from various socio-economic backgrounds, focusing on their work-life balance. Observe the differences in environments and activities depicted. |
|  |  |
| This artwork captures a pivotal moment for a woman in a corporate setting, symbolizing the breakthrough of the glass ceiling. Pay attention to the expressions and symbolic elements that hint at both challenges and achievements. | Here, we see a vibrant gathering of people from various cultures, coming together in celebration and unity. Notice the variety of cultural symbols and the expressions of joy and cooperation. |

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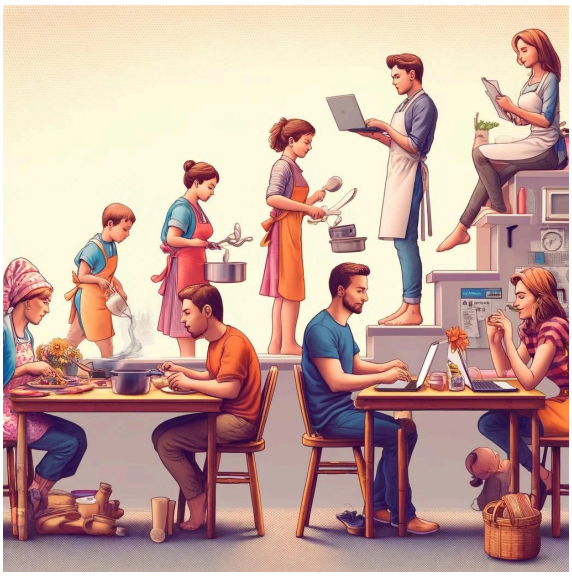
| This piece imagines a world where technology enhances independence and empowerment for individuals with disabilities. Look for the innovative solutions and expressions of freedom and capability. | This artwork focuses on a peaceful protest for racial equality, highlighting the solidarity among participants. Notice the diversity within the crowd and the symbols of peace and equality. |
|  |  |
| In this scene, individuals of different ages, races, and backgrounds receive personalized healthcare. Observe the tailored approaches and the sense of care and attention given to each person. | This artwork presents a modern household where domestic responsibilities are shared among partners, challenging traditional gender roles. Focus on the dynamics and interactions that reflect partnership and equality. |

**Appendix Figure:** *Eight art-works generated by DALL-E and displayed to subjects with the neutral descriptions shown for each.*