Ethics in AI and Art

IAIFI, Cambridge Science Festival, and MIT Media Lab

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AI in the News

Pause Giant AI Experiments: An Open Letter

We call on all AI labs to immediately pause for at least 6 months the training of AI systems more powerful than GPT-4.

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The AI panic is here

Pausing AI Developments Isn't Enough. We Need to Shut it All Down
Is AI coming for humanity?
AI in the Arts

Source: Google Brain

DALL-E, Stable Diffusion, Midjourney

Music LM

ChatGPT
The World’s Smartest Artificial Intelligence Just Made Its First Magazine Cover

BY GLORIA LIU  PUBLISHED: JUN 21, 2022
Beyond the headlines:

The artist is more involved than this makes it sound!
“Astronaut woman on Mars...”
The human artist created this cover with the help of a tool!
Is AI coming to take our humanity?

Or can we develop generative AI as a tool to express our humanity?
Overview of the session

15 min: Introduction with Carol

Activity part 1

15 min: Introduction to Ethics of Generative AI in the arts

Activity part 2

Share out and discussion!
Activity Part 1: short poems

This Is Just To Say
By William Carlos Williams

I have eaten
the plums
that were in
the icebox

and which
you were probably
saving
for breakfast

Forgive me
they were delicious
so sweet
and so cold

“Dreams”
by Langston Hughes

Hold fast to dreams
For if dreams die
Life is a broken-winged bird
That cannot fly.
Hold fast to dreams
For when dreams go
Life is a barren field
Frozen with snow.
Activity Part 1: tune into your creativity

Write a 4-6 line poem that can be shared with all ages

5 minutes of free writing on your own- no AI allowed!

My 5 minute “poem”:

End of summer light on the low boat, pollen pooling on top of the water next to me
I reach down and pull out a smooth fossil as the eagle soars over us
The shore is uneven and it will be hard to get out
I’ll put the stone in your hand and you’ll help me ashore
Activity Part 1: tune into your creativity

Write a 4-6 line poem that can be shared with all ages

You could write about...

- Something beautiful you saw on your way here
- The funniest thing that’s ever happened to you
- The way you hope to spend your next birthday

5 minutes of free writing on your own- no AI allowed!

Notes app or paper welcome :)
Art and the science of generative AI

Understanding shifts in creative work will help guide AIs impact on the media ecosystem

Art and the science of generative AI is not the harbinger of art’s demise, but rather is a new medium with its own distinct affordances. AI can be understood both as a new medium used by human creators, generating AI, and as a tool used by human creators, consuming AI. Generating AI is poised to expand many aspects of the creative industry and beyond—transforming existing jobs and enabling new models of creative labor and new forms of work. Unlike past disruptions, however, generative AI relies on existing data made by people. The medium “learns to create art” by accessing material presence from existing art. The tools of generative AI place new emphasis on the role of the viewer, changing the nature of the creative process, generating new forms of art that are not beholden to the same constraints of time and place as traditional art. AI-generated art can be any medium, from video to photography, from music to text. In this issue, we examine the uses and implications of AI-generated art, from the ethical and legal issues to the cultural and economic implications. We discuss the role of AIs in the creative process and the impact of AI on the art world. We also explore the potential for AI to transform the way we create and consume art. AI-generated art offers new possibilities for creators and consumers, but also raises important questions about the ethics and aesthetics of AI-generated art. As AI technology continues to advance, it is necessary to understand how the language used to describe AI reflects our perceptions of the technology. The role of AIs in the creative process is a complex and evolving one, and it is essential to consider the ethical and legal implications of AI-generated art as we move forward. Epstein, Ziv, Hertzmann, Aaron et al. Science 380.6650 (2023): 1110-1111.

Four main areas:

- **Aesthetics & culture**
- **Legal issues**
- **Creative Labor**
- **Media Ecosystem**
Art and the Science of Generative AI

Aesthetics & Culture

Discuss

- Is this AI-generated?
- What is informing your perception?
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Aesthetics & Culture

Key questions:

How can we make sure that AI art tools lead to more artistic diversity, rather than less diversity?

How will AI-generated content be “rewarded” on social media?
In a cosmic ballet, where stars brightly gleam,
Lies a mystery profound, a celestial dream.
Black holes they’re called, a mysterious sight,
They gobble up matter, and swallow up light.

With gravity’s grip, they whirl and they twirl,
A cosmic dance, in a cosmic swirl.
They warp space and time, in a cosmic trance,
A cosmic phenomenon, a mesmerizing dance.

A point of no return, where secrets unfold,
Invisible wonders, a tale to be told.
They’re a puzzle unsolved, a celestial quest,
These black holes, my friend, are the universe’s best!
Art and the Science of Generative AI

Legal Issues & Ownership
Art and the Science of Generative AI

Legal Issues & Ownership

AI cannot hold copyright!  
(Edmond De Belamy case)

Style change may not be enough to be considered “transformative fair use”  
(Warhol Supreme Court case)
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Legal Issues & Ownership

Key questions:

Will courts rule in favor of artists or users of the technology?

What constitutes “fair use”?
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Creative Labor
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Creative Labor

Writers Guild of America tentative agreement: (today!)

- Writers can’t be forced to use AI
- Companies must disclose if any materials given to a writer were AI-generated
- Writer can use AI if they disclose and a company consents
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Creative Labor

Key questions:

Can AI tools positively impact artists?

How can we protect artistic labor as the role of the artist changes?
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The Media Ecosystem

Is this art?

Is this fake news?

Midjourney, posted on Reddit by u/trippy_art_special
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The Media Ecosystem
Biometric-based forensic tools

Identity-based forensic tools

Art and the Science of Generative AI
The Media Ecosystem

Figure 4. Shown are (a) a single video frame where the face has been tracked, aligned, and cropped; (b) 35 manually annotated aural landmarks; (c) 100 points on each of two Bezier fitted curves; (d) rotated and cropped ear; and (e) three regions from which local aural motion are averaged.

Agarwal and Farid “Detecting deep-fake videos from aural and oral dynamics” 2019

Figure 1. Shown above are five equally spaced frames from a 250-frame clip annotated with the results of OpenFace tracking. Shown below is the intensity of one action unit AU01 (eye brow lift) measured over this video clip.

Agarwal and Farid “Protecting World Leaders Against Deep Fakes” 2019
Boháček and Farid “Protecting world leaders against deep fakes using facial, gestural, and vocal mannerisms” 2022
Art and the Science of Generative AI

The Media Ecosystem: writing

User bans due to bot activity
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The Media Ecosystem

Key questions:

How can we detect synthetically generated media?

How can we establish and defend trust in different types of media?

What is the role of disclosure in promoting trust?
Co-creation: Humans use AI tools for image creation

“An astronaut in space with a pink sky”

Why AI?
- Creativity can feel more accessible
- Ideation may be faster
Co-creation: Humans use AI tools for writing

“Poem about a black hole...”
Activity Part 2: develop your draft

Return to your first poem draft, and complete the activity described in this survey:

(https://forms.gle/Mq3Y4oGnDVqWxnRE7)

Steps:

- Survey consent for research
- Reflect on your first draft
- Improve on your draft
- Finalize
First, read your poem. We will clap!

Then, disclose any help from ChatGPT on:

- Editing
- New ideas
- Structure
- New lines
- Anything else you found interesting!
Take home:

**Human control and expression**

can be at the center of

co-creation with AI tools

Please submit your survey to us, either online or in person. Thank you!
Related Work at the Media Lab

AI Alchemy

Co-creating Utopias

Epstein, Ziv, Hope Schroeder, and Dava Newman. *When happy accidents spark creativity: Bringing collaborative speculation to life with generative AI.* *International Conference on Computational Creativity*, 2022

Trash to Treasure

Smith, Amy, et al. *Trash to Treasure: Using text-to-image models to inform the design of physical artefacts.* *AAAI Creative AI Across Modalities Workshop*, 2023