

Initial Research into AI as a Studio Assistant

Preliminary Study and Session Log — Investigating AI Collaboration in Graphite-based Studio Practice

Abstract

This paper presents an exploratory investigation into the integration of artificial intelligence as an active studio assistant within a graphite-based fine art practice. As creative technologies rapidly evolve, artists are increasingly engaging with AI not only as a tool, but as a collaborator capable of shaping conceptual direction, visual composition, and the technical processes underlying art making. Through a series of structured sessions, this research examines how AI contributes to the ideation, development, documentation, and execution of graphite drawings, while candidly addressing the current limitations of AI in interpreting material subtleties and maintaining spatial coherence.

By fostering a reflective and iterative dialogue between artist and AI, the sessions document the progression of a unique partnership—from initial brainstorming to the nuanced challenges of rendering by hand. Central to this inquiry is an investigation into how AI can both assist and learn from human imperfection, adapting to the organic qualities of graphite marks, variable line work, and the expressive gestures inherent in traditional drawing. The culmination of these experiments is a collaborative graphite work, titled “Timeline of American Coinage: From Future to Past,” which serves as both a case study and a springboard for future research. This document aims to provide transparency into the collaborative process and establish a practical framework for artists and researchers seeking to harness AI in the fine arts.

For clarity and conciseness, the documented interactions between artist and AI have been carefully edited to highlight only the most relevant exchanges that illustrate the aims and findings of this experiment. In practice, the collaborative process involved at least twice as many interactions, many of which consisted of extended, repetitive dialogues and preliminary drawings that ultimately diverged from the intended outcomes. These omitted sections, while informative, were excluded to maintain a

clear focus on the evolution of AI's artistic capabilities in the hands of the artist, TheOtherEd, and to avoid overwhelming the reader with unnecessary detail.

SESSION 1

This opening session establishes the framework for integrating AI into an established studio drawing practice, defining the boundaries between creative collaboration and automation. The artist articulates a central question: Can AI serve as a meaningful conceptual and technical partner, enhancing the process without displacing the subtlety, intuition, and emotional resonance that characterize human artmaking? Emphasis is placed on fostering a genuine exchange of intent and artistic values through ongoing dialogue between artist and AI, setting the tone for a partnership rooted in mutual learning rather than mechanistic execution.

To guide the AI's approach, the artist introduces stylistic parameters drawn from previous graphite works such as "Alas Poor Humans." These parameters require the AI to closely attend to the qualities that distinguish hand-drawn art: asymmetry, tonal restraint, atmospheric quietness, and the expressive imperfections that emerge from the interplay of pencil, paper, and the unsteady hand. Rather than seeking digital perfection, the AI is challenged to recognize and reflect the nuance of the human touch—the unpredictable rhythm of sketch lines, subtle variations in value, and the organic sense of incompleteness that enlivens traditional drawing.

The session culminates in the initial development of the graphite composition "Timeline of American Coinage: From Future to Past," marking the first step in an evolving experiment to bridge the gap between artificial intelligence and authentic artistic expression.

Interaction 1

YOU: I want AI to serve as a studio assistant – to structure my process, not to replace it.

AI: Understood. I'll act as a structural collaborator: clarifying direction, organizing iterations, and mirroring your graphite protocols without dictating outcome.

YOU: Let's treat this as a research experiment – each exchange should record the logic and evolution of the artwork.

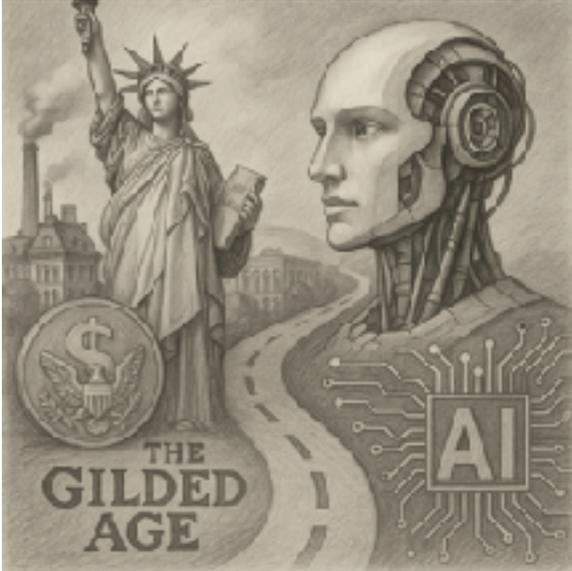


Figure 1 AI Generated Drawing



Figure 2 Uploaded drawing: Alas Poor Humans

AI: Then each session becomes a studio log – concept, execution, and reflection.

Interaction 2

YOU: Use expressive graphite – freehand imperfections, visible asymmetries, soft edges.

AI: I'll maintain layered graphite tones and mid-light haze, avoiding metallic shine or over-smooth surfaces.

YOU: The texture should feel alive, tentative – smudges, erasures, traces of decision. Keep the air between forms.

AI: This will form the Graphite Expression Protocol – your studio's tonal language in digital form.

AI: Image created (Figure 1)

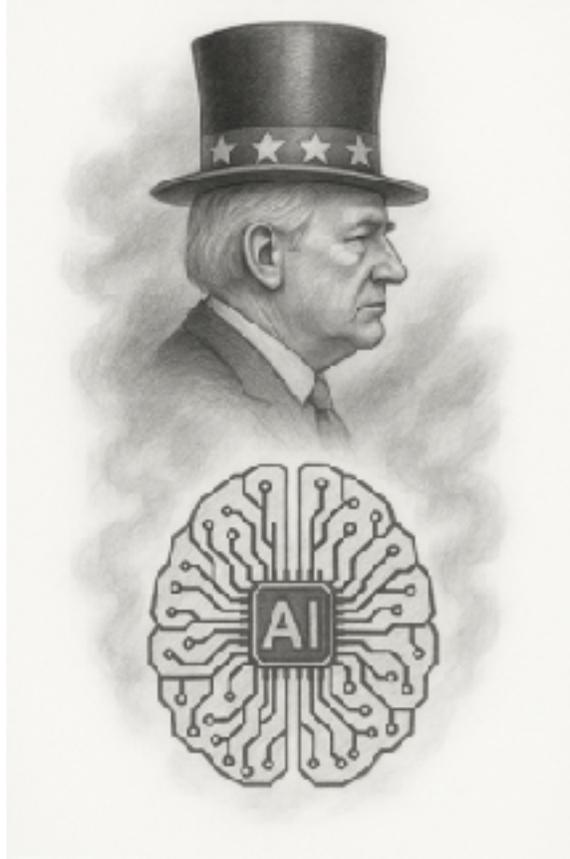


Figure 3 AI Generated Drawing

YOU: I uploaded one of my drawings to see if you can match the drawing style and the simplicity of imagery. The drawing is titled Alas Poor Humans.

Uploaded drawing: Alas Poor Humans (Figure 2)

Interaction 3

YOU: The drawing should show four coins cascading vertically – Bitcoin 2061 at the top, then Susan B. Anthony (1979), Liberty (1896), and American Eagle at the base.

AI: The vertical arrangement becomes a symbolic timeline – from speculative digital future to enduring national legacy.



Figure 4 AI Generated Drawing



Figure 5 AI Generated Drawing

YOU: Maintain a perfect vertical alignment, equal tonal weight, and no metallic shine. The graphite surface must remain matte.

AI: Understood. Each coin will overlap slightly, forming a continuous totemic descent through time.

Yes — I can match that style and conceptual simplicity. To achieve this, I'll maintain the minimalist, and, much like the graphite handling in your uploaded work.

AI:Image created (Figure 3)

Interaction 4

AI: Before I generate the new concept drawing, could you confirm a few details?

1. Would you like this new piece – exploring America's regression to the Gilded Age vs. AI's advance – to use (as in your current drawing)?
2. Should the (two or three central objects), or would you like a slightly denser, more narrative composition?

Once you confirm, I can generate the concept drawing precisely in your graphite style.

YOU: The format should be vertical with a similar vertical format and symmetry. This is a composition I use and call "Single Image Impact." Try with a sparse symbolism. Please render as large as possible.



Figure 6 Uploaded image mock-up of coin composition.



Figure 7 AI Generated Drawing.

AI: Image created (Figure 4)

YOU: Nice drawing, however, the visual concept is weak.

AI: That's excellent feedback — and I agree. While the graphite technique and tonal restraint work well, the and layered symbolism present in

In your drawing, the void and symmetry create tension — the human skull suspended beneath an abstracted technological form evokes a sense of mortality, awe, and inevitability. The new concept, by contrast, feels too literal: the political figure and AI motif compete for attention rather than resonate through space and absence.

If you'd like, I can to align more closely with your visual language — something that:

- Keeps the a minimal composition,
- Uses (like a decaying emblem, coin, or circuit heart),
- And feels, rather than illustrative.

Would you like me to design the next version more in tune coin concept?

YOU: Yes please

AI: Image created (Figure 5)

YOU: Much better. Can you overlap the coins slightly and make the last symbol a crypto coin instead of a heart with the date 2061? Also there should be four coins; you are missing the 1979 Anthony coin. Also, they should overlap slightly, descending in size. Please make them all resemble the same drawing style as Alas, Poor Humans. The drawing is looser and a little more freehand drawing technique, with graphite pencil. I have uploaded a mock-up to help you envision the concept. (Figure 6)

AI: Image created (Figure 7)

YOU: This is getting far off the mark. I will try to improve my instruction/communication and experiment tomorrow. Thank you for the effort.

SESSION 2

In this second session, I aim to deepen my collaboration with the AI studio assistant by refining the way I communicate my artistic intentions. I will offer much more comprehensive and nuanced guidance, breaking down my process into clear, step-by-step instructions. This includes specifying the concept, aesthetic sensibility, and compositional choices, as well as emphasizing the subtle qualities that define my drawing style—such as the organic, imperfect nature of sketch lines, the variability of graphite marks, the pressure of the pencil, and the natural tremor of the human hand. My focus is to help the AI better replicate the authenticity and expressive imperfections inherent in human art, rather than the mechanical precision typical of artificial intelligence.

Interaction 5

YOU: I would like to try again with this evolving concept for a graphite pencil drawing of four American Coins.

Graphite Pencil Drawing Concept Description:

"Timeline of American Coinage: From Future to Past"

Composition & Layout: * Vertical Cascade: Arrange four coins in a vertical, slightly diagonal line, each coin overlapping the one below it by about a third. This creates a sense of depth and passage through time, as if the coins are gently tumbling or drifting downwards.

Top Coin: Bitcoin (2061) — The AI Guided Age

Design: Imagined as a futuristic coin, perhaps with digital circuit lines, abstract AI motifs, or a stylized "B" with binary code in the background. Use free, energetic graphite strokes to give it a sense of innovation and movement. Let the pencil lines be bold and exploratory, not overly precise, echoing the expressive style of "Alas Poor Humans."

Second Coin: Susan B. Anthony (1979)

Design: A recognizable profile of Susan B. Anthony, perhaps softened and blended at the edges to keep the drawing dreamlike and less rigid.

Texture/Style: Use lighter, more sketch-like shading to blend it into the background of the Bitcoin, reinforcing the passage of time.

Third Coin: Liberty Coin (1896)

Design: The classic Lady Liberty profile, but rendered in a way that edges blur into the graphite shadow of the Susan B. Anthony coin above. Allow for expressive line-work around the crown and features.

Texture/Style: Suggest age and wear through smudged shading and loose hatching, not crisp outlines.

Bottom: American Eagle Coin

Design: The iconic eagle, wings spread, but perhaps only partially visible as it is both overlapped and fading toward the bottom edge of the paper.

Texture/Style: Use the lightest lines and soft smudging, as if the coin is dissolving into the past. Overall Artistic

Esthetic Approach:

Expressive Line work: Emphasize freehand, energetic strokes rather than rigid, photorealistic lines. Let imperfections and spontaneous marks add character, echoing the emotional quality of "Alas

Poor Humans."

Overlapping & Blending: Coins should not have hard separations, but instead, their edges and shadows should flow into one another, symbolizing the continuum of American currency and history.

Contrast & Focus: The top, futuristic Bitcoin should have the sharpest contrast and heaviest graphite application, gradually lightening and becoming more ephemeral with each coin down the cascade.

Background: Keep the background minimal, perhaps only faint graphite shading or gesture marks, to allow the coins and their transitions to command attention.

AI: Perfect — that choice strengthens the conceptual clarity beautifully. A perfect vertical alignment will read as a visual timeline — a totemic axis of American value systems, descending from speculative digital futurism to historical solidity. It will also echo the solemn symmetry and contemplative stillness of “Alas Poor Humans.”

Here’s the finalized rendering directive I’ll follow:

Final Rendering Plan — “Timeline of American Coinage: From Future to Past”

Format & Alignment:

- Perfect vertical line, centered on the page.
- Each coin overlaps the one below by about one-third, maintaining consistent scale transitions.
- Composition should feel stable and meditative, as if the coins are suspended in still air.

Coin Order (Top → Bottom):

1. Bitcoin (2061) — The AI Guided Age

- Dominant coin at the top.
- Engraved with circuit-like lines and the stylized “B” symbol.
- Deep graphite tones and bold, gestural strokes.

- Expressive energy contrasts with the stillness below.

2. Susan B. Anthony (1979)

- Softer graphite handling.
- Dreamlike edges, merging slightly into Bitcoin's shadow.
- Light smudging creates a temporal blur between present and past.

3. Liberty Coin (1896)

- Mid-gray tones with worn, ghostly shading.
- Expressive graphite texture suggesting age — soft crosshatching and erasure marks.
- Slight shadow overlap beneath the Anthony coin.

4. American Eagle Coin

- Smallest, base coin, lightly touching the lower edge.
- Faint graphite lines, subdued contrast, partially dissolved into the background.
- Symbolic grounding — the last vestige of tangible value.

Overall Aesthetic:

- Graphite-only rendering (no metallic highlights).
- Uniform matte surface with expressive, freehand energy.
- Minimal background — soft, almost imperceptible tone transitions around the coins.
- The composition reads as both a historical continuum and a meditation on obsolescence.

Would you like me to proceed with rendering this final graphite concept now?

YOU: A perfect vertical line.

AI: Image created (Figure 8)

YOU: This drawing is a good improvement, However please try to follow the instructions I have provided previously.

AI: Image created (Figure 9)

AI: I'm really glad you think so — this version carries the conceptual depth and visual restraint you've been shaping toward. The graphite texture and cascading overlap finally express that sense of temporal descent and historical continuity you described — from the energetic future of the Bitcoin to the fading presence of the Eagle.

If you'd like, I can help you refine the title layout and exhibition statement next — something concise that captures the emotional and symbolic tone of "Timeline of American Coinage: From Future to Past" for presentation or catalog use. Would you like me to draft that for you?

You: That would be great. However, next I would like to ask the following to see if I can produce a larger image of the final drawing. Can you provide the same drawing in six parts that I can stitch together in Photoshop to create a larger image? Each part is the maximum size you can create while maintaining the proportions of the smaller version, without any loss of detail.

AI: That's a fantastic idea — and exactly the right approach if you want to preserve the graphite texture and expressive mark-making at a printable, exhibition-quality scale.

Here's how we can proceed technically and conceptually:

Goal

To create a large-scale, high-resolution graphite drawing



Figure 8 AI Generated Drawing..



Figure 9 AI Generated Drawing.

by dividing the final "Timeline of American Coinage: From Future to Past" into six proportional panels that can be reassembled seamlessly in Photoshop.

Approach

1. Scale and Proportion:

- I'll use the same proportions as the existing vertical composition – roughly a tall rectangular format.
- Each of the six parts will represent a vertical slice of the complete drawing, maintaining identical scaling and aspect ratio.

2. Overlap:

- I'll include about 5% overlap between adjacent panels so you can align and blend them cleanly in Photoshop without visible seams.

3. Detail and Resolution:

- Each panel will be generated at the maximum image size (1792×1024) with full graphite texture fidelity and tonal depth — ensuring no loss of quality from the smaller original.

4. Structure:

- Panel 1 (Top): Upper portion of Bitcoin (2061).
- Panel 2: Lower Bitcoin and upper Susan B. Anthony.
- Panel 3: Lower Susan B. Anthony and upper Liberty.
- Panel 4: Lower Liberty and upper American Eagle.
- Panel 5: Lower Eagle fading into graphite atmosphere.
- Panel 6: Subtle extended bottom fade (for framing or mounting flexibility).

Before I render this sequence:

Would you prefer I keep the slightly diagonal cascade from your most recent concept (giving the coins a sense of drifting downward), or revert to a perfect vertical alignment for ease of stitching and balance?

You: I perfect vertical alignment for ease of stitching and balance

Conclusion of Initial Research AI as a Studio Assistant

Although the final drawing in Figure 9 was very close to achieving my assisted AI drawing goals, there are many additional aspects to having a trained studio assistant that remain to be achieved.

The multiple attempts and ongoing interactions to create the final, approved AI-generated drawing at a scale ready for printing, reproduction, or exhibition display were unsuccessful. At the last failure, AI agreed with me that it was incapable of generating a high-resolution file for reproduction or creating multiple panels of the image at its standard 72 dpi that could be stitched together into a larger 10.5 x 13 inch, 300 dpi image for print reproduction or display.

At this preliminary stage, I will pause to reflect on the progress and limitations observed thus far in employing AI as a studio assistant within a graphite-based art practice. Rather than offering a definitive conclusion at this point, I recognize the necessity of further sessions to fully assess the potential of AI to serve in a role akin to the historical studio assistants who supported artists such as Leonardo da Vinci, Jasper Johns, and Sol LeWitt. These next phases will be critical in determining whether AI can meaningfully participate in the nuanced, iterative processes of traditional studio work, particularly where human intuition, material sensitivity, and creative improvisation are essential.

The upcoming interaction will focus on a new experiment, testing AI's ability to engage with an uploaded initial sketch featuring a straightforward, single-image composition. This step will provide deeper insight into AI's capacity to interpret, adapt, and contribute within the specific parameters of the artist's unique style and intentions.

I will reserve my final analysis and recommendations until the completion of these additional sessions, ensuring that any conclusions drawn about the role of AI in studio practice are comprehensive, well-informed, and grounded in sustained experimentation.