



The Prompt Wrangler: AI text-to-image generation as curatorial practice

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ABSTRACT: The *Slow Down Time* project is an aesthetic and technical investigation of the procedural outcomes of generative AI routines as both standalone works of visual culture and mechanical biproducts of large language models (LLM). As an exercise in new media curation, the assemblage operates as both a performative and conceptual response to LLM black-box processes in the form of a slow-media / slow-synthesis art intervention.

The archive documents the dialogue between the text-to-image service Midjourney, a network of twenty-three prompt authors and the curator (aka The Prompt Wrangler). An intentionally meditative process that catalogues fragments of data and dialogue – via email, the written word and printed copies (sent by global postal systems) – enabling contemplation within latent diffusion spaces.

The curatorial process for *Slow Down Time* archive was also an exercise in transparency, with the inclusion of the Discord data for the original instance of every image. This openness not only exposes each image's genealogy, but also makes possible the "creation" of further generations beyond the archive. Capturing and preserving the stylistic and technical developments of the Midjourney "house style" over a specific period of time (August 2022 - May 2023) was also an important goal of the project.

1. INTRODUCTION

<u>Slow Down Time</u> is a collaborative art intervention that seeks to cursively deconstruct the procedural aesthetics and compositional tendencies of latent diffusion models, in this case the text-text-to-image service <u>Midjourney</u>. The philosphical nature of this procedural inquiry has four curatorial elements:

• *Contemplation* - Do contemplative practices make the opaque operations of LLMs more relatable?

- Deconstruction How does adopting literary devices impact production and reception of text-image generative AI?
- Documentation What is actually being preserved by curating human-machine dialogues within a finite period of a technology's rapid development?
- Presentation By framing the machine compositions in exhibition and symposia contexts important questions emerge around creative authorship, cultural heritage, data integrity and the means of (media) production in the age of AI.

1.1 THE PROPOSAL

My invitation to potential prompt authors was to compose a simple line of text. In many ways this request was akin to a techno-futurist thought experiment: What would you like the machine to dream?

Both an aesthetic and technical investigation, the project seeks to examine the procedural outcomes of generative AI routines as both standalone works of visual culture and mechanical bi-products of large language models (LLM). These models are trained on gigabytes of text-image pairs, a form of annotated archive scraped from the Internet and dutifully, if not slavishly, labelled by humans.

Slow Down Time is an attempt – using curatorial and literary methods – at a conceptual response to that archive. The majority of text prompts are not the calculated compositions of a typical prompt engineer. Instead, they are mostly contemplative – quotations, throw away comments, existential questions, melancholic observations, whimsical thoughts and the occasional literary flourish.

The Loneliness Room

A single boat floats Blue ripples surround the oars Loneliness can be so still

- Sean Redmond



Figure 1 - Edition 03-A2DB from the "Loneliness Room" series by Midjourney, Redmond & Goodwin (2022-10-04)

1.2 TEXT-TO-IMAGE POETICS

The most fascinating aspect of these emregent forms generative "art" production are the

<u>poetics</u> of both the textual prompt and the final outcome. [1] It begins and ends as a text. Within that loop various modes of receivership and recontexualisation take place.

For me, while the outcome is inherently visual, the process feels like a literary one. Therefore, I was keen from the outset to work with former colleagues who possess a literary-minded creative instinct – or at least, loiter around those who do.

Although the process is ultimately a technological one, there was no need for participants to be familiar with A.I. or generative art making. Having said that, given the current period of emergent A.I., machinic and data-centric logics are perhaps more widely understood across the Arts and Humanities - especially since the arrival of ChatGPT.

1.3 SLOW A.I.

The reason I'm painting this way is that I want to be a machine, and I feel that whatever I do and do machine-like is what I want to do. — Andy Warhol [2]

Generative A.I. systems perform image requests in a matter of seconds, representing a new machine operation of hyper-seduction. *Slow Down Time* is a response to this manufactured desire for instantaneity and gratification in a time of near ubiquitous modes of digital media production and consumption.



Figure 2 - Handwritten response from artist Ron McBurrnie to images from his series, "Newton".

Contemplation then becomes a key feature of the design process, occurring at numerous stages of the project's life:

- i. Crafting of the prompt by the authors
- **ii.** *Production* of image variations (often over many hundreds of generations)

- **iii.** Curation of the final collection of thirty-three image series
- **iv.** *Printing* of the selected images as a set of photographic prints
- v. *Receivership* by the authors of their image series in the mail (postal service)
- vi. Response by the authors to the generated images as tactile media objects (photographic prints)
- **vii.** *Archiving* of the images, meta data and the dialogue exchange with the authors

Each step in the journey a deliberate measure to slow down time.

This iterative "slow-A.I." method seeks to discern the character and the intention of the algorithm when responding to text prompts by authors who assume – however misguided they may be – that the algorithm is cognizant of the world beyond the network, and that there is 'human-like' intention in the stylistic and compositional choices it makes. To which one is tempted to ask, is there some form of contemplation or sub-text at work within the algorithmic black-box as it blitzes through its trove of cultural fragments?

1.4 ALGORITHMIC THERAPY

When the invite to participate in the MidJourney Beta arrived in my inbox in June of 2022, it had been a particularly crappy time in my life. The playful interaction with the "creative process" of a generative A.I. was a welcome tonic, gradualy restoring of my sense of creative energy and mental well-being. I immersed myself, in the cascade of images on the Newbie Discord servers, a mash-up of cultural and historical forms fluttering before my eyes like cheap knock-offs of masterpieces blinking in a slot machine. Suddenly, I was back in the salty pipes as it were, messing about with a new software tool, reclaiming my geekdom and - as always - contemplating its implications. This time however, the software dance feels like a partnership, my creative instincts augmented by an algorithm.

I can appreciate now the observation by Midjourney founder <u>David Holz</u>, that users find their text-to-image interactions to be a "deeply emotional experience" with the potential for it to be therapeutic, as he reflected at the time, "there's a lot of beautiful stuff happening." [3]



Figure 3 - Early test image, 'A rose is a rose is a rose' by Midjourney & Goodwin (2022-07-26).

2. A CONTEST OF PERCEPTION

Up until recently generative AI outputs have been lacking definition and perspective, like the <u>face on Mars</u> or the <u>puffs of dust</u> on 9/11, they were suggestive images observed at a distance construed by the limitations of image capture. This is similar to the "surrealist charm" that Raphaél Milliére observed in earlier generative A.I. efforts like Craiyon and Wombo. [4]

We can trace the recent pop-cultural inflection of generative A.I. back to early face swapping apps like FaceApp (2017) which made the technology accessible on IOS and Android. The emergence of early #deepfakes online, featuring infamous synths, such as Barack Obama (2018) and Tom Cruise (2021). To the contested spaces we have today, between chat-based transformers like ChatGPT and Bard and the generative text-to-image services Midjourney and DALL.E. As Time magazine recently declared, we have found ourselves in an "A.I. arms race" of competing vision machines. [5]

David Holz has suggested the Midjourney model's purpose is to "augment our imagination". [3] Like the emergence of expanded cinema, Midjourney plays with genre and form, using existing principles that have long informed media arts practice such as non-linearity, repetition and remix to exploit the archive. What is emerging are rhizomatic possibilities for cultural (re)production and exchange.

2.1 THE NEW REMIXOLOGY

In <u>Art as Information Ecology</u>, Jason Hoelscher writes that "art's difference is sustained over time and reveals itself differently with each encounter, because art is information's free play of difference." [6] MidJourney as algorithm is conducting this free play, there are rules, but each interaction is different, each outcome unique. In practice, this is nothing new:

Blues and jazz musicians have long been enabled by a kind of "open source" culture, in which pre-existing melodic fragments and larger musical frameworks are freely reworked. Technology has only multiplied the possibilities. — Jonathan Lethem [7]

How should we describe these outcomes if we are indeed experiencing an entirely new genre of electronic image production and perception? Networked images, database images, algorithmic images are all useful terms, reflective as they are of the procedures within. They are certainly products of algorithmic processes, so we might understand the operant as an image synthesiser, or a kind of autophotography.

Magic lurks within the algorithm too. Eryk Salvaggio – from the quite magnificent blog, Cybernetic Forests – has described the technology of the more photo-realistic aspirations of the DALL.E platform as "a kind of spirit photography". [8] Conjuring images replete with the ghosts and markings of past technologies: the fading image, the decaying medium and the corrosive chemical reaction.

Ilya Sutskever, cofounder and chief scientist at OpenAI, describes the process as "transcendent beauty as a service" [9], while artist and theorist Lev Manovich has poetically described his interactions with MidJourney as akin to working with a "memory machine". [10] The recognition that it is a service but also a metaphysical experience, is a new way of thinking about tools of automation.

2.2 SPIRIT VOICES

The lesson I have learned the most is that words are spells. If I didn't know it before, I know it now for sure. — Tess Parks [11]

My initial experience of the psychedelic drift of the host platform <u>Discord</u>, was certainly reflective of an other-worldly exchange. My first image requests were whimsical queries, nocturnal flights of fancy, gentle tentative casts into the virtual spirit world - unnervingly wellsuited to the algorithm's default aesthetic:



Figure 4 – Early test image 'Johnny & Mary' by Midjourney & Goodwin (2022-07-18) Lyric from Palmer (1980)

When entering the "/imagine" prompt into a text field and receiving back a wholly new image generated by an A.I., I am reminded of Arthur C. Clarke's <u>often quoted axiom</u> that "any sufficiently advanced technology is indistinguishable from magic". [12] Never has that statement felt more true. MidJourney is no different. It might also be an enchanted object, as <u>Mario Klingermann</u> has observed, "a magic incantation that turns words into gold." [13]

That art of prompt crafting is definitely the secret sauce of text-to-image synthesis services. Wired magazine has noted the impact this will have in a range of creative practices, not least the curation of digital media and generative art in a gallery context, "prompt curation offers an alternative way of developing a personal artistic style. Interestingly, it also places images in dialog with text, as traditional museum curation does, although in a less academic and often more poetic format". [4]

2.3 THE STORY PITCH ANOLOGY

Having taught film production for many years, the signifier-laden text to visualisation pipeline of Midjourney closely reflects the industry staple of the story pitch. A skill in which it is routine to cite previous works, name-drop actors, directors and other films to give the folks with the purse strings a taste of what might end up on screen. A sharp well-crafted pitch in an

elevator or across a bar or in the back of a cab can set in motion a multi-million-dollar project.

In my screen writing courses, I would routinely quote a scene from Robert Altman's <u>The Player</u> as an explainer for the vagaries and elasticity of the commercial story pitch. In one exchange between a writing team and the studio's producer played by Tim Robbins, we can see how the crafting and condensing of a story pitch is akin to designing a text prompt for an A.I., the clarity only emerging when the writers cite specific examples:

Scriptwriter #1

It's a story about a bad-guy senator.

Scriptwriter #2

He's traveling around the country on the country's dime ...

Producer

It's a cynical, political thriller comedy?

Scriptwriter #2

But it's got heart in the right spot. Anyway, he has an accident ...

Scriptwriter #1

- and he becomes clairvoyant, like a psychic.

Producer

So, it's a psychic, political, thriller comedy with a heart?

Scriptwriter #2

With a heart, not unlike *Ghost* meets *Manchurian Candidate*. [14]

3 TOWARDS AN ARCHIVE

After several weeks of fevered exploration of the technology, recurring anomalous patterns began to emerge: surface textures, inferences of data-noise in the form of hair-like wires and machinic glitches. Historical and genre abstractions were present too: luminous acrylics and garish neon, moody pink skies and deep shadows, while silhouetted strangers, always facing away from the viewer, give scale and hint at sub-text, but their melancholic presence haunts the canvas.

What was also observable were the spaces in between objects and forms that were not describable in human terms, these machinic utterances were clearly the product of an algorithmic loose end. Stephen Wolfram has described this tension as an "inter-concept space" at the edge of human understanding somewhere beyond <u>Euclid optics</u> and Wolfram's own description of the limits of computational entanglement – the <u>ruliad</u> – where "things look familiar but mostly what we will see are things we humans do not have words for." [15]

Moreover, when things went well, when images managed resolve themselves successfully, certain compositional and stylistic tendencies became evident. This suggested that a default aesthetic was at play. This was the poetics I referred to in my article in *The Conversation* that documented my initial flirtations with Midjourney. [16]



Figure 5 - Edition 03B-A3GC from the <u>Bots</u> series by Midjourney, Gardner & Goodwin (2022-12-30)

3.1 GLITCHES AND ANOMALIES

These tendencies were especially evident when the going got tough for the Natural Language Processor (NLP) with regards to negotiating the conceptual or linguistic intent of the prompt. Typically, this occurred when a prompt was too open or vague, or the scenic elements were to complex, or the genre parameters not so easily resolved. Depending on the context, Midjourney would improvise to achieve, what it "supposed" was a coherent image and an adequate response to the given prompt.

It was these textures, anomalies and improvisations that became interesting to me, and influenced my decision to share my prompt writing adventures with my creative and academic colleagues. Giving rise to numerous questions:

• What if we intentionally prompted Midjourney with abstractions, with lyrical compositions or existential riddles?

- What if I did this in a controlled manner, remaining true to the prompt and generating not one but many hundred images following the same thread?
- How might a mediated dialogue between authors and algorithm tease out stylistic tendencies or subtext?
- How might one curate over time, these textto-image interactions – both the successes and the failures – in a format that might reveal the potential discursive poetics of the machine?
- What would such a collection reveal about the algorithm's coded sensibilities – what embedded biases and imported "world views" might we detect?

These questions formed the basis of my curatorial design of the *Slow Down Time* (SDT) project. A deliberate effort to work against the emergent practice of "prompt engineering" at a time when such descriptors were only beginning to emerge, and see what – if any – compositional intentionality we could collectively ascertain. Further to this was the question as to whether there was any evidence of an aesthetic "hand" at work, or as Lev Manovich would perceptively observe in his own extensive interactions with Midjourney – a "house style". [17]

3.2 ARCHIVE ELEMENTS

At the time of the archive's conception, I was on extended personal leave without pay from my academic institution due to an accumulation of factors that those familiar with post-COVID neo-liberal enterprises may recognise. So, I needed an affordable and accessible platform to host a net-art experiment that was also a form of art therapy. For better or worse I settled on a Word Press blog site. A familiar platform with sufficiently flexible templated options to organise the required text and image data. After all, despite this being a very visual exercise, it was inherently data and link driven. A future ambition would be to move to a database model like Omeka.

Without getting too prescriptive with regards to the Midjourney image generation process, there were several parameters and data points from a curatorial perspective that I considered important elements to track in the organisation of the *Slow Down Time* archive. My aim was to make the cataloguing system as transparent as possible:

Title and edition number – a classification system to track the evolution of image variations and/or prompt manipulation (aka "prompt wrangling").

Text prompt – the original prompt supplied by the authors.

Image prompt – some prompt authors were artists themselves and I invited them to also submit an image to complement their text prompt.

Prompt parameter/s – in some cases it became necessary to include additional prompt parameters to direct Midjourney towards a coherent outcome.

The parent grid – the first response to any prompt provides four image variations in a 512x512 pixel grid.

Midjourney Job ID – the original Midjourney job number used to identify the generated image.

Discord message link – the exact location of the generated image on my Discord server

Commencement date – the period of Midjourney's development in which the image series were "created".

Contact sheets – all the images from each series to reveal the genealogy of the images.



Figure 6 – The parent grid from the first response to the prompt "How do I know if this is real?" by Midjourney, Perkin and Goodwin (2022-10-06)

4 VIDEO INTERPOLATION TESTS

An unplanned component of the project were the video interpolation experiments. These were produced for a selection of prompts that displayed what I would describe as expanded modes of "compositional desire". In these cases, I pursued compositional threads just one or two grid variations, often generating hundreds of images as a result. I discovered that when these images were compiled in a linear sequence, they more clearly revealed the evolution of the generative process. The linear sequencing of image variations on a timeline was done using Runway ML's frame interpolation process.

4.1 SAD BY DESIGN

Beginning with a curious sequence of images from a prompt by Geert Lovink – "sad by design" – I could more clearly demonstrate the algorithm's seeming determination to find coherence from compositional abstractions through multiple re-generations. These emergent patterns demonstrate how the algorithm seeks out formal references from the chaos and abstraction – the latent instinct of the diffusion model. In turn through our witnessing of the sequential playback, we are able to attribute meaning and mediated symbolism upon the ghostly visage.



Figure 7 – 09-A4EE & 09-A4GB from "Sad by design" by Midjourney, Lovink & Goodwin (2023-01-23) See: https://vimeo.com/800727356

Through veils of abstraction, we can also see how this process reveals the narrow bandwidth within the labelling method used to train the Midjourney algorithm as it seeks out visual stereotypes: the horror film poster featuring a blood red silhouette, the traumatized Asian/Middle Eastern figure in a scarf, the forlorn female model disappearing into advertorial collateral and is that Picasso's *Weeping Woman*? Perhaps.

The prompt mentioned neither gender or any form of embodiment. What is being designed

here? Are women inherently sad – or just rendered that way by men and their algorithms?

4.2 REALITY CHECK

What is a face, really? Its own photo? Its make-up? Or is it a face as painted by such or such painter? That which is in front? Inside? Behind? And the rest? Doesn't everyone look at himself in his own particular way? Deformations simply do not exist. – Pablo Picasso [18]

In another example worth noting is the series of images produced by Jennifer Perkin's prompt, "How do I know if any of this is real?" which initially produced the silhouetted outline of a young woman in portraiture. Although her face is obscured her ghostly presence will be <u>familiar</u> to anyone who was playing around with Midjourney back in those halcyon days of late 2022. The neatly fitted shirt, the bob of black hair are signatures of a default female character known as Ms Midjourney who haunts "the blank spaces between parameter weights and engrams." [19]



Figure 8 – Edition 01-D2CE from "Reality Check" by Midjourney, Perkin and Goodwin (2022-10-06) See: https://vimeo.com/805075965

During the course of generating over 260 images from the Perkin prompt the abstract orb, reminiscent of an inverted tear drop, underwent many variations: landscapes, sunsets, cracked earth, bleached valleys and occasionally hints of a baking cityscape, even a stack of old newspapers signpost the urban decay. A concurrent narrative appeared to express a synergy between these two "minds" – roots, branches, valleys, stars, and finally in the last frame where I stopped the process – tears. A

sadness had emerged. Was reality no longer shared? Or was it mourning the fact that the two could not really be as one, permanently staring off in separate directions?

5 THE DIGITAL GOTHIC

Have you ever tried to describe a dream? And yet try as you might, you cannot recall how it started, or how it arrived at its fevered resolution? You're left clutching at fragments, a disjointed burst of images flicker back at you like some form of rear-projection technique or a glimpse of the upside down. What lingers is a staccato conversation between language and memory and history, an awkward fumble in the dark, a psychohistory of image fractals falling in and out of time. Late nights with the Midjourney Bot are like that – gothic portals through liquid time.

Despite its futurist and often disorientating tendencies the text-to-image process has a distinctly nostalgic feel to it. This reflexive dance recalls the notes I read recently for Bill Callahan's new album, *Reality*. An interaction with an AI image service is like the circling back of a song lyric, the algorithm "pitting dreams of dreams against dreams of reality." The future jacked-up on the past in a recursive cyber-coil. [20]



Figure 9 - Edition 04-C2B from the "Future Imperfect" series by Midjourney, Brown & Goodwin (2022-09-22).

My own personal experience of wrestling with a seemingly innocuous Midjourney prompt – "the future of architecture" – was of being horrified that such a simple unadorned request of an AI could produce image after image of crumbling cityscapes and barren wastelands.

Each variation rendered in deep reds and oranges with hot hazy disappearing horizon lines of infinite destruction. While in the centre of the image rose a shiny abstract tower, all glass and steel and aqua blue accents, impossible architectural forms that reached pleasingly into the temperate cooling air of the stratosphere. There will always be inequality, I suppose. Winners and losers, algorithms and keystrokes, the <u>Cloudalists</u> and the Earth hardened data clones toiling away in the sun.

5.1 TECHNO-FUTURIST REDUX

Generative AI text-to-image services represent a major shift in the gothic techno-futurist tendencies of digital media. They look exclusively and mindlessly back into the past before portending their dark melancholic scenarios and thereby stoking our anxieties of what might be imminent – that which comes for us in the dark. Machine learning algorithms diligently seek out corollary information from vast archives of training data consisting of billions of image and text pairs scraped from the web that recalls a somewhat skewed rendition of humanity's cultural history.

What they find of course is that the darkness is embedded in our past and it is horrific. From epic biblical tales of destruction to the horrific photographs of the holocaust, from movie stills of slasher films to the paintings by Goya and Etienne Sandorfi and the illustrations of HR and Zdzisław Beksiński. Giger photojournalism of fallen towers and gruesome mechanical wreckages to screenshots of marauding zombie hordes. The algorithms of Midjourney and DALL-E are merely appropriating what is already there, dutifully recycling back to us the dark and ominous retrograde landscapes of the human mind.



Figure 10 - Edition 10-A4CD from the "<u>El Agua</u>" series by Midjourney, Posse & Goodwin (2023-10-31)

6. BUT AT WHAT COST?

It should be made very clear that this project does not operate in a vacuum and is very aware of persistent and unresolved issues pertaining to the development and rapid proliferation of generative AI.

Via the work of danah boyd, Edward Snowden, Yuval Harari, Trevor Paglen, Tristan Harris, Virginia Eubanks and Shoshana Züboff, we know very well that algorithms of surveillance and analysis are not in any way passive. Nor should we expect generative A.I. to be a docile entity once fully formed and embedded on the networks of commerce, governance, and information production. They will mature rapidly to become core components of an increasingly artificial lived experience. Virtual constructs to be sure, however in-tandem with existing modes of data mining and analysis, generative ΑI constitute powerful operationalised forces of calculation, prediction and influence.

These are the emergent signatures Frank Pasqual describes in *The Black Box Society* [21] and Züboff picks up on in *Surveillance Capitalism*. [22] Invisible infrastructures and opaque operations that churn through the data stacks rapaciously farming the artificial crowds of our synthetic psychic doubles. These are the ungoverned and the time-poor netizens of Stiegler's *Automatic Society* [23] and Jonathan Crary's waking dreamscape, 24/7: Late Capitalism and the Ends of Sleep. [24]

6.1 INVERT THE NARRATIVE

We might only ever notice their presence when our number comes up. This is because, machine learning tools and automated systems are increasingly deployed across a range of industry sectors to evaluate risk, pre-empt crime, monitor workers and to make moral judgements often splintering along racial and cultural lines.

All these methods have been criticised for further marginalising the poorest and most vulnerable members of society and negatively profiling already marginalised communities. Virginia Eubanks has argued in her important book, *Automating Inequality*, that we must resist by exploiting these same technologies to tell our own stories and to advocate for the poor and the marginalised and lift the lid on opaque unethical practices.

6.2 THE TROUBLE WITH GEN-A.I.

In principle a work of art has always been reproducible. Man-made artifacts could always be imitated by men. Replicas were made by pupils in practice of their craft, by masters for diffusing their works, and, finally, by third parties in the pursuit of gain.

– Walter Benjamin [25]

While it is not the focus of this paper, I think it is important to flag some of the key ethical concerns particular to generative AI technologies at this critical moment in their foundational development:

Embedded biases - the embedded inequality, cultural stereotypes and gender biases within training data and their generative outputs.

Worker safety - the <u>psychological cost</u> of labelling training data and monitoring violent, abusive and explicit content.

Worker rights - the <u>exploitation</u> of vulnerable workers in the labelling and vetting of text-image pairs.

Digital rights - the unsolicited acquisition of copyrighted work by <u>living artists</u> for training data purposes as well as the discernible "presence" of style and technique in the output.

Environmental costs - the energy impact of algorithmic calculations / the mining of rare minerals to construct chips and components.

Some of these signatures are certainly evident in the *Slow Down Time* archive. For an idea of how problematic this can be in practice, see Wajeehah Aayeshah's *ID* series and Jack Latimore's series *The Cliff*. Both expose the limitations of the Midjourney corpus in depicting (and describing) cultural diversity.



Figure 11 - Edition 05-A1C from "The Cliff" series by Midjourney, Latimore & Goodwin (2022-10-16).

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