Simulating Form: The Dance of Physical and Digital Aesthetics

by the curator of the Gilbert Bayes Awards 2023 Winners' Exhibition, Harry Yeff (Reeps100), artist, founder and technologist.

Last year, I entered a room to help judge the winning candidates for the Gilbert Bayes Award. Coming from a challenging and working-class upbringing, I know all too well that talent and creativity can emerge from any direction. Judging art is always a slightly uncomfortable process, one that requires absolute clarity on the values and competencies you bring to the panel and the selection process. I aimed to bring openness and a palette of both digital and organic aesthetic interests, excited by the tension and conversation that can be struck between these two modalities. Ultimately, the final curation leans heavily on this dance of organic and digital, raising questions about whether digital and organic are becoming harder to define as they converge toward an inevitable collaborative entropy, In life and in art.

In my work, I've explored how technology can inform the most human aspects of our creative process. Since my 2017 collaboration with AI in the E.A.T. programme at Bell Labs,

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I've maintained that technology has the capacity to observe and assist in our understanding and development of creative practice. I'm fascinated by its power of observation, its ability to provide learnings, and even its capability to create artistic opposition. This opposition challenges and tests our work and thinking with a sensitivity unattainable by a human being. I refer to this as the 'realm of intelligent interruption,' where systems can broaden our perspectives and enhance the human artist's role. When discussing these themes, it's important to recognise that today's technology is sometimes not as removed from organic processes as we may believe.

Many aesthetics we associate with the digital realm have their roots in nature. For instance, the intricate, fractal-like patterns seen in digital art are mirrored in geological formations. These natural sculptures, shaped over millennia, often display a complexity and symmetry akin to computer-generated imagery. Similarly, cymatics, or Chladni patterns, are another example. When sound vibrations pass through a medium like sand or water, they create patterns that are strikingly geometric and detailed, resembling visualisations often produced by digital algorithms. These natural phenomena remind us that the digital world often mirrors the intricacies found in the natural world, blurring the lines between artificial and organic beauty, prompting us to consider how distant really is the digital landscape to the world of physical art and themes we see as traditional, or organic or physical. Even the neural processes that underpin the AI models we sometimes fear have a biomimicry underbelly, learning using similar processes found in nature. It's this paradoxical old versus new, digital versus the organic I find particularly fascinating, but the tension between these pillars generating fear is in no way a new cycle.

The first public screening of a moving image, often attributed to the Lumière brothers in 1895, marked a transformative moment in the history of art and technology. The screening, featuring a simple scene of a train arriving at a station, famously caused panic among the audience, as they had never before witnessed such a realistic simulation of motion. This historical moment serves as a vivid illustration of the initial fear and scepticism that often accompany technological innovation in the realm of art. The parallel between the early reactions to moving images and the contemporary responses to digital innovation in art has an uncanny nature, triggering many of the same complaints we hear today. Just as the viewers of the Lumière brothers' film struggled to comprehend the simulated reality before them, modern audiences and creators grapple with the implications of digital technology in artistic practice. This fear, while understandable, often acts as a barrier to embracing new methods and technologies.

The unstoppable digital transformation in the arts is a realm of both trepidation and immense potential, but is it not the

responsibility of the artist to find new authentic ways of understanding our human experience, jumping into the dark unknown? Some may disagree but at the core of creativity is eros and emergence, and to lose sight of this may cause the potential richness of a practice to remain more of an echo than a source of creative energy.

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Artists, traditionally guardians of creative innovation, now stand at the frontier of an evolving partnership with technology. This new era heralds a blend of human creativity and machine intelligence, leading to unprecedented forms of art and reimagined workflows. The fears - of obsolescence, loss of traditional skills, and the unknown of artificial intelligence - are counterbalanced by the promise of technology as a collaborator, not a replacement. This partnership opens avenues for more intricate, diverse, and globally connected artistic expressions. In harnessing digital tools, artists don't just adapt; they can lead the way in shaping how technology integrates with the human creative spirit, forging new pathways in artistry and collaboration.

As of 2023, the Creative Industries in the UK accounted for approximately 2.3 million jobs. This sector boasts a significant rate of self-employment, with about 32% of its workforce being self-employed. This proportion is notably higher than the average for the broader UK economy. Agility in creative practice, which allows for nimble innovation, is central to the functioning of the creative economy. So, why is there so much fear around an aspect that reinforces our ability to expand and create work? What are we really afraid of?

Fear can hinder artists from embracing technology in their art, partly due to the perception that emerging technologies are exclusive to the financially privileged, institutionalised, or elite. This belief creates a psychological barrier, where artists feel that these tools are out of their reach, either due to cost or complexity. However, this assumption is increasingly being challenged as daily innovations make emergent tech more accessible. The democratisation of technology, through affordable software, open-source platforms, and user-friendly interfaces, is breaking down these barriers. The fear of irrelevance or the loss of traditional skills persists yet, the evolving accessibility invites artists from all backgrounds to explore and integrate these tools. This shift is gradually dispelling the notion that technology in art is a luxury, instead positioning it as an accessible avenue for creative

exploration and expression. Technology does challenge our archetypes of artistic value, but this is a cycle and the nature of creative innovation for as long as we have conceptualised the act of artistic practice.

For a moment if we are to put down our torches and pitchforks, what power does this new wave of opportunity bring to the individual artist? This year OpenAI's CEO shared a speculation of a possible future where a single individual could helm a billion-dollar AI-powered company, while intriguing, my primary interest lies in what this may suggest for the amplification of independent artists. This scenario is a potent metaphor for the evolving landscape of art, where digital tools and AI are empowering artists to scale their work beyond traditional boundaries. No longer confined by the need for a large support team, artists can now, as independent entities, realise projects of a magnitude and complexity that once seemed unattainable.

This paradigm shift is not just about technology enhancing artistic capability; it's a redefinition of what an individual artist can achieve. It marks a transition from collective dependency to singular autonomy, where the creative vision of one can unfold on a canvas as vast as that managed by a small army of collaborators. This isn't about building a corporate empire but about expanding the horizons of artistic expression and influence. What today needs an established studio and a village-like team to achieve,

tomorrow will be achievable with a single artist's vision and technological support. What challenges our ideas of artmaking and work, will be the same force that will open up new genres and scales of artistic practice, leading to something I argue as more valuable than anything, a diversity of vision.
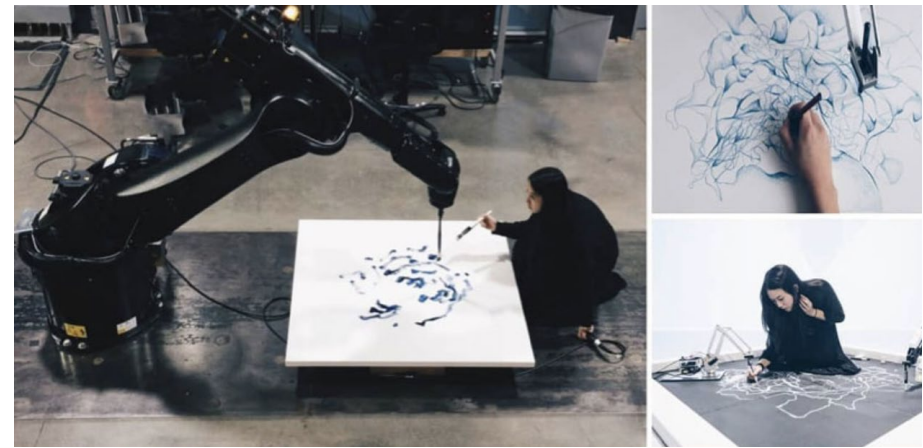
There are today artists embracing the dance and interplay with machine intelligence and a shining example is friend and collaborator Sougwen Chung. Chung's artistic practice is a compelling embodiment of the synergy between human creativity and robotic technology. Sougwen captures data from a retrospective of her mark making, using this as a personalised and bespoke fuel to drive a collaborative robotic limb named D.O.U.G. which has seen many iterations.

She paints alongside her robotic counterpart, a process that is as much a collaborative effort as it is a performance. This unique interaction allows Chung to explore new dimensions in her art, blending her intuitive, human touch with the precise movements of the robot.

The result is a fascinating fusion of organic and engineered elements, creating a dynamic that is more than just artist and tool, but rather a duo that paints in tandem. This partnership highlights the potential of technology to not only augment but actively participate in the creative process, offering new perspectives on the relationship between the artist and the medium.

It's understandable to have tendencies to avoid incorporating new technological opportunities into your art process. However, we can no longer deny that AI, blockchain, generative art, and algorithmic art are here to stay. Covering one's eyes and ears, hoping these advancements will disappear, will only lead to blindspots in your practice. When integrated well, these technologies can offer a holistic, and sometimes spiritual, empowerment. This could mean seeing new ideas, creating new work, scaling your practice, or simply creating genuinely new experiences for the next generation of art viewers. I argue this is an optimistic and exciting possibility. The choice to evolve and explore, or to remain as you are, is yours to make and should be decided with great care.

I am optimistic about the convergence of art and technology, holding a strong stance that technology allows us to observe the traditional through a new lens. It enables us not just to look forward but also to reflect back on ourselves and the past. When executed correctly, the digital process can unlock beauty and emotional insight. Most excitingly, it offers the opportunity to cultivate entirely new realms of art making, creativity, and introduces new players in the ever sought after pursuit of expanded human ability.

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