The automation of creation: from template art to AI

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Twenty to thirty years seems to be the period of time after which it becomes respectable to begin the art-historical study of an art project, artform, event or movement. It was indeed in the year 2020 that, in Europe, artists and curators who made internet art in the 1990s and early 2000s started to receive an increasing amount of emails from PhD students, funded postdoctoral researchers, curators and other scholars with requests for interviews, documentation and contextual information. Suddenly, twenty or thirty year-old art does not look outdated but can be re-seen, and can claim the present as its new cycle of – now art-historical – existence.

Only a couple of years ago, I struggled to explain to my students why exploring a project made in 1996 was meaningful. As we near the thirtieth Jubilee of the World Wide Web, the rules of the game change. Projects that looked naïve yesterday appear fresh, almost lustrous, like unexpectedly discovered early designs and blueprints of things ubiquitous today, or as traces of other paths that might have been taken. They appear in a new light – one emitted by a screen that has changed from the desktop to the phone, tablet and smart TV, but also, more importantly, one of a new ideation.

What is this new light? Is it a question of 'inevitable' historical cycles and an attempt to see how abstract principles of the spiral of history traverse our own lifetime? Is it a question of 'aging well'? Is it a question of being stuck with the same problems that create new problems that create new problems until the cascade overflows, perhaps in the form of street protests? Or is it that we now find ourselves in the moment of another reconsideration of human-technical relationships (with advances in artificial intelligence, new language models, pervasive data practices)

that let us see the analogies to similar previous moments, some of which are, coincidentally, twenty or so years old?

And what does it mean, anyway, to age well? Browsing recently, I came upon some sociology and critical theory research on consumerism, popular in the late 1990s and early 2000s, mostly validating consumption as a practice of individual identity-building. This work has not aged well at all. In the times of climate damage, such postmodern explorations seem absurd. On the other hand, a work of net art such as Cornelia Sollfrank's *Female Extension* (1997)[1] that automatically generated female artists and their works as an entry to a competition, is an early precursor of the automation of creation, 'style transfer', interpolation and other augmentation techniques performed by machine learning (ML) models today. Using AI agents in art and music, as well as text, is boosted by the latest ML models, especially auto-regressive language models such as GPT-3 (generative pre-trained transformer 3), an ecological disaster due to its massive energy usage, whose PR makes it hard to judge whether it works really well or if it is merely really well promoted. (After much initial hype about its 'dangerous' power, the company that developed GPT-3 received $1bn investment by Microsoft in return for an exclusive license.) In any case, the art world is buzzing around these new keywords.

Today, it would be no problem to build upon the implementation of Sollfrank's project by using new ML models to create identities for the invented artists, generate their unique faces, write their life stories and develop individual styles, alongside a plethora of original artworks. A project that points in this direction is a series of experiments led by Joasia Krysa in collaboration with a number of artists, *The Next Biennale Should Be Curated by a Machine* (2021-onwards).[2] One of the core questions that this work poses is why virtual artists generated in abundance to disrupt a model of artistic success based on gatekeeping and artificial scarcity should pretend to take on a human form. As posthuman arguments around ecology are strengthened, they will surely be joined by the animal

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[1] Cornelia Sollfrank, *Female Extension*, 1997, https://artwarez.org/femext/content/femextEN.html.

[2] See Krysa, Joasia, et al. *The Next Biennale Should Be Curated by a Machine* (2021-). https://ai.biennial.com

[2] See Krysa, Joasia, et al. *The Next Biennale Should Be Curated by a Machine* (2021-). https://ai.biennial.com.

[3] Fazi, M. Beatrice. 'Beyond Human: Deep Learning, Explainability and Representation'. *Theory, Culture & Society,* 38:7-8, 2020. https://journals.sagepub.com/doi/full/10.1177/0263276420966386.

artist, plant artist, and the non-human and non-living artist. Sollfrank's project worked with the construction of 'the artist', and its state of being gendered as male, and racialised as White, and whose importance is derived from the notion of the Subject. The legacy of the concept of the Subject, foundational to the structures of our society, such as the economic (based around autonomous individuals with their own bank accounts and regimes of private property that produce subjects), medical (focused on contained bodies), legal (representing juridically formed subjects), political (reliant on voting subjects) and many others, is hard to shake. Consequently, many others are framed as unimportant non-subjects. Injecting those into the art scene – and other scenes – in forms that exist, are invented or predicted, is something that is currently being moved out of the hands of the artist and into the realm of artificial intelligence – where new problems of gatekeeping arise.

At the time *Female Extension* was made, the question of the subject was approached through a feminist, anti-colonial and ecological critique, and it was, as part of the backwash of the postmodern movement, also a question of the author (a category that had also been strongly reworked in historical avant-gardes.) Thinking about technology, or a specific piece of software, as an author, as a collaborator, was a distinctive feature of much of the net art and software art and related phenomena of the 1990s and early 2000s. These art forms conceptualised and practised the extension of authorship to non-human infrastructural software environments and practices. But the pushback against the idea of the human authorial figure and a lively engagement with code, software and technical infrastructures as active agents was dampened by the general capitalist logic of reward, either of companies' shareholders or for individual artists. Much post-internet art, for instance, was keen to return to the model of individual success, and it was indeed the collective and self-deprecating dimension of internet art that was discarded first. Suddenly, from the early 2010s, rarely could we see the kind of gestures common in the 1990s and early 2000s, when personal invitations were turned into collective platforms, artists contributed to actions under collective art pseudonyms, and some projects remained anonymous forever. (Perhaps now, the times have changed again, since in the year 2021 all entities nominated for the Turner Prize are collectives.)

There are some differences between how the questions of authorship, the agency of technology and the nature of the artwork were posed twenty years ago, for instance, in the previous alteration of this volume, *Curating Immateriality*, published in 2006, and the form into which these questions have now mutated. Projects and platforms of the late 1990s and early 2000s developed new art. While striving for agency shared with technology, the focus often remained on the communal working-out of a new aesthetics. In a sense, it was a practice birthing something aesthetically brilliant. In other words, it was an empiricist, materialist endeavour.

Today, similar discussions are driven by related but changed questions: AI making art, curating automatically and personalising all data. Here, attention is squarely on the deep-learning models that make art, rather than the art made by the deep-learning models. The question is how your data is curated and personalised and what it means politically, rather than the detail of what it is that you are served. Previously, art developed an ethics of being anti-authorial, deprivileging certain forms of subject by making art that embodied such working methods as aesthetic propositions. Now, interest in curated data, machine-generated text or AI art as a new aesthetic in its own right is rendered less visible. The attention is all on the models. Certainly, AI art 'outputs', GPT-3 texts and algorithmic curation are created by such working processes. However, more often than not, these techniques are non-communicable, proprietary or financially and ecologically expensive to play with, very demanding in terms of computational capacity, or solely driven by damaging economic and political considerations. At some level, we are not interested in what such technologies produce or what they do. We are interested in what they are, and whether they are, indeed, extremely good, and if so, what happens to the humans. In other words, it is an idealist horizon; we are, once again, asking questions about the ideal, as both a logical projection and a model, and how it shapes society.

The current moment brings us back to the questions of the artist-author, the curator, the subject and the agency of technology in new ways and for a number of reasons. Among them are incommensurability (between the human scale of the users and huge models / platforms / infrastructures delivering results) and non-

explainability[3] (of deep-learning models, driven by the sector's desire to hype their products and commercial secrecy as much as the formal difficulty of explanation). The scale has changed to one of art inhabiting hyper-infrastructure and selecting from its options, while the human figure has faded, but in a new way. On one hand, the question of the human subject-author and technological agency continues, undergirded by our narcissistic obsession with the figure of the human, with its rich history and its wide range of practices of discrimination, and with anxiety around antihuman figures to round it all off. On another hand, the question has morphed, from one foregrounding techno-infrastructural play, organisational aesthetics, and aesthetic brilliance, [4] to one of non-figural entities such as deep-learning models, generative forces of technological production, and machinic dynamics, which indicate that the shift to the nonhuman has already occurred (while often intensifying the problems of gender, race, disability and ecology).

We are used to the problem of media art becoming defunct. The technological age is brutal. Conceptually, however, seen from today's moment of AI hotness, the projects with which we were once involved seem to have drawn the lines that by now have subsumed our field of vision. In what follows, I will try to reconstruct some of the early sketches of the future we presently inhabit before coming back to the problem of coming to terms with the nonhuman now.

Runme and Automated Curation

Runme.org is a software art platform that I developed in 2003 with Amy Alexander, Alex McLean (who also coded it) and Alexei Shulgin. Art platforms had flourished for a few years just before social-media platforms came about and obliterated everything. The spaces, infrastructures and practices for growing art that I group under the umbrella of art platforms were self-determining human-technical experiments in organisation that highlighted, stored, contextualised, brought

[3] Fazi, M. Beatrice. 'Beyond Human: Deep Learning, Explainability and Representation'. *Theory, Culture & Society,* 38:7-8, 2020. https://journals.sagepub.com/doi/full/10.1177/0263276420966386.

[4] See Olga Goriunova, *Art Platforms and Cultural Production on the Internet*, London: Routledge, 2011.

together, put into contradiction, reframed and valued novel art forms, thus formulating new aesthetics.[5] They were either specifically designed to oppose art-institutional logics, or carved their own spaces in the new dimension of the World Wide Web. In the case of Runme, multiple categories were designed to obfuscate the institutional logic of one category, while drawing in feral projects, i.e. experiments not designed to be 'art', projects born in disparate fields, gimmicks and acts of code appreciation that stretched the horizon of possibility for software art. Awards were abandoned in favour of writing reviews of the projects, which could number in the dozens, as opposed to winners of traditional art awards, which are rarely more than three in number. I have written about Runme extensively elsewhere, but I still want to draw attention to one thing.

Runme became known as an experiment in automated curating. This always struck me as inaccurate. There was little automated about Runme. Yes, artists and non-artists could submit their work without an invitation, with a view to it being exhibited on the platform. But all entries had to be manually checked and approved (or rejected) for inclusion. We also found projects and submitted them to Runme ourselves. Every element of Runme was partially manual, and in some way, personal. At the same time, Runme focused on software art and had to think in relation to its medium, which also ran networks, platforms, and, as of late, learns, interprets, judges, produces and takes decisions. A form of reflexivity required by software art warranted a form of 'working with' technology, software, and infrastructures that were 'collaborating with' technology, thinking with it, sometimes following its lead. If Runme was about automated curation, then 'collaboration with' technology required a re-evaluation of automation, or machine creation and action, which this volume aims to do.

What was discussed as machine automation twenty years ago has now substantially graduated into machine intelligence. How does art deal with it? When automation is shifting from the manual and personal into the cognitive, emotional, creative and universal activity of artificial intelligence, the baby steps of the early

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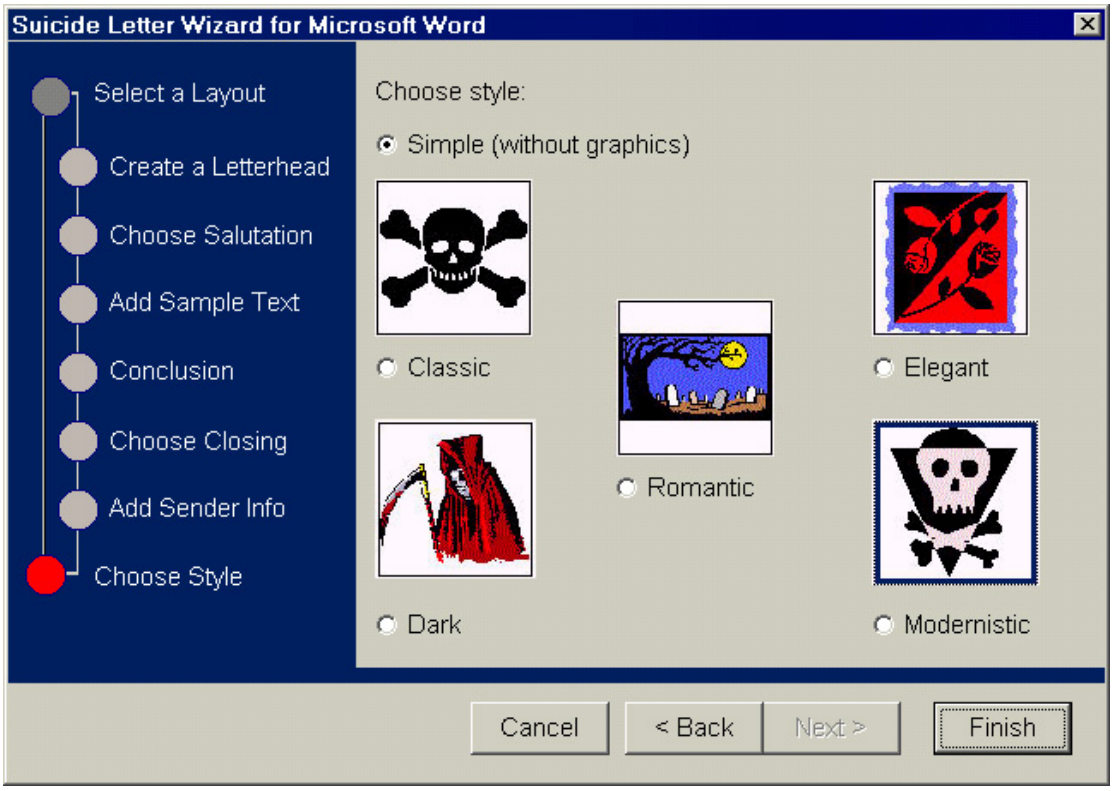
[5] See Olga Goriunova and Alexei Shulgin, 'From Art on Networks to Art on Platforms', *Curating Immateriality: the Work of the Curator in the Age of Networked Systems*, Data Browser V.3. ed. Joasia Krysa, New York: Autonomedia, 2006.

automation of art curating and co-authoring *with* the machine can be clearly seen as delineating the grammar of problems to come: the search for the subject, the predicate of actions available, the morphology of the entity, the lexicon of the database, the syntax of the infrastructure and many other conditions to come.

***Suicide Letter Wizard* – Algorithmically Assisted Farewell**

I discovered the text that follows when searching my hard drive for documentation of Readme software art festivals and related exhibitions in response to a request from a student writing a doctoral thesis on software art. It must have been written in 2003, the same year that Runme was launched, and I made my only art project, the *Suicide Letter Wizard for Microsoft Word* (SLW). The 'Template Art Manifesto' was written to accompany SLW, a little piece of software (called 'wizards' at the time and now known as 'intelligent agents' or 'smart assistants') that guided the user through writing a suicide letter and, at the end of the process, launched Word, creating the desired document.

Designed using the inbuilt aesthetics of Microsoft's operating system, it included steps, such as 'choose salutation' (and ending), 'choose category' (supplied with pre-written content), 'add sender information' and 'choose style', among others. The styles (parodic, like the whole project) were created using Microsoft clip art. The project was a response to the new release of Microsoft Office that included hundred of templates for all occasions of life, bar the sad, bad, intolerably awful and atrocious ones. I reproduce the text here in full.



<Caption> Olga Goriunova (2003), *Suicide Letter Wizard for Microsoft Word*.

'Click a Pathway for Some Great Ideas ® or Template Art Manifesto' (2003)

Chicken fillet, sprinkled with salt, red and black pepper, curry and coriander, costs much less in the supermarket than the whole chicken. You get it packed into a tidy plastic container along with clear instructions how to fry it. Well, of course, you can choose not to fry it, but rather steam it, but you will agree that you wouldn't really steam curry chicken. Nor would you make a soup out of it. Basically all that you can do is fry it.

No doubt, it is very convenient. You need not even remember to salt the dish. I also doubt that a lot of young adults today know how to cut chicken into pieces. And even my mother can't identify which part of the cow the particular piece of beef comes from. But if you take an old cookery book, there you can get all the knowledge. Though you won't be able to apply it. Cooking today is performed with the help of dish templates, prepared products, instructions to follow, and Here we go! Enjoy being a virtuoso cook.

The template, a combination of prepared / existing content and instructions on how to achieve a particular result with it, was introduced to private life long ago. I

remember Meccano sets of plastic or metal details for assembling a plane or a ship, which adults adored no less than kids.

In the digital domain, there are more possibilities to form consistent instructions. In fact, instructions can be regarded as core components of the digital realm based on algorithms. As culture is becoming digital, and the very nature of digitality is collage and plagiarism, templates and wizards for templates form an important part of our digital cultural life. Digital culture at large can be called a template culture.

Let us take an example of programmes for generating or processing music. Every second teenager spends a significant amount of time playing with sound libraries, mixing and looping or generating musical pieces of a certain style, length and melodic structure. He or she works with cultural heritage and a set of instructions for achieving a certain goal of 'creating' a piece. If you purchase a server space today, along with the server space you can possibly get a programme for generating your website. You can also generate CD covers, paintings, sculptures, letters, fliers, postcards, wedding planners, photo frames, home-inventory worksheets, car-loan worksheets, vehicle logs, travel planners, fitness tracking, moving lists, CV and portfolios, home-improvement worksheets, sports-team records, tape inventory, certificates, cover letters, gift labels, journals, menus, shopping lists, travel journals, party invitations and planners, school reports, newsletters, instruction sheets, bibliographies and monthly financial reports.

Is there something else you might need in life? A funeral planner? Divorce planner? Or suicide letter wizard? As the Frankfurt school showed long ago, one of the main tasks of the culture industry is to make people forget about grief and death. The intertwinement between entertainment and manipulation in pop culture was discussed before being discredited as a line of questioning. And if for Windows 3.1, Microsoft suggested a template that was nothing more than a particular web-hosting contract (without any pretensions for its global usability), Microsoft Works 6.0 helps you write a letter of sympathy to your friend who is in the hospital (or rather, it will write it for you).

When using templates, everyone can feel himself/herself creative. You are a great DJ when you are fifteen, a great cook when you are twenty, and a great artist when you are twenty-five. When using templates, your individual preferences are very much respected. For instance, you are absolutely free to choose the layout for your letter. You are free to cook whatever you want from curry chicken breasts.

Today's culture is digital culture. Digital culture is template culture. If there is template culture, there is template art.

Associated works: 1. Suicide Letter Wizard for Microsoft Word ®

Machine Curation

It is with archival fever that I look at this text. It draws the contours of the discourse of digital culture with an implicit reference to the notion of the defunct author, claiming our digital environment as plagiaristic. This word has since disappeared from cultural discourse, being only relevant to university administration and the TurnItIn software that supplants it. The closest contemporary development following on from plagiarism is that of training datasets. Training datasets for image recognition (with ImageNet as an example) were populated early-on by Flickr images, annotated through the mechanisms of Mechanical Turk by people in dozens of countries.[6] In summary, bad images from social networks formed the foundation of computer vision – a form of artificial intelligence working on the basis of *whatever* data labelled by *whomever*. Can we thus talk of AI in terms of plagiarism? It might seem that in our data culture, there is no data but 'plagiarist data'. Amy Alexander's *Plagiarist* (1998) copied corporate websites, included all 'sorts of projects involving other people's data' and 'as a result, (has) organically grown into a mess'.[7] Today,

[6] Olga Goriunova, 'Humans Categorise Humans: on *ImageNet Roulette* and Machine Vision', in Donaufestival: Redefining Arts Catalogue, April 2020, https://pure.royalholloway.ac.uk/portal/files/41356875/ENG_Olga_Goriunova_Human_Categories_DonauFestival_article.pdf.

[7] Amy Alexander. *Plagiarist.org* (1998-); https://amy-alexander.com/projects/internet-art/plagiarist-org.html.

models are trained on such data, amplifying old habits through the feedback loops of computational practices. What the 'Template Art Manifesto' called 'consistent instructions', i.e. templates and algorithms, is now replaced by models with a capacity to learn and handle complexity, or at least provide a framework for plagiaristic data practices that only sometimes grow into a mess (for instance, becoming known when image-labelling is explicitly racist, or attention is drawn to discriminating judicial or actuarial decisions derived from computer modelling). But can we even trust ourselves to judge the success and failure of AI[8] with any more precision than the 'Template Art Manifesto' did?

There is also a certain aesthetic judgment that is easily detectable in the text, which presents a certain reduction in knowledge and artfulness once the age of the template arrives. This has not gone away. It is partly rooted in a much older disdain for technological and indeed scientific reason, such as, for instance, Husserl's.[9] However, this problematic has also been somewhat transformed. It is clear now that AI can process certain kinds of information and derive decisions and actions better and faster than humans. The template has become sharp, and the question is whether politics, art, ideas of fairness and equality, care and survival can find an expression in AI, as input, framework, practice, data ontology, logic, or in other forms. An intervention in the question of good and bad subjects, such as *Suicide Letter Wizard* or *Female Extension*, would now have to work directly on the playing field of AI to make propositions worthy of consideration.

It is surprising to discover a reference to the 'old cookery books' and an idea of a more harmonious, tacit and fuller prior forms of knowledge (and art) in my own text. But the text also upholds the argument that a template is a liberatory tool; it is democratising. It is indeed a blueprint that can transform society, echoing the arguments about mechanisation that avant-gardists such as the Constructivists made. Tradition that sustains repetition with deviation and thus uniqueness holds within itself multiple forms of oppression. The liberatory blueprint shedding the idea

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[8] Mercedes Bunz, 'The Calculation of Meaning: On the misunderstanding of new artificial intelligence as culture', *Culture, Theory and Critique*, 60, 2019: 3–4.
[9] Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology* (Evanston: Northwestern University Press, 1970).

of an original is not devoid of politics. The politics of AI, machine learning, data culture and curation bothered us, whether decades ago or a century ago.[10]

Politically, what is weird about the text under consideration is that all its references are to the flesh of animals. This pack of chicken is well past its best-before date in the time of climate crisis. Furthermore, templates – a blueprint, algorithm, model – have become so pervasive that they have disappeared from view. Hyper-templates of increasing complexity in plagiarist data culture subtend machine intelligence. After all, machine learning and artificial intelligence promise template-based creation, judgment and decision-making that is personalised to the point of becoming unique. The tension is not between human or machine, hand-made or automated, but between individual and certain kinds of collective, profit and survival. When the idealist figuring of AI models is put to the test with a pragmatic working out of what happens and what should happen, fused with political thinking, with paradoxes and a diverse and open overflowing of options, maybe there will be hope. 'Our reality is imagined, developed, fed, curated, and subsequently collectively hallucinated by all of us, humans, animals, and machines and the new networked organisms that are us!'[11]

It is customary to end on a positive note, and I should have ended with the line above. But the last time we invented forms of collaboration with the machines, Facebook happened. Now, what will happen as we keep collaborating with the machines? What is the equivalent of the disaster of Facebook when you augment it with the templates embedded in OpenAI, Alphabet, Five Eyes, automated warfare, VR that promises to 'fix' your brain? What will machine curation do next?

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