The Spectacle of Meaninglessness in An Essay in the Style of Douglas Hofstadter

The essay “An Essay In the Style Of Douglas Hofstadter” is a meta-narrative in which Douglas Hofstadter uses recursion, parody and deliberate ambiguity to air his concerns around the uses of artificial intelligence to mimic human creative labor. Hofstadter shows how a seemingly innocuous example, such as imitating the style of a musical composer, intrudes on a class of cognition no different from other creative arenas such as writing or doing theoretical physics. He is deeply troubled by software developers and the general public who downplay and minimize his ethical concerns and cautions that the success of an AI in any of these domains should be cause for deep alarm.

Through textual analysis I argue that Hofstadter is not troubled by merely being copied or replaced, but by the specter of vacuous cultural erosion in which substantive human endeavor becomes meaningless and/or indistinguishable from a creative simulacra that is deprived of the nuance and complexity of the human author. For Hofstadter the terror lies not in the fact of a software which can produce a plausible Chopin mazurka, but a culture that considers this product “just as good” as an original Chopin because it cannot tell the difference. In the cultural present tense of AI paradigms such as LLM and GAN that now do this routinely at scale, unpacking Hofstadter’s concerns dating back to the early aughts has a renewed relevance.

Hofstadter's essay is a self reflexive hall of mirrors. It begins with a programmer giving an account of how he has developed an AI which has been trained to imitate the writing style of Douglas Hofstadter. An example essay is given, ostensibly by the AI, in which an imitated Hofstadter recounts his reaction to another AI program that can imitate music in the style of any composer. To examine why this should be troubling, the AI generated Hofstadter proposes yet another meta-narrative, a parody which imagines an AI able to do physics by imitating the “style” of Albert Einstein. The last is told from the point of view of Dave, its programmer, who gleefully brags that his AI has produced “100 times as many Einstein style discoveries as Einstein himself did”. The AI written story is then followed by concluding remarks in which Hofstadter responds to the essay, admitting that the AI imitation was very convincing but that he finds it all very uncanny and disturbing.

But the essay is not over. Hostadter makes the unexpected move of appending yet another epilogue wherein he pulls back the literary curtain to reveal that the entire essay is a thought experiment written by him, not an AI. This larger “frame” to the nest of stories adds another level of recursion and also allows him to reveal how he is transposing truth and fiction. The story of the AI writing program is fictional, but Dave Cope is a real music programmer as is his AI program that is able to compose music in any style. Hofstadter’s efforts to make sense of it are also based on real events. The transposition of truth and fiction underscores the real anxiety he seems to be having about the possibility of being unable to distinguish the output of an AI from that of a human creator.

In the fictional epilogue Hofstadter seems to be puppeting an exchange between himself and Dave Cope to play out the intellectual problem he is trying to solve. “Doug” admits he finds

“EWI’s skill a little bit scary” given that the content of the AI essays are not found in either of the two books on which the AI was trained. This fiction mirrors the real life situation in which the EMI program was able to somewhat convincingly copy Hofstadter’s musical style (he also writes music) after only being trained on two of his compositions. He parodies Doug’s befuddlement at this mysterious capability:

> “I surely don’t know how EWI came up with this whole weird fantasy … merely by “recombining” aspects of GEB (*Goedel, Escher, Bach*) and MT (*Metamagical Themas*). Beats me! Nonetheless, it’s undeniable that it did so, since Dave Coco-Pope sent it to me, and it was clearly a computer printout printed on computer paper, and I’m not one to deny what’s right in front of my eyes.”

What is he suggesting here? Why would he be lampooning himself in this way? “Merely recombining” seems to echo the way others seek to downplay what the software is doing by describing it simply as “a matter of coherently throwing together a bunch of stylistic devices“. Yet he is still troubled trying to account for what is “right in front of my eyes.”

Hofstadter is not only troubled by what the AI can do but about the *claim* being made by its developer. David Cope claims that his program can capture the style of a human composer so convincingly that a new piece it produces might be considered part of the oeuvre of the original composer, as with the example of creating Sergei Prokofiev’s 10th Sonata. Cope’s main defense is that professional musicians were unable to tell where the AI reconstruction of the Sonta began. Unconvinced by this, Hofstadter articulates throughout the essay that to truly “capture” a person's style as such in all its complexity and nuance would require capturing their entire intellect. Their creative output would be informed by experiences and subjectivity, age, training, friendships, accomplishments, likes, dislikes, a whole range of “soft” variables. He asserts that such a claim is tantamount to capturing “the very human soul of the very human creator”. If this were true then such a program would in theory be able to reproduce wholly new creative works well outside the source materials it was trained on, such as writing an essay on a topic that Hofstadter had not even thought of yet. If a software program were really able to do any of these things we should find it “not merely astonishing but also extremely disorienting and even very upsetting.”

Hofstadter is openly skeptical that Cope’s AI program is really that capable. Moreover he finds the lack of concern from others troubling and it seems the aim of his essay is to prompt others “to think long and hard about what EMI can be validly claimed to do.” Hofstadter repeatedly points to the tension between knowing that the software is “just about the surface level of note patterns” and the uncanny plausibility of an output that is “so strangely real and so seemingly filled with emotions”. The ambiguity between the real and the simulacra is part of his terror as is the idea of a culture which has devolved into meaningless superficiality in which cultural products “don’t have content, don’t have meaning, don’t speak—they are just well-polished assemblages of stylistic flourishes.”

In this view the claim that AI generated content has equivalent intrinsic value as that of a human is troubling because it invites wholesale mimicry across a wide range of cultural fields which results in “new" cultural artifacts with no connection to any lived experience, emotional complexity or embedded meaning found in human authorship. The easy proliferation of meaningless creative simulacra effectively devalues human cultural production and the nuance and complexity of real human achievements are lost.

Moreover it seems to lead to a slippage in how cultural value is placed, wherein the mimicry is deemed admirable when it is indistinguishable from the work of a human creator. A recent example, which nearly reads like a sequel to Hofstadter's essay, was the effort in 2021 to complete Beethoven’s 10th Symphony. A team of music historians and computer scientists trained an AI on all of Beethoven’s work as well as a few sketches he had made for his 10th Symphony. The project was deemed a success by its creators at several phases when audiences of composers and music experts were unable to distinguish which parts were from Beetwhoven’s initial sketch and where the reconstruction began.[1]

If the stakes involved with creating music seem too low, consider the other fields Hofstadter makes comparison to, that of writing and theoretical physics. Researchers are now grappling with thorny issues around scientific papers that have been co-authored or even written entirely by services like ChatGPT-3. At the same time there are also efforts by government and private research to train AI models on the vast corpus of peer reviewed scientific literature in order to develop new theoretical models, making Hofstadter thought experiment of an AI writing in the style of Einstein uncannily prescient. Will this result in the strength of original thought becoming diminished, as Hofstadter fears, or will it, as accelerationism claim, only enhance human ingenuity? The parody in Hofstadter’s essay seems to clearly indicate that the developers of these tools will always seek to tout their benefits and achievements and minimize the ethical concerns of academic “spoilsports”. As the beneficiaries (or victims) of these new tools, we must always be vigilant about the veracity of these claims and their implications for human society, or we may not be able to tell what has been lost.