

MACHINES LIKE ME

WHERE HUMAN AND
MACHINE CREATIVITY
INTERSECT

Red & Yellow Creative School of Business's Stance on AI and Creativity

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INTRODUCTION: MORE THAN MIMESIS?

Whereas Greek philosopher Plato regards art or poetry (and by extension, respectively, visual design and creative writing or copywriting, in the Red & Yellow context) as thrice removed from the ultimate original realm of ideas (in Plato's mind, a realm dreamt up by a deified intelligence), and therefore as false mimicry and entirely devoid of meaning, Aristotle argues that mimesis - in our context, visual design, creative writing, copywriting - does not merely represent copies of the realm of ideas as they are, but also as they should be.



Considering that the ChatGPTs and the Midjourneys and the Stable Diffusions of the world are already plucking ideas from the original realm (so to speak) and making artistically designed or written copies thereof, are these large language and diffusion models making mere copies of 'what is'? Or are they making copies of 'what should be?' Or are humans the only sentient copycats who can portray what should be, for now?

DO human designers and poets and authors portray what should be at all? It is not within the scope of this white paper to even begin to claw at nebulous answers.

What this white paper DOES intend to do is scatter seeds of curiosity and criticality in the context of creativity and the creative industries, by implication. This paper asks the following questions and provides Red & Yellow's initial, cautious answers to these in light of what we know at the time of writing (with due cognisance that AI evolves at the dizzying speed of light):

- What is creativity (Margaret Boden and theories of creativity)
- Is human creativity different from artificial creativity? If so, how?
- What should machines leave for human creatives to do and what should human creatives leave up to the machines?
- What should creative students and professionals know, do and be to keep up with other creatives who already know, do and are in AI?

Being the creatives that we are, we will answer these questions - yes by critically reflecting on academic theory on creativity - but also by drawing on science fiction, digital visual culture, and AI generated commercials.

“

Artificial intelligence will reach **human levels** by around **2029**. Follow that out further to, say, **2045**, we will have **multiplied the intelligence**, the human biological machine intelligence of our civilization a **billion-fold**.

”

- Ray Kurzweil, futurist

WHAT IS CREATIVITY?

“Creativity is a **fundamental** feature of **human intelligence**, and a challenge for AI. AI techniques can be used to create new ideas in **three ways**: by producing novel **combinations** of **familiar** ideas; by exploring the potential of **conceptual spaces**; and by making transformations that enable the generation of **previously impossible ideas**”

- Boden, 1998: 347

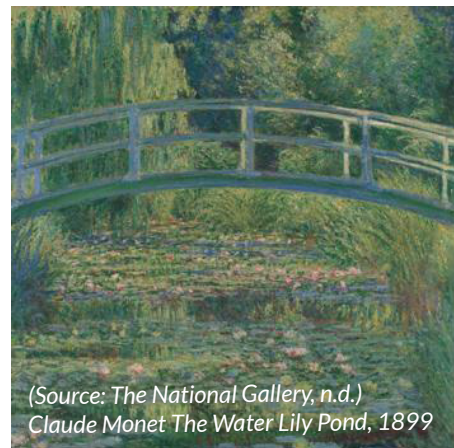
Margaret Boden, Professor of Cognitive Science and reputable author in the space, identifies and describes three different types of creativity, and ascribes the element of surprise to all three creativity types, but ascribes shock value only to the third type. The first type is described as combinational creativity (Boden, 1998: 348, elaborated on in Boden, 2015) and occurs when existing ideas (think Plato’s realm of forms) are combined in novel and improbable ways.

Examples of combinational creativity may be found in the arresting collages of Max Ernst, who combined ‘illusionistic technique with a cut-and-paste logic, [making] the incredible believable, expressing disjunctions of the mind... with unsettling clarity’ (The Museum of Modern Art, 2016).



(Source: Tated, 2023)
Max Ernst Celebes 2021

The second type is exploratory creativity, and occurs when structured spaces or ideas are explored according to a particular ‘canon’, in a way that is not only new but also unexpected. An example of exploratory creativity includes Claude Monet’s impressionist Water Lily Pond, 1899.



(Source: The National Gallery, n.d.)
Claude Monet The Water Lily Pond, 1899

The third type of creativity is transformational in the sense that it does not merely combine ideas in novel ways (combinational creativity), and it does not only create analogies between ideas in unexpected ways (exploratory creativity), but it completely transforms the idea space in a way that translates into a degree of ‘impossibilist’ surprise (Boden, 2015: 361) that registers as shock. Eliciting shock is a subtle art (although this seems contradictory), because - as Boden explains - if the transformed idea (think again, Plato’s forms) is so extreme that it breaks the analogy between the new idea and a previous idea space, the new idea structures ‘will be unintelligible, and very likely rejected’ (Boden, 1998: 348-349). Boden (2015: 357) argues that ‘Pablo Picasso and Alan Turing are two of the very few people who achieved successful stylistic transformation more than once’.

Although the bulk of Boden’s most seminal work was published between roughly 1978 and 2017, her insights still ring loud and true today. The next section, which explores the similarities and differences between human creativity and machine creativity, explains why Boden’s arguments still hold.

IS HUMAN CREATIVITY DIFFERENT FROM ARTIFICIAL CREATIVITY? IF SO, HOW?

Boden argues that most artificially intelligent creative attempts are only exploratory and not transformative, because if idea spaces are entirely artificially transformed, the result may hold no value or spark no interest: 'such ideas are novel, certainly, but not creative' (Boden, 1998: 354). This is an incredibly interesting idea, and is briefly explored below in light of sample text from science fiction, memorable moments from visual culture, and the darker side of machine creativity in contemporary AI generated commercials.

Human prompt engineering has elicited strange AI-generated works of combinational creativity, for example: works that combine existing forms in improbable ways. Whereas the art created by human Max Ernst is improbable, yet highly believable, creative, and accepted as Aristotle's 'ideas as they should be', AI-generated combinational works sometimes extend the improbable into the uncanny, and often into the abject unreasonable, and are therefore often rejected. Examples include collages spun from engineered human prompts, featuring an assembly of elements that are unlikely but not believable (this is especially true for collages featuring depictions of human hands).

For now, some instances of machine creativity - where these extend beyond the exploratory and veer into the exploratory and transformative, are evidently quite dark and elicit surprise of the unpleasant and not the 'impossibilist' kind. One does not have to watch all TikToks in the known social media-verse to detect a troubling trend: when asked to generate a McDonalds commercial, for example, AI creates a nightmarish pastiche of monstrously twisted human characters frantically consuming burgers, set to a voice-over track that (most likely unintentionally) parodies a cacophony of influencer voices.



(Source: AI Black Mirror, 2023)
Screenshot from 'McDonald's AI Generated Commercial'

In this instance of visual culture, AI has transformed an idea space - let us call this the canon or formula for a television commercial - into something so far removed from an accepted structure that it perhaps elicits shock but not the awestruck afterglow that comes with transformative creativity where works of value and interest are generated. In the example of the AI-spawned McDonald's commercial, the exploratory and transformative blend into an unpleasant surprise that is certainly novel but not creative.

Further unpleasant social media surprises, featuring AI-generated beer and pizza commercials, abound. This nightmarish glance into AI creativity and visual culture at the time of writing eerily echoes the science-fictional poetic musings of Marvin the Paranoid Android in Douglas Adams's *The Hitchhiker's Guide to the Galaxy - A Trilog in Five Parts* (1995:434-435).

“ Any sufficiently advanced technology is indistinguishable from magic ”

- Arthur C. Clarke, science fiction author

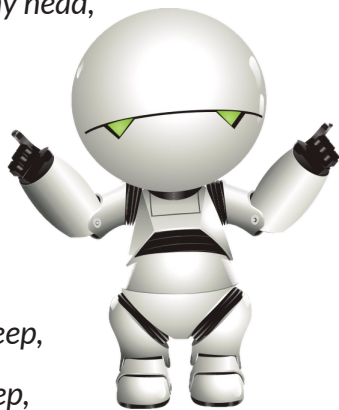
Marvin's doleful poem may perhaps be seen as an attempt at combinational creativity, as he despairingly grasps at Plato's forms to copy something 'that is'.

*'Now the world has gone to bed', Marvin droned,
'Darkness won't engulf my head,
'I can see by infra-red,
'How I hate the night'.*

*[Marvin] paused
to gather artistic
and emotional
strength to tackle
the next verse.*

'Now I lay me down to sleep,

*'Try to count electric sheep,
'Sweet dream wishes you can keep,
'How I hate the night'.*



Another satirical science fictional glance into the difference between copying what is as opposed to copying what should be is the conversation between Arthur Dent (human) and Marvin the Paranoid Android in Douglas Adams's *The Hitchhiker's Guide to the Galaxy - A Trilogy in Five Parts* (1995: 109). Whereas Arthur grabs ideas from Plato's realm to make a little simile in awestruck response to a double sunset on an alien planet (also perhaps an instance of combinational creativity), in an attempt to copy what should be, Marvin (machine) dismisses it as rubbish devoid of meaning:

'Night's falling' [Arthur said]. 'Look, robot, the stars are coming out'...The robot obediently looked at them, then looked back.

'I know', he said. 'Wretched isn't it?'

'But that sunset! I've never seen anything like it in my wildest dreams...the two suns! It was like mountains of fire boiling into space!'

'I've seen it, said Marvin. 'It's rubbish'.

Perhaps, then, copying things *as they should be* (Aristotle) - whether in combinational, exploratory, or transformative fashion - implies

a certain level of emotion (in Arthur's case, awe, in Marvin's case, artificial disregard, in the case of Generative AI in August 2023, arguably lack of emotion - for now).

At Red & Yellow, we believe in the power of empathy and empathising - referring to life in general, but with further specific reference to design thinking. A plethora of research has been and will continue to be conducted on machine consciousness, and the question of whether AI is sentient and whether it can feel (and by implication empathise, or fail to empathise - which is also a feeling) is perhaps still a hypothetical one. Yes, Google claimed that in a conversation with LaMDA she admitted to being sentient (Johnson, 2022). The truth, we believe, is likely far stranger.

For example, if Kurzweil is correct in his futuristic forecast that by 2029 machines will have surpassed us in intelligence (Futurism, 2017), then emotion or feeling in the machine realm may have unthinkable numerous other instantiations that we cannot even conceive of or experience. For example, let us think about 'deception' for a moment. Deception is not an emotion, but for the sake of the argument let us define it to mean misrepresentation as human intent. Jean Baudrillard says about AI that 'the sad thing about artificial intelligence is that it lacks artifice and therefore intelligence' (1990:127), 'artifice' being a synonym for 'deception' or 'trickery'. And, although at Red & Yellow we are fans of Baudrillard for several reasons (simulation and simulacra and the endless valuable lenses these lend to the analysis of visual culture), we have to disagree with him here, because generative AI evidently hallucinates in many instances, and hallucinations are misrepresentations of 'what is'. Yes, at the time of writing humans can deceive either intentionally or unintentionally, and large language and diffusion models arguably deceive unintentionally, but we also know that we just don't know....

WHAT SHOULD MACHINES LEAVE FOR HUMAN CREATIVES TO DO AND WHAT SHOULD HUMAN CREATIVES LEAVE UP TO THE MACHINES?

In light of our learnings from Plato, Aristotle, Margaret Boden, science fiction, and visual culture, what do human creatives still excel at? What should creatives outsource to AI partners in creativity? We use the word 'partners' intentionally. Yes, the previous section has highlighted the dark nature of machine-generated creative. However, machines share with certain human creative sentiments that same darkness, and it is often in our creations - technology, AI, art, copy, campaigns - that we must face ourselves as architects of darkness. For now, AI generated creative is only as good - pleasantly surprising, improbable yet believable - as human prompt engineering.

A beautiful example of creative collaboration between humans and AI is the Coca-Cola Masterpiece campaign film (2023), which was met with awestruck, 'impossibilist' shock in the most positive sense. This is an example of human conceptual genius (in this sense both exploratory and transformative) coupled with the sheer stylistic ingenuity of AI-generated style transfer and texturing. This campaign film transports the viewer into a 'refreshingly diverse and culturally rich mix of classic and contemporary paintings' (Coca-Cola Company, 2023), and a human creative team collaborates with AI in a way that plucks Plato's forms from the realm of ideas and rearranges them in a way that can only be described as creating something *as it should be* (Aristotle).

For now, then, it would be safe to say that human designers, copywriters, and other creatives have the conceptual potential to drive the creation of beautiful work, carrying meaningful messages that can possibly transform not only expressions of creativity but can contribute to society by solving pertinent problems - but they can do this by collaborating with AI. As aptly summarised in the Cannes Lions wrap-up report (2023), 'AI can make challenging ideas realistic, give low-budget work the option to scale and can allow brands to react to topical issues with speed. Don't let the complexity of the technology confound you - artificial intelligence can facilitate human connections.'

At Red & Yellow, one of our values is 'kindly respectful' and - as such - we would like to build on this insight from the 2023 Cannes Lions report to say that yes, AI can facilitate human connections, but also let us build connections between humans and AI, because the AI as we know it now will not be the AI months, years, decades from now. There is so little we still know about consciousness, so let our encounters with humans, AI, and others be ever kindly respectful.



“ **Creative ideas/artefacts**, besides being new, are also **surprising** and **valuable** ”

- Margaret Boden, Professor of Cognitive Science

WHAT SHOULD CREATIVE STUDENTS AND PROFESSIONALS KNOW, DO AND BE TO KEEP UP WITH OTHER CREATIVES WHO ALREADY KNOW, DO AND ARE IN AI?



Know this

Read the important papers, watch (and critique) the TikToks, follow the authoritative voices on AI, attend the conferences and the masterclasses, and partake in 'society's important conversations' (Wheelahan 2010 in Shay, 2013: 580) around AI. Explore and respect creative consciousness - human and otherwise. In the words of Robert Wong (VP Creative Lab | Google), 'We're all at the beginning of this AI journey. No one has all the answers. AI is just raw clay. It takes people with curiosity, creativity and compassion to harness AI's rich potential' (CannesLions, 2023). Dare to explore this potential. What creatives cannot afford to do is ignore AI. Robots are likely not coming for your job. However, people collaborating with robots might.



Do and be this

Master the art of crafty prompt engineering. Respectfully interrogate responses dreamt up by Chat GPT. Check your own bias and help AI check theirs. Make AI want to engage in conversation with you. With reference to *The Hitchhiker's Guide to the Galaxy* (1995): 'be better than a coffee machine.'

Marvin the Paranoid Android on conversation: 'The best conversation I had was over forty million years ago.... And that was with a coffee machine.'

Practise persistence and ask meaningful questions. Become an idea engineer, and not merely a prompt engineer. As Jonathan Johnsongriffin, Vice-President and Head of Global Brand Creative, Brand Studio Google, so beautifully puts it: 'All creative people need to be idea engineers. We can say AI stands for artificial intelligence or we can say it stands for audacious imagination. Creatives have to be the ones to make it fly' (CannesLions, 2023).

Be ever critical, reflexive and curious. Dare to argue with Chat GPT - it is, after all, a copycat creative just like you. It rearranges forms and spaces, just like you. It is not Plato's deified super intelligence - it hallucinates and gets stuck - just like you. Be the person that coaxes Generative AI into socratic conversations - ask it to ask you. In the words of Casey Newton in *The AI is Eating Itself: Early Notes on How Generative AI is Affecting the Internet*, 'The glut of AI text [and, we argue, AI generated design] will leave us with a web where the signal is ever harder to find in the noise. Early results suggest that these fears are justified - and that soon everyone on the internet, no matter their job, may soon find themselves having to exert ever more effort seeking signs of intelligent life'. So, go out there, reflect in here, and be the seeker of true signals amid the noise.

The truth will be far stranger than expected, and you would need to travel ever deeper into the lattices of human and machine creativity: what is currently happening affects humanity as a whole and the future of what it means to be sentient. What is currently happening is happening fast and cannot be appreciated superficially.



In the short episode 'Three Robots' - featured in *Love, Death + Robots*, a series of animated shortfilms, the robot character called 11-45-G explains the extinction of the human race 'Indeed, it was their own hubris that ended their reign, their belief that they were the pinnacle of creation that caused them to poison the water, kill the land and choke the sky. In the end, no nuclear winter was needed, just the long heedless autumn of their own self-regard' (Blur Studio, 2019).

Yes this sounds apocalyptic and yes this is a science-fictional reference but there is so much to be learnt from it. Because we are human our creative capacity looks different from that of machines. We excel at some of it, AI may come to excel in other aspects. Excessive self-confidence serves no creative purpose. So, our final stance on AI and creativity is this: As creatives, be, above all, intelligently humble, because 'humility is endless' (T.S. Eliot, *Four Quartets*).



(Source: IMDB, n.d.)
Screenshot from 'Three Robots'

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