

The Wicked Problem of Generative AI in Marketing

As a student at the University of Wollongong in the field of marketing, I find myself navigating through a complex landscape shaped by the emergence of generative AI. This new technological breakthrough presents a wicked problem—one that is intricate, multifaceted, and resistant to simple solutions. In this essay, we will dive into the intricacies of how generative AI influences marketing, emphasising the sustainability aspect of this wicked problem and how to adapt to this new change.

Generative AI has transformed marketing by offering a plethora of opportunities for efficiency, personalisation, and data-driven decision-making. However, it also poses significant challenges, making it a wicked problem. A wicked problem is one that defies straightforward solutions due to its complexity, dynamic nature, and the interplay of various factors. It is said that "a wicked problem is one for which each attempt to create a solution changes the understanding of the problem"(Rittel, 1967). In the context of marketing and generative AI, these complexities manifest in many ways. Generative AI, with its ability to autonomously produce content, has ushered in a new era for marketers at the University of Wollongong (UOW) and beyond. However, beneath the surface of its seemingly limitless potential lies a series of intricate challenges that span beyond the conventional boundaries of our discipline. This complexity, the hallmark of a "wicked problem," necessitates a comprehensive examination that encompasses various facets of the marketing profession and extends into broader aspects of business,

including leadership, corporate social responsibility (CSR), and responsible decision-making frameworks.

Firstly, generative AI blurs the lines between human and machine-generated content, challenging the authenticity of marketing efforts. As noted by Rich and Gureckis (2019, p. 174), “artificial intelligence and machine learning systems are increasingly replacing human decision-makers in commercial, healthcare, educational, and government contexts. But rather than eliminate human errors and biases, these algorithms have in some cases been found to reproduce or amplify them.” (Peres, 2023). While AI can efficiently create content, sustaining human touch and emotional connection remains elusive. This balance is crucial, as customers seek genuine interactions with brands, not chat boxes with robots. The authenticity challenge stems from the fact that generative AI is excellent at mimicking human language but lacks the true understanding, emotions, and experiences that humans bring to the table. Thus, while AI can produce content that appears genuine on the surface, it may lack the depth and sincerity that human marketers can provide. This presents a significant dilemma for marketers who aim to leverage AI's efficiency while preserving authentic brand-customer relationships.

Secondly, the displacement of traditional marketing roles due to AI automation raises questions about job sustainability. As AI takes over routine tasks such as content creation, data analysis, and customer segmentation, it requires marketers to adapt and acquire new skills. To obtain a grasp of how impactful AI is in marketing roles, let's look at some statistics. “65% of content marketers plan to use AI content generation tools.” (Siege Media and Clearscope) “B2B businesses are 24% more likely than B2C to use AI content generation tools.” (Siege Media and Clearscope)

"Bloggers who used AI to create a 2,000-word blog post reported it took 2.81 hours to write a blog post, compared with 4.02 hours for bloggers who did not." (Wordtune)

From these statistics, it is fair to conclude that AI does not only save time and money but also increases efficiency and creates room for more opportunities. We must also be conscious of the negative offspring that arise from such a positive influence. We must ensure the long-term sustainability of marketing careers and address this pressing concern.

Beyond job sustainability, there is another critical facet to consider: environmental sustainability. The proliferation of generative AI has significant energy and resource implications. "In January 2023, ChatGPT had roughly 590 million visits. With approximately 5 questions per user, this amounted to the same energy consumption as 175,000 people consume in the same period of time." (Kuever, 2023) As seen in this quote, large-scale AI models, such as GPT-3, require substantial computational power, resulting in increased energy consumption. The sustainability of our planet is at stake as AI technologies expand. Generative AI models are notorious for their energy consumption. Training a single large AI model can consume as much energy as several cars do in their entire lifetime. For instance, GPT-3, a widely used generative AI model, is estimated to have a carbon footprint equivalent to that of a car's lifetime emissions. This alarming environmental impact is a cause for concern, especially in a world where sustainability is increasingly prioritized. To address this, responsible decision-making frameworks must extend to sustainability considerations. Companies should factor in the environmental impact of their AI applications and strive to minimise their carbon footprint. Sustainable AI practices, such as using renewable energy for computations, designing energy-efficient algorithms, and optimising hardware infrastructure, can mitigate these

concerns. An example of how AI can put sustainability at the forefront is by using predictive AI to our advantage. "Predictive AI can forecast future emissions across a company's carbon footprint in relation to current reduction efforts, new carbon reduction methodologies, and future demand. As a result, they can set, adjust, and achieve reduction targets more accurately." (Degot et al., 2022). Moreover, there is an ethical dimension to sustainability in AI. Companies must not only be sustainable in their energy usage but also in their data handling practices. The responsible collection, storage, and use of data are critical to ensuring that AI applications are aligned with sustainable and ethical principles.

Marketing leadership is central to tackling the wicked problem of generative AI. Leaders must navigate the integration of AI into marketing strategies, making responsible decisions that balance efficiency with authenticity. They play a crucial role in setting the ethical standards for AI-generated content and ensuring that sustainability concerns are addressed. Leaders of marketing teams must be able to "recognise that failure is often a steppingstone to success in an AI-driven world." (Leal, 2023) Leadership in the AI age also requires a nuanced understanding of both marketing principles and AI capabilities. Marketing leaders need to be well-versed in the potential of AI tools while also being mindful of their limitations. They must be advocates for responsible AI practices within their organisations, emphasising the importance of ethical content generation and sustainable AI operations.

Corporate social responsibility (CSR) also takes on a new dimension in the era of generative AI. Ethical marketing, including the responsible use of AI, becomes an integral part of CSR efforts. Companies that prioritise sustainability and ethical AI practices are likely to earn the trust of environmentally conscious consumers. "Using

ChatGPT to automate the CSR report production can also help to ensure that the report is written in a clear and concise manner that is easy for stakeholders to understand." (team, 2023) This will not only build trust within the company but also contribute to transparency between the company's stakeholders, customers, and employees. Incorporating sustainability into CSR initiatives can take several forms. For example, companies can pledge to use AI models that are energy-efficient or invest in renewable energy sources to power their AI infrastructure. They can also commit to minimising data waste by adhering to strict data privacy standards and ensuring responsible data handling practices.

Wrapping it all up, let's consider the wild ride that is generative AI in marketing here at the University of Wollongong. We've been dealing with what you might call a "wicked problem." It's not your run-of-the-mill issue; it's a tangle of complexity, a bit like trying to solve a Rubik's cube blindfolded. In this essay, we've explored how generative AI shakes up marketing, with a particular focus on the sustainability angle, and how we, as budding marketers, can ride this wave of change. Generative AI has thrown a curveball into marketing, offering us a treasure chest of goodies like efficiency, personalisation, and data-driven decision-making. But, as with any treasure hunt, there are traps along the way. Our treasure map has led us to a place of complexity where solutions aren't one-size-fits-all. This complexity, that's the hallmark of a "wicked problem," requires us to dig deep and examine not just marketing but also other aspects of business, like leadership, corporate social responsibility (CSR), and responsible decision-making. So, what's the catch? Well, first, generative AI blurs the lines between what's created by humans and what's churned out by machines. It's like a magician's trick: AI can mimic human language like a pro, but it can't grasp the depth of human understanding and emotions. This

poses a tricky question for us marketers: How do we keep it real when the content we create might be authored by AI? Striking that balance between efficiency and authenticity is our modern marketing riddle. Then, there's the elephant in the room—job sustainability. AI is learning to do many of our marketing tasks, which, let's be honest, can be a relief when you're swamped with work. Statistics show that AI can save us time and money while creating new opportunities. But hang on a second! What about the folks whose jobs might be on the line? We've got to ensure that our marketing careers don't vanish into thin air. We're in for a ride where we'll need to learn and adapt, keeping our skills up to date. Beyond our job security, there's a bigger picture—our environment. The energy and resources that generative AI gobbles up are a concern. It's like having a car that never stops guzzling gas. The sustainability of our planet is at stake as AI continues to expand. Those large-scale AI models, like the famous GPT-3, are energy hogs. Training one of those is like running a fleet of cars for their entire lifetimes. The carbon footprint of AI is very large, especially in a world where sustainability is becoming a top priority. We need to add sustainability to our decision-making toolkit. That means companies should think green when using AI—opting for renewable energy, designing energy-efficient algorithms, and being eco-conscious. AI can even be part of the solution by predicting future emissions and helping companies set greener goals. In this adventure, marketing leadership becomes our guiding star. These leaders must navigate the AI maze, making wise decisions that balance efficiency with authenticity. They're the guardians of ethical AI-generated content and sustainability champions. It's a tough gig; they need to understand marketing inside out and know AI's potential and limits. These leaders should be the ones shouting from the rooftops about ethical content generation and sustainable AI. But that's not all!

Corporate social responsibility (CSR) gets a makeover in the AI era. Ethical marketing and responsible AI are now key ingredients in CSR efforts. Companies that embrace sustainability and ethical AI practices earn the trust of environmentally conscious consumers. Transparency between companies and their stakeholders, customers, and employees is the name of the game. Sustainability in CSR can take many forms—pledging to use energy-efficient AI models, investing in renewable energy, and making sure data is treated responsibly to minimise waste. As we wrap up this AI marketing odyssey, remember this: generative AI is a game-changer that can make marketing more efficient and personalized. But it's not a game without challenges. It tests our authenticity, job security, and the sustainability of our planet. Marketing leaders have a key role to play in steering the ship, and CSR now includes a hefty dose of AI ethics and sustainability. We, as the marketers of tomorrow, must take the reins and champion ethical, sustainable AI practices. In this AI-driven world, marketing remains a powerful force for good, but it's up to us to navigate these challenges smartly and ethically.

Below you will find some mock-up examples of what my twitter feed would look like for new students coming into marketing based on my responses to questions 1 and 2.



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Welcome to the world of marketing, new students at @UOW! 🎓🌟 Get ready for an exciting journey where Generative AI is reshaping the landscape. In this thread, we'll explore how to navigate this new era.

10:00 AM · Jun 21, 2022 · Twitter for iPhone

74 58 178 2023



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AI is taking over routine marketing tasks, creating room for innovation. But traditional roles may change or vanish. New marketers, you'll need to adapt and learn new skills to stay ahead. 🧠📚

10:00 AM · Jun 21, 2022 · Twitter for iPhone

74 58 178 2023



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Imagine AI writing content that's hard to tell from human-written text. Great for efficiency, but what about authenticity? Customers want real interactions, not just automated responses. Striking that balance is the challenge. 🤖

10:00 AM · Jun 21, 2022 · Twitter for iPhone

74 58 178 2023



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As future marketers, you're the change-makers. Engage in responsible AI practices that embrace ethics and sustainability. Navigate these challenges wisely for a brighter marketing future! 🌟🌍 YOU ARE THE FUTURE!

10:00 AM · Jun 21, 2022 · Twitter for iPhone

74 58 178 2023



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Did you know AI can have a big environmental footprint? Large AI models consume lots of energy. In a world where sustainability is key, responsible AI practices are essential. 🌱💡

10:00 AM · Jun 21, 2022 · Twitter for iPhone

74 58 178 2023



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CSR gets an AI makeover. Ethical marketing and responsible AI are now vital. Companies prioritizing sustainability earn trust. Transparency is the name of the game. 🤝

10:00 AM · Jun 21, 2022 · Twitter for iPhone

74 58 178 2023

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