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A Chatbot for a Thought: the Flower of Evil has Bloomed (60 Years Later)

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This article examines the implications of recent advancements in Large Language Models (LLMs) through the lens of Marshall McLuhan's seminal work Understanding Media*. It explores how LLMs outsource language creation, potentially abstracting verbal expression from human cognition, akin to how the phonetic alphabet abstracted thought. Overall, the essay argues McLuhan's foresight into technological extensions provides a framework to navigate the ramifications of LLMs redefining language, communication, and human experience itself.*

Keywords: language, LLMs, AI, cybernation.

Sixty years after it first hit the shelves, Marshall McLuhan's *Understanding Media* (1964)* still rides high as a classic. It remains a cornerstone of media theory, crucial for understanding today's human-technology ecosystem. Undoubtedly, it has never ceased to offer new insights, continually inviting us to probe the unforeseen implications of media and technologies, prompting reflections on how any human innovation establishes new ecological patterns and social frameworks. While the first part of the book has consistently garnered widespread acclaim—from the most celebrated chapter entitled "Medium Is the Message" (Ch. 1) to "The Gadget Lover" (Ch. 4) and "Media as Translators" (Ch. 6), just to name a few—most of its intellectual gems are concentrated in the second part, across 26 of the book's 33 chapters, where McLuhan dives into the intrinsic capabilities of various human innovations that have deeply shaped human history, exploring "the contours of our own extended beings in our technologies" (UM, p. 6). Significantly, McLuhan opens this second part of *Understanding Media* by examining the essence and intricacies of language, the quintessential form of media which he characterizes as the technology through which humans shape their thoughts; the technology that "enables the intellect to detach itself from the vastly wider reality" (UM, p. 79).

*This essay is crafted to revisit and provide a focused analysis of Marshall McLuhan's seminal work, *Understanding Media*(1964), embodying a return to a classic. As such, the bibliographic references throughout the text are exclusively drawn from it, highlighting a dedicated exploration of McLuhan's insights within its original context. At the end of this essay, the bibliography section includes a selection of essential texts from McLuhan and the Toronto School's scholarship, providing additional resources for deeper exploration and understanding.
Henceforth, *Understanding Media* is cited as UM, followed by the pagination of the first edition McGraw-Hill, New York, 1964.

These notable instances of McLuhanism specifically examine the spoken (Ch. 8) and written word (Ch. 9), highlighting their distinct roles in shaping the human cognition. Language in fact, continues McLuhan, "does for intelligence what the wheel does for the feet and the body […]; an extension or uttering (outering) of all our senses at once" (UM, p. 79). With a literary twist, the subtitle of the chapter 8, "Flower of Evil?" (UM, p. 78), intriguingly incorporates a Baudelairean nuance, prompting a deeper exploration of language's inherent duality and its power to connect and unify, as well as to separate and isolate, echoing Baudelaire's literary investigation of beauty and decadence in *Les Fleurs du mal*. The inclusion of a question mark evidently opens up a range of possible scenarios, serving as a gateway to multiple interpretations. Seen from today's eyes, this sense of contrast and conflict, of elevation and decline, both mesmerizing and potentially malevolent, is echoed in the recent and significant advancements concerning the state of language, particularly in the context of the latest Artificial Intelligence systems.

Notably, McLuhan saw all technologies and media as enhancements and extensions of human physical, sensory, and cognitive abilities. In this perspective, language acts as a foundational human technology, increasing our cognitive range and depth, and facilitating the development of personal and collective intelligence. It is not far-fetched to assume that language can be viewed as a primordial form of artificial intelligence, that significantly augmented homo sapiens' intellectual capabilities. As McLuhan puts is: "Without language [...] human intelligence would have remained totally involved in the objects of its attention" (UN, p. 79). The acquisition and development of language provided our ancestors with the ability to surpass simple reactive behaviors, paving the way for more complex symbolic and societal structures: "As an extension or uttering (outering) of all our senses at once, language has always been held to be man's richest art form, that which distinguishes him from the animal creation" (UM, p. 80). In this context, language functions as an operating system for the human species, enabling the programming of cultural knowledge that is passed across generations – "a transmitter of the perceptions and experience of one person or of one generation to another" (UM, p. 140) – enhancing and expanding symbolic thinking and collective intelligence beyond what any single individual could achieve. It is no accident that the entire intellectual tradition

known as The Toronto School of Communication, from Eric Havelock and Harold Innis to Walter J. Ong, with McLuhan often seen as the main protagonist, has strengthened this assumption, offering substantial theoretical support and expanding upon the ways in which communication technologies, beginning with spoken language and later the phonetic alphabet, have reshaped human cognition and social structures. As such, by extending this tradition, one can re-understand media, reinterpreting McLuhan's critical insights on the nature of language through the lens of the recent deployment, in the AI landscape, of the so-called foundation models and, specifically in the domain of language, of the Large Language Models (LLMs). These AI-powered linguistic agents capable of generating coherent text, tackling intricate verbal challenges, and simulating natural conversational exchanges have in fact significantly disrupted traditional intellectual paradigms, signifying more than a mere technological advancement. The surprising capabilities of LLMs indeed challenge traditional epistemological frameworks, pushing us to reconsider the "uttering and outering" of language in a new light. In a world where AI-generated texts designed to mimic human cognitive abilities become an integral part of the humanity's relentless quest for meaning, these new human extensions may potentially impact on our cognitive processes and reshape the very nature of human thought. McLuhan warned us as early as sixty years ago: "Our new electric technology that extends our senses and nerves in a global embrace has large implications for the future of language" (UM, p. 80).

One might ponder what McLuhan would say today, given that language seems no longer to be an exclusively human domain, transcending human boundaries through the agency of AI systems. Has language been outerred to such an extent that it is no longer confined to the human realm? Is the essence of human communication and cognition being fundamentally altered as machines begin to speak as we do? To borrow McLuhan's literary language, has the "Flower of Evil" bloomed, and has its fragrance reached a point of no return? These questions highlight the relevance of *Understanding Media* in its 60th anniversary and at the same time underscore the need to understand these language models and their implications for human communication and cognition.

The Machine Learns to Write

Echoing a foundational work of the Toronto School intellectual legacy, Eric Havelock's classic text *The Muse Learns to Write* (1986), which captured the profound transition from oral tradition to written literacy in ancient Greek civilization, a parallel phenomenon can be discerned in the current AI-driven foundational models. Not the Muse, but the Machine – *aka* LLMs – is now learning to write, heralding a transformative shift in how we create, disseminate, and engage with verbal content. Just as the emergence of the writing systems revolutionized the preservation, transmission, and perception of knowledge in the ancient world, the development of LLMs is ushering in a new paradigm shift in the realm of written expression. These amusing computational scribes, now broadly accessible to the general public – such as ChatGPT, Claude, Gemini, among others – have rapidly and surprisingly developed the capability to generate human-like text, analyze and synthesize information, and even engage in creative writing and storytelling. In fact, we have imbued these systems with the capacity to engage in dialogue, a task that was once considered the exclusive domain of human cognition. As such, LLMs signify a transformative shift from the traditional notion of language, with its nuanced expressions, creative constructs, and complex semantics, as an exclusively human endeavor, solely the domain of human intelligence. Throughout human history, the ability to create and use language has been an innate and exclusively human capability. Language, in its various forms, has been a defining characteristic of our species, deeply rooted in our cognitive processes, cultural traditions, and modes of expression; it has historically been constrained by individual cognitive capacities and knowledge domains. LLMs are now transcending these boundaries, harnessing the power of massive datasets and computational capabilities to generate text that draws from a vast realm of information.

Akin to how writing liberated knowledge from the constraints of human memory in ancient times, LLMs are breaking free from the limitations of individual cognition, offering the promise of augmenting human creativity, enhancing productivity, and facilitating the access to and the production of knowledge. This transformation allows for the simplification and standardization of cognitive functions, making them more accessible and efficient. As McLuhan would put it,

"mechanization of any process is achieved by fragmentation, beginning with the mechanization of writing by movable types" (UM, p. 348). The process of liberation in cognitive functions is made possible through a distinct separation and specialization of tasks, a principle inherent in human innovation: "The phonetic alphabet, by a few letters only, was able to encompass all languages. Such an achievement, however, involved the separation of both signs and sounds from their semantic and dramatic meanings" (UM, p. 87). It would be fascinating to consider how McLuhan might have reacted to the idea that, with LLMs, the uttering/outering of the spoken word, both as signs and sounds, has now seemingly reached its peak, that the recent developments in natural language generation through LLMs outsourced the human language, effectively decoupling it from the human mind and embodying it within machines

By externalizing and outsourcing language creation, LLMs are in fact challenging long-held assumptions about the intrinsic link between human cognition and linguistic expression. This outering inevitably represents a paradigm shift in our relationship with language and its use. In McLuhanesque terms, the fact that language has been outerred is not merely a technological feat; it has profound implications for how we perceive, interact with, and potentially redefine the very nature of language itself. LLMs transcend the mere mechanical parroting of human speech; they are more than just verbal regurgitators. While processing vast swathes of text, absorbing information at a scale and speed unimaginable to the human brain, LLMs have now begun to develop a comprehension of the world that mirrors human understanding. The domestication of language undertaken by LLMs suggests in fact a rudimentary form of world understanding, transitioning from mere language modeling to comprehensive world modeling, manifesting in the creation of a model of the world that is coherent with our linguistic frameworks. This phenomenon indicates that these systems do not merely process and reproduce language, but rather, they assimilate and reconfigure information within the frameworks of existing human linguistic structures, suggesting a form of emergent understanding that parallels human cognitive patterns. As McLuhan would put it, "with the use of electricity in previously mechanized situations, men easily discover causal

connections and patterns that were quite unobservable at the slower rates of mechanical change" (UM, p. 352).

With LLMs, we may have extended and externalized not just language, but our very capability to think and understand. With a lexicon uniquely his own, McLuhan had already foreseen this scenario: "Language as the technology of human extension, whose of division and separation we know so well, may have been the 'Tower of Babel' by which men sought to scale the highest heavens. Today computers hold out the promise of a means of instant translation of any code or language into any other code or language. The computer, in short, promises by technology a Pentecostal condition of universal understanding and unity" (UM, p. 80). Put more secularly, with LLMs, the ability to handle language and produce verbal outputs does not necessarily require what we traditionally consider cognitive intelligence or conscious thought: with LLMs, there's no need to think to verbalize. If the phonetic alphabet once fostered a separation between auditory and visual experiences, "giving to its user an eye for an ear" (UM, p. 84), the computational capabilities of LLMs are now fostering a separation between thinking and verbal expression, effectively giving us *a chatbot for a thought*.

By teaching the machine how to write, we have effectively relinquished our monopoly on many traits that have long distinguished human intelligence, capabilities that were once the exclusive domain of human cognition. Just as the phonetic alphabet abstracted thought, LLMs may abstract, outsource, and separate the verbal expression from the human cognitive process. This separation, a loss of our monopoly on such defining traits, or "amputation" as McLuhan would put it (UM, p. 42), prompts a reevaluation of what it means to be human in an age where machines can exhibit characteristics once thought to be uniquely human. As McLuhan might say, the gadget lover is facing himself, this time reflected in a chatbot.

Through the Chatting Glass: the Enchantment of Narcissus

In Chapter 4, "The Gadget Lover: Narcissus as Narcosis," McLuhan explores the profound and often subconscious impact of technological advancements on human perception and experience. In fact, the meticulous effort he invested in

Understanding Media aimed to address the "never-explained numbness that each extension brings about in the individual and society" (UM, p. 6). By borrowing the ancient Greek myth of Narcissus, McLuhan introduces the term "narcosis," from the Greek word for numbness, to describe the state induced by our own technological inventions. Captivated by his own reflection, Narcissus becomes emblematic of individuals today, enchanted and ultimately numbed by the technological extensions of themselves. Like Narcissus, who fell in love with his own reflection, humans can become similarly enchanted by and numb to the technological extensions of their senses and faculties. All technologies, as McLuhan put it, by extending our physical, sensory, and cognitive abilities, enhance the possibilities to reach, perceive, communicate, and ultimately think. Yet, this enhancement comes at a cost: it dulls our sensory and perceptual sharpness, creating a buffer between ourselves and reality.

The swift and pervasive integration of LLMs into communication processes exemplifies McLuhan's Narcissus effect. LLMs capability of mimicking human-like text reflects our linguistic abilities back to us, generating coherent narratives and responses that appear deeply human. Inevitably, this reflection carries a numbing effect. As LLMs become embedded in our daily lives – from powering search engines to virtual assistants, chatbots and social media feeds – they shape our perceptions and interactions in profound, often unrecognized ways. Like Narcissus mesmerized by his image, we may become captivated by the fluency and apparent intelligence of these AI systems, potentially overlooking their artificial nature and the ways they are designed to engage us. The narcosis here is indeed twofold: a numbing to the artificial nature of interactions, where the boundary between human and machine blurs, making the artificial seem natural; and a potential numbing to the richness of human interaction itself. As we increasingly rely on machines for communication, our expectations and perceptions of communication are subtly yet significantly reshaped. The Narcissus effect also mirrors McLuhan's concern with the amputation of human faculties. As we delegate more cognitive tasks to LLMs, we may become "gadget lovers", where a kind of self-amputation is at play, detaching ourselves from the very skills and capabilities that these technologies are meant to augment.

Similarly, McLuhan's analogy of the "reversal of the overheated medium" (UM, p. 33) offers a valuable framework to assess this scenario. The reversal approach suggests that when a medium becomes excessively saturated and dominant, it can lead to unforeseen and often adverse consequences, reversing its initial benefits. Specifically, the phenomenon of overheating may occur when LLMs are employed so extensively that they saturate every aspect of communication and cognition. As these models are woven into the fabric of daily interactions, their pervasive presence can begin to overshadow and diminish human capacities. At a certain saturation point, in fact, the very attributes that made LLMs valuable – enhancing communication and cognitive efficiency – may flip to yield contrary outcomes. For instance, as LLMs take over tasks requiring complex language processing, there is a potential for human linguistic abilities to atrophy, similar to how reliance on GPS navigation can weaken spatial awareness and navigation skills. Could this, over time, lead to a diminished capacity for critical thinking and creativity, skills essential not just for personal development but for societal progress? How might our increasing reliance on LLMs for communication and verbal expression alter our ability to engage in empathetic and meaningful interpersonal interactions?

It cannot be underestimated that we have reached a pivotal moment in the communication technologies where we have created an entity capable of conversing with us, in other words allowing Narcissus to converse with himself. This interaction mirrors the Greek myth more closely than ever, as it isn't just about self-reflection but engaging in a dialogue that mimics our own responses. What implications arise when, like Narcissus engaged in conversation with his own reflection, we interact with AI systems that mirror our language and thoughts back to us? Perhaps it is not a coincidence that we find ourselves anthropomorphizing AI. As McLuhan anticipated, this anthropomorphism is another manifestation of the Narcissus effect, where we project human traits onto technology, crafting these systems in our image, perceiving their outputs through the lens of human experience and interaction, thus seeing a reflection of humanity where there may be none. In fact, these AI systems do not necessarily think like us. While these technologies undoubtedly expand our capabilities and offer unprecedented conveniences, they

also pose significant challenges to our ability to engage authentically with the world and with each other. As we endeavor to make machines more like us, we perhaps inadvertently gloss over the profound differences that distinguish our intelligence from artificial systems, the fundamentally non-human processes that underlie AI functionalities, potentially leading to misunderstandings about their capabilities and limitations. Recognizing this narcosis is crucial in ensuring that we use these powerful tools mindfully, preserving the depth and richness of our human faculties and interactions. Once again, McLuhan warned us: "Our new electric technology now extends the instant processing of knowledge by interrelation that has long occurred within our central nervous system" (UM, p. 349).

Learning a Living: Entering the Age of Cybernation

In the concluding chapter of *Understanding Media*, titled "Automation" (Ch. 33), McLuhan's prescient insights resonate with profound relevance in today's context of AI systems and LLMs. Here, McLuhan introduces the term "cybernation" – a synonym for automation, yet transcending its traditional meaning, which typically focuses on mechanical and routine task s– to describe the technological shift toward automated systems and processes made possible by advancements in computational technologies. It comes as no surprise that McLuhan appears to be addressing today's AI-driven world, anticipating the complex interplay between technology and human cognitive processes that defines our current era. In fact, the concept of cybernation does more than merely reference the automation of labor or other human tasks; it encapsulates a transformative shift in the dynamics of human interaction with technology and, subsequently, with each other and their environments. Such a transformation signifies a redefinition of the roles humans play within the broader cultural and social contexts. Through this lens, the integration of AI and LLMs into the fabric of daily life is not just a technological evolution but a pivotal transformation in the operational and communicative structures of society.

In a particular passage of this chapter, McLuhan discusses the potential of emerging technologies, specifically computers and electronic networks, to mimic human consciousness and thought processes:

> Any process that approaches instant interrelation of a total field tends to raise itself to the level of conscious awareness, so that computers seem to 'think'. In fact, they are highly specialized at present, and quite lacking in the full process of interrelation that makes for consciousness. Obviously, they can be made to simulate the process of consciousness, just as our electric global networks now begin to simulate the condition of our central nervous system (UM, 351).

McLuhan seems to suggest that as systems and technologies become capable of instantaneously interrelating information across a "total field" – meaning a comprehensive or entire system of data and interactions best represented by today's LLMs – they begin to exhibit behaviors that might be perceived as conscious or thoughtful. McLuhan is highlighting the increasing capability of technological networks to simulate aspects of human neural activity, like those in our central nervous system. This simulation does not mean the machines are conscious, but rather that they can perform tasks and process information in ways that mimic human cognitive processes. This simulation, according to McLuhan, prompts a reevaluation of technology's role and its impact on human perception and societal functions, underscoring the transformative power of entering into cybernation.

In an era of cybernation, in fact, technologies do not just continue the trend of specialization, advanced by the development of writing and printing; rather, they reintegrate fragmented processes. The whole passage is worth quoting:

> Thousands of years ago man, the nomadic food-gatherer, had taken up positional, or relatively sedentary, tasks. He began to specialize. The development of writing and printing were major stages of that process. They were supremely specialist in separating the roles of knowledge from the roles of action. […] But with electricity and automation, the technology of fragmented processes suddenly fused with the human dialogue and the need for over-all consideration of human unity. Men are suddenly nomadic gatherers of knowledge, nomadic as never before, informed as never before, free from fragmentary specialism as never before—but also involved in the total social process as never before; since with electricity we extend our central nervous system globally, instantly interrelating every human experience (UM, p. 358).

Today, LLMs make every person a "nomadic gatherer of knowledge," unbound by the limitations of previous information silos and capable of engaging with a vast array of data and perspectives as never before. With this shift towards a form of cognitive nomadism, humans now wander broadly across a vast landscape of information, enabled by the natural language processing capabilities of LLMs.

Moreover, the ability of LLMs to understand and generate human-like text in real-time doesn't just change the quantity of information available but alters the very nature of learning and information exchange, turning it into a dynamic, personalized process where the lines between learning, querying, and everyday digital interactions blur. In this environment, each individual has the potential to learn about diverse subjects outside of traditional educational structures, explore new ideas from multiple disciplines, and even contribute to the collective pool of knowledge: "learning a living", as McLuhan puts it.

With the rapid advancements in AI systems and LLMs, we have effectively ushered in the era of cybernation that McLuhan anticipated. As such, sixty years after the publication of *Understanding Media*, a new research agenda is taking shape, extending the intellectual legacy of the Toronto School of Communication. As LLMs evolve from parsing sentences to possibly understanding and predicting human behaviors and societal trends, the surface beauty of these technologies may obscure deeper, more complex challenges. McLuhan's foresight into technological extensions as potential amputations becomes starkly relevant here. The more we depend on AI to mediate our interactions and to produce our cultural artifacts, the more we risk losing the essential human skills and sensibilities that these technologies aim to augment. Drawing from Baudelaire's contemplation of beauty intertwined with decadence, McLuhan's question now resonates profoundly in the age of LLMs and AI. The "Flower of Evil" has indeed bloomed in the form of LLMs that replicate human linguistic abilities, presenting a dual-edged sword that cuts through the fabric of traditional intellectual paradigms, redefining what it means to create, to think, and to exist within a digitally mediated reality. The bloom of this metaphorical flower might exude a narcotic fragrance that dulls our ability to engage deeply with complex thoughts or to empathize with nuanced human emotions, commodifying the richness of human interaction into algorithmically

generated approximations. What are the broader implications of "outering" language creation to machines on our relationship with language and its functions in society? What does it mean for language to be outsourced and decoupled from the human mind through the use of LLMs? How might the ability of LLMs to generate human-like text and engage in dialogue challenge our traditional understanding of human interaction and communication? These questions represent just a glimpse into an evolving scholarly focus dedicated to exploring and articulating the implications of LLMs, particularly how these technologies are reshaping communication, cognition, and culture.

As we stand amidst the blooming fields of AI advancements, McLuhan's insights from sixty years ago provide us with a map to navigate this *terra incognita*. The "Flower of Evil" has bloomed, revealing both the beauty and the challenges of our technological extensions. It compels us to question, critique, and ultimately choose the path that reinforces our humanity, ensuring that as we advance technologically, we do not regress humanistically. In doing so, we honor McLuhan's legacy not merely by understanding media but by actively shaping it in pursuit of a future where technology amplifies the best of what it means to be human.

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