Bing, Bard, and Brainstorming: A Triadic Tenor of AI Pedagogy
Shiva Mainaly[2]

Abstract: Artificial Intelligence (AI) chatbots like *Bing Chat*, *Bard*, *ChatGPT*, *Perplexity*, and *Claude 2* produce sophisticated content. It is essential to integrate AI-generated material into the early stages of the writing process, such as prewriting, brainstorming, and pre-research. There are three primary reasons for this approach. First, AI is an educational copilot intended to enhance rather than replace human intelligence; second, AI-generated content often contains biases, disinformation, and data racism, acknowledged by AI chatbots; third, incorporating AI content into prewriting allows human intelligence to oversee and engage with it, fostering continuous human creativity and addressing ethical dilemmas in leveraging AI capabilities. AI-generated content can assist writers by providing initial ideas, outlines, and source suggestions. When used thoughtfully, chatbots stimulate creativity in early drafting. However, excessive reliance on AI may result in unoriginal or underdeveloped writing. AI can only augment human creativity and critical thinking. Using AI as a generative tool judiciously can enrich the writing process while preserving the writer's unique voice. Ultimately, the writer's synthesis and analysis should shape the final content, as AI complements but does not substitute for a writer's knowledge and skills. A measured approach allows AI to expand possibilities without diminishing human creative potential.

Keywords: *AI content, Copilot, Prewriting, Brainstorming, Bard, ChatGPT, Augment,*

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Introduction and Background Information

Regardless of the sophisticated quality of content generated by AI chatbots such as *Bing Chat*, *Bard*, *ChatGPT*, *Perplexity,* and *Claude 2*, it would stand in the interest of the integrity of human intelligence, creativity, and normative ethical framework to treat AI content as part of prewriting, brainstorming, pre-search, and pre-research for three reasons. First, AI is relaunched as an education copilot whose purpose is to augment human intelligence (pilot) not to replace it. Second, AI content tends to be filled with biases, disinformation, data racism, including racist slights and slurs—a fact confessed even by all AI chatbots themselves. Third, any step toward treating AI writing as part of prewriting makes room for the involvement of human intelligence with AI content, which allows for a vibrant scope for the constant proliferation of human intelligence, creativity, and also a human approach to the dubiety about leveraging AI affordances. AI-generated content can help writers jumpstart projects by providing initial ideas, outlines, and source recommendations. When used thoughtfully, AI tools like chatbots can stimulate creativity and direction in the early drafting stages. However, overreliance on AI risks unoriginal or underdeveloped writing. AI cannot wholly replace human creativity and critical thinking. The key is striking a balance – using AI judiciously to augment, not dominate, the writing process. Writers who thoughtfully integrate AI at early stages can benefit from fresh perspectives while still maintaining originality and voice. However, the final content must come from the writer's own synthesis and analysis. Used only as a generative tool, AI-aided brainstorming, and research can enhance the human writing process without substituting for the knowledge and skills a writer brings. With a measured, thoughtful approach, AI can expand possibilities without minimizing a writer's creative potential.

The widely practiced process pedagogy has been pivotal to teaching writing to students. Its relevance persists despite pedagogical ups and downs in writing studies, rhetoric, and composition. As part of the writing process, brainstorming is remembered as the first step toward initiating the process. When we need to generate rudimentary ideas or when we suffer from a paucity of ideas to start the writing process, there is no doubt that brainstorming yields a wealth of advantages and affordances, along with inducing students' participation in brainstorming activities. Nevertheless, studies have shown that despite being efficacious, brainstorming has not become persuasive for students (Abedianpour & Omidari, 2018, p.1084). However, the role of brainstorming in the writing process can still result in success. Like other parts of the writing process, brainstorming has not gained attention because participants in brainstorming fear evaluation, which is typified by an assertion of L. M. Camacho and P. B. Paulin: "The authors predicted that individuals high in dispositional anxiousness would perform poorly when brainstorming in groups but not during solitary brainstorming" (1995, p.

1071). If participants are asked to join brainstorming in a group, they may fear that their clusters of ideas may not be as important as others.

Due to the fear of being assessed, brainstorming in a group or any other way, shape, or form appears less effective than other parts of the writing process. Nevertheless, this stance on brainstorming is no longer valid, with the growing accessibility of AI-empowered chatbots and cutting-edge content-generating software. Brainstorming has yet to sleepwalk into irrelevance. Quite the contrary, brainstorming's role in the writing process is renewed. It is every bit as redefined and renewed as our erstwhile definition of creativity. Is brainstorming likely to be practiced in the same way? In light of AI disruption with the goal of augmenting our paradigm of pedagogical imperative, how can our understanding of brainstorming remain unaffected? The leading-edge AI chatbots disrupt the pedagogical spectrum and augment and aggrandize dormant pedagogical practices. In this process, the definition of some practices can be stretched or overstretched so that older practices can get renewed relevance.

In the wake of AI instilling new vibrancy to our existing pedagogical practices and perorations, I examine the prewriting practice and brainstorming concerning Microsoft's *New Bing* chatbot, which is incorporated into Microsoft Edge's search engine. Additionally, I also consider how Google's *Bard* can be used in a reliable way to achieve the purpose of brainstorming. In light of this, the notion of AI as an education copilot is relevant. The technology company previewed "a new AI Copilot for Microsoft 365, its product suite which includes Word documents, Excel spreadsheets, PowerPoint presentations, and Outlook emails…AI will offer a draft in these applications, speeding up content creation and freeing up workers' time" (Dastin 1, 2023). Stated simply, Microsoft came up with a narrative of AI chatbots as education copilots bent on augmenting human intelligence rather than replacing it. All this specifies is that AI is a copilot, and human intelligence is the pilot. Its quintessence is that full-fledged and sophisticated content AI chatbots generate always needs oversight of human intelligence. The sole purpose of AI is to aid in unleashing human productivity.

AI Content as Part of Brainstorming and Prewriting

AI content is bound to contain some traces of biases, misinformation, and racial slurs and slights. So, it is in the interest of AI users to count any content generated by AI chatbots as part of prewriting. Once we start treating AI content, however sophisticated and persuasive, as part of prewriting or in-progress writing, we will automatically feel moved to exercise our skeptical bent of mind while dealing with AI content. In addition, any set of ideas or of content students generate by employing *ChatGPT*, *Bard*, *Perplexity*, and so forth, needs to be put under the rubric of brainstorming, including other prewriting activities for two reasons: One, there is an expanding narrative that AI

is an education copilot; two, AI has its limitations in its ability to produce unblemished and authentic content devoid of any biases, disinformation and racist slurs and sights.

Although AI chatbots such as *ChatGPT*, *Bard*, *New Bing Chat*, and *Perplexity* can create content at the touch of a button, it would not be wrong to call that content an assembling of data, text, and information. Of course, the content looks like a finished product of a writing process, and it appears that, unlike human intelligence, the machine creates without following a process, meaning that it jumps directly from a process to a product. Evidence has shown that AI-generated content may contain inaccurate facts, wrong information, and biased statements. Regarding the inevitability of skeptical and editorial oversight of human intelligence on AI content, Amanda Hetler (2023) writes:

> People still need to read through AI-generated content. It might save time, but people still need to be involved and articles quality checked. AI tools combine information from several websites into one piece. There may be some mix-ups to fix, such as product descriptions with textures and colors because AI tools do not understand adjective meanings. (p. 1-5)

Given that there is always precarity associated with AI content, we need to look at content generated by AI critically, and even if AI provides finished content, it still needs to be reviewed. It still needs a critical and curative gaze of human intelligence.

Writing drafted by AI may contain misinformation, disinformation, unsupported claims, and counterclaims. We must exercise skepticism before accepting the worthwhile part of the content AI writes for us. Even some online learning platforms have started arguing that "AI-generated content may not always be original and unique. AI tools may copy or paraphrase existing content or generate similar or generic content. Therefore, you should always test the originality and uniqueness of your AI-generated content before publishing it" (LinkedIn). As we thread, curate, and order less developed and rudimentary ideas we have during brainstorming, we also have to curate and receive AI content with a skeptical mindset, since AI content is not entirely above biases and disinformation, which fits in well with an assertion by Mehrabi et al. (2021), which states that "There are still many future directions and solutions that can be taken to mitigate the problem of bias in AI systems" (p.1). Apart from this, there is fear that students may use part of the AI-generated content in their assignments, and that if the use of AI writing software is freely allowed, it could lead to a type of plagiarism known as 'algarism' by Paul Graham (qtd in Halupa, 2023). Presently, there is no AI content-detecting plagiarism software. The best way forward in this scenario is to highlight the assertion that writing that uses human intelligence is genuinely worthwhile and deserves attention. To keep students from getting addicted to the affordances furnished by leading-edge AI chatbots, it would be reasonable to intensify the sanctity and supremacy of human intelligence in the form of human exceptionalism (Beltramini 2018). Though exceptionalism rooted in hegemony and discrimination is not good, a strategic and instrumental use of human exceptionalism and the supremacy of human

intelligence in the face of an AI revolution could be justifiable if such a use saves us from falling into a vicious cycle of plagiarism and temptation to rely on AI. To this end, the best way forward is to treat content generated by AI chatbots as part of brainstorming in the broader sense of the term, even if it means counting content generated as similar to clusters of raw and rudimentary ideas tapped by a practitioner of brainstorming. It makes sense to subsume AI content under a broader umbrella of prewriting because AI is currently transitioning from hype to humbleness. This is reflected in a growing narrative that AI is an educational copilot, and that the copilot is always subservient to the human intelligence pilot. Aside from this strategic appropriation for the greater good, a relevant recommendation is to consider AI content as a basis to develop a draft, even if what AI writes looks like finalized writing.

Brainstorming does not always have to start before drafting. If we fall short of sufficient ideas while writing a draft, AI chatbots such as *Bard* can be used to generate additional backup ideas. This process makes most chatbots' use akin to making a pointwise breakdown, which brings it under the prewriting process. If properly commanded, *Bard* and *Bing Chat* can provide a list of ideas. Tips given by AI come in a list, bullet point order, and catalog. In this way, chatbots' role in inducing electronic brainstorming is like a virtual moderator because "we [can use] various artificial intelligence functions, like natural language processing, machine learning, and reasoning and [to create] a comprehensive Intelligent Moderation (IMO) for virtual brainstorming" (Strohman et al., 2017, p. 457). This pointwise breakdown of content makes the generative process like brainstorming.

AI will not generate content if we do not give it a command. Unless we tell it to revise a prompt placed on the search bar of the AI chatbot, it will stay the same. Human intention and command are essential for the machine to operate. It cannot operate at its own will because it is not sentient. Because of this, treating AI content as part of brainstorming and the broader prewriting process is not wrong.

A few months ago, no one had expected AI to make such unprecedented strides. In a short while, AI experienced significant process, though its direction is still unknown. Moreover, questions have been raised as to the ethics of AI, which is captured in the following extract:

> The rise of AI agents for automated text generation… brings with it new ethical challenges. Such agents can generate large-scale highly refined content that 'sounds' like a real human, and their use is on the rise. This development has profound implications for society: What happens if we end up silencing the human voice? Who benefits from this technology and who loses out? And how should we regulate its use to ensure responsible deployment in public discourse? (Illia, Colleoni, and Zyglido, 2023, p. 2001)

While some reliable and effective measures have been taken to tackle the issue of ethics in AI, there is a growing consensus in the global community to formulate globally

accepted norms and regulatory mechanisms on the use of AI chatbots. In this condition of uncertainty, it is good to consider AI content similar to the content extracted from brainstorming.

Generally, tools and technology for writing need to be humanized, the implication being that technology should be designed to meet human needs and necessities smoothly. The rhetoric of humanizing AI has been gaining popularity as AI becomes more complex (Esrani et al., 2019). Because AI enthusiasts' visceral obsession with the super-smartness of AI and the uncritical application of AI has incurred the risk of disrupting normative and ethics-bound human practices, critics have started talking about humanizing leading-edge tools and technology for learning. They have discussed meeting AI halfway with various calls, such as responsible AI, aligning AI with our values and value system (Kim et al., 2021), AI ethics (Jobin et al., 2019), responsible AI (Brundage, 2016), to name a few. But this does not mean AI chatbots' pedagogical potential is not always under ethical penumbra.

> Suppose we are to probe into the unfolding landscape of humans' preoccupation with AI. In that case, AI has started humanizing our composing and rhetorical practices, contrary to the call for its humanization. Some fewer emphatic practices that had fallen under a grey zone have been invoked, revitalized, and restored to the legitimate level of their recognition. As claimed in the article "As ChatGPT enters the classroom, Teachers Weigh Pros…" published in *National Education Association*:ChatGPT's simple design and brainstorming capabilities appeal to educators who see its potential to improve education. These teachers say that, over time, the real impact will not be an increase in cheating, but a revitalization of lesson plans and classroom instruction. (neaToday)

To be more precise, we should give more importance to the possibility of conducting brainstorming, information search, revision practice, and various other prewriting and freewriting activities at a multisensory level. Because of the AI-assisted writing process, each supplementary and complementary act of writing has gone beyond the single sensory realm to the multisensory modalities.

By way of illustration, Microsoft's new *Bing Chat* is an example of a multisensory composing and knowledge-search practice. The AI-empowered *Bing Chat* is embedded in the Microsoft Edge browser (Kubasik, 23 May 2023). On the search bar of this chatbot is an audio search engine. Anyone interested in getting suggestions can verbally ask a question, and the audio search engine will capture it, prompting the *Bing Chat* to start composing relevant advice. *Bing Chatbot*'s tips are delivered in a list, bullet points, or whatever format the user prefers. If information and content we find on *Bing Chatbot* were to be characterized as a part of prewriting practice, the entire *Bing Chatbot*-based practice of exploring workable content comes off as multisensory, which means that both oral and written commands are enforced to make prewriting practice cohesive. *Bing Chatbot*'s inclusive affordance is reflected in its ability to receive verbal

commands and give replies, suggestions, and tips (Novet et al., 2023). To be more specific, this oral/aural mode of natural conversations on the *Bing Chatbot* is slated to widen the range of accessibility. Those who cannot access written text or context due to different cases of disability can rely on an audio mode of giving commands and receiving suggestions and a particular content. Judged from one angle, what takes place on and between the *Bing Chatbot and* the user goes beyond being a part of prewriting to the conversation. The best part of the new *Bing Chatbot* is that it furnishes multiple conversation style options: creative, balanced, and precise. Regarding this,, Tom Warren (2023) has said that:

> Microsoft has added a new feature to its Bing chatbot that lets you toggle between different tones for responses. There are three options for the AI-powered chatbot's responses: creative, balanced, and precise. The creative mode includes responses that are 'original and imaginative', whereas the precise mode favors accuracy and relevancy for more factual and concise answers. Microsoft has set the default for the Bing chatbot to the balanced mode, which it hopes will strike a balance between accuracy and creativity. (The Verge)

Users can choose any conversational style from these options to explore ideas and content. At the top of these options is a disclaimer that acknowledges *Bing Chatbot*'s fallibility: "AI powers *Bing*, so surprises and mistakes are possible. Please share feedback so we can improve!" With this confession comes motivation for those who want to interact with it for prewriting, revisionary tips, and suggestions for relaxation from burnout, writer's block, or exhaustion of any kind that develops along the process of fighting off the crucible of content generation.

Part of the reason users are fascinated by *Bing Chatbot* is that it is nonjudgmental; the other part is that users do not fear being exposed and denuded throughout asking any question and searching for any kind of suggestion for any trouble (Kevin Rose, 2023). Getting feedback and down-to-the-earth tips for bettering ourselves without being judged by the chatbot is the single most crucial factor that has sparked interest in a natural, conversational, aural, audio-based, and interactive modality of engaging in prewriting, brainstorming, and casual conversations on *Bing Chatbot*.

AI Content as Part of Preliminary Research

As a result of growing hype around AI chatbots, our understanding of what research is, how it starts, and what initiatory processes it involves is also changing. As specified by M' hammed Abdous (2023) in his article "How AI is Shaping the Future of Higher Ed" published in *Inside Higher Ed,* "AI tools are being used to sift through large data sets to identify patterns, build models, recommend relevant articles, and prepare manuscripts for publication" (para, 2-3). Our pre-searching activity and preliminary research practice are changing as the use of AI chatbots continues to grow. Scattered but valuable

background information on any select topic can easily be elicited at a single command from AI chatbots that are made accessible to the public. Because of chatbots' confessed fallibility (Maruyama, 2020) and the human need to check on substantive content and information furnished by Chatbots (Hariri, 2023), it would be in the interest of all users of AI-empowered chatbots, including *Bing chatbot*, *ChatGPT*, *Bard,* and *Perplexity*, to count AI content as part of preliminary research or pre-search. It would be an act of injustice perpetrated against artificial intelligence if we put AI content under prewriting, brainstorming, pre-search, and preliminary research rubrics. The author of this article is perfectly aware that such an attempt will be met with resistance by AI enthusiasts and practitioners of AI pedagogies. However, my argument is that it would be in the interest of the sanctity of our well-established, justice-oriented, and equity-inflected pedagogical practices to conceive AI-generated content as being on par with every quasi-generative activity. Such postulation may not sit well with the expectations of those given to seductive hypes and myths fabricated around the epicenter of the AI revolution.

Even AI-driven gadgets are hyped to the degree that any attempt to cut through AI hype and AI affordances raises the eyebrows of AI acolytes. Despite this possibility of resistance, what I want to put forward is that it would be too hasty to rely on leading-edge AI chatbots and software because some AI chatbots display a disclaimer that any content it develops at the command of its user is likely to remain insufficient or contains bias. This unavoidable fact is realized and then carefully addressed in "MLA-CCCC's Joint Task Force on Writing and AI Working Paper", which is reflected in the following extract:

> The increased use and circulation of unverified information and the lack of source transparency complicate and undermine the ethics of academic research and trust in the research process. Additionally, although using LLMs to collect and synthesize preexisting information may provide students with models of writing and analysis, such models reproduce biases through the flattening of distinctive linguistic, literary, and analytical approaches. (p.5)

It is admitted that what cutting-edge chatbots create is subject to fallibility. A sustained level of critical ingenuity and a sense of care for our proven pedagogical practices are required on the part of every instructor of writing when it comes to leveraging each affordance breakthrough AI chatbots are potent enough to provide.

In trying to check with *Bard, ChatGPT*, *Perplexity,* and *Claude 2* if they admit the possibility of going fallible in their content generation spree, I typed some questions on the search bar of these AI bots. I got some statements of the admission of their limitations and fallibility. Some screenshots I have here work as some compelling scraps of evidence:
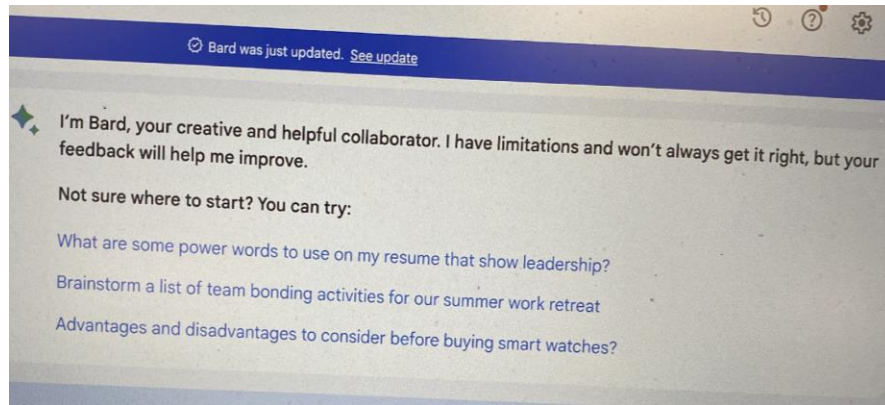
Screenshot: I
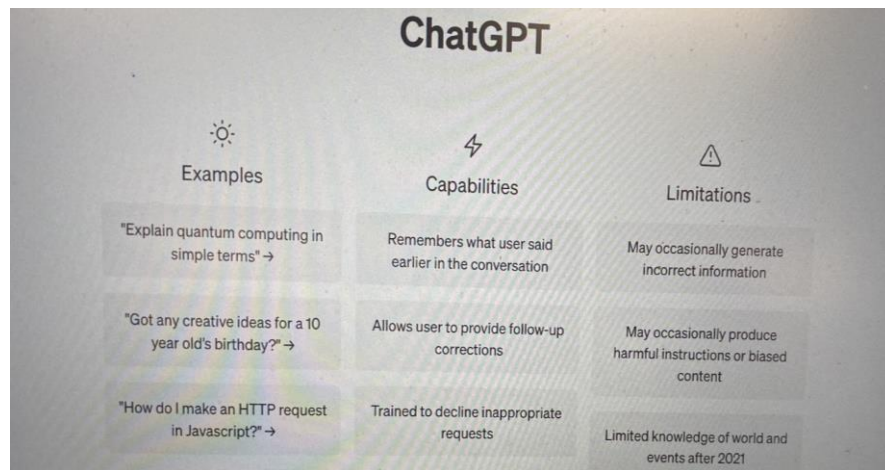
Screenshot: II

The front part and search bars of *Bard* and *ChatGPT* mention their limitations, their chance of being fallible, as well as their willingness to act on any human feedback, which will lead to a leap in their accuracy and predictive performativity. Screenshot I is my screenshot of *ChatGPT*'s search bar, where under three different title columns, users can see what *ChatGPT* can do, some user guidelines, and *ChatGPT*'s limitations and fallibility. *Bard* also admits that it "has limitations and won't always get it right." With these admissions of limitations, treating AI content and feedback as part of prewriting will not be wrong. Human oversight on AI content (Mesko & Topol, 2023) has become imperative even if AI chatbots have been swift in generating content up to the alleys of AI users.

The outcomes of AI in content generation, summarization, paraphrasing, and revisionary feedback for fixing higher-order and lower-order concerns are expected by AI chatbots themselves to be under the analytical oversight of human intelligence. Thus, it will not be illogical if it is recommended that each stroke of AI creativity be counted as part and parcel of consistent human endeavor to keep generating writing in the usual and procedural fashion. This stance of AI writing as a part of prewriting being developed by human intelligence does not go against the momentum toward developing more

sophisticated artificial chatbots and software. With successive lightning-fast pace of breakthroughs in AI has come a phalanx of issues pertaining to AI: Disruptive effect of AI (Girasa, 2020), ethics of AI (AI Ethics-IBM), plagiarism apocalypse (Ahmer, 2023), obsolescence of humans' generative potential, data racism (Chander), a deluge of disinformation, misinformation and conspiracy theories (Arsenault 2020), mounting unemployment through AI automation and robotics.
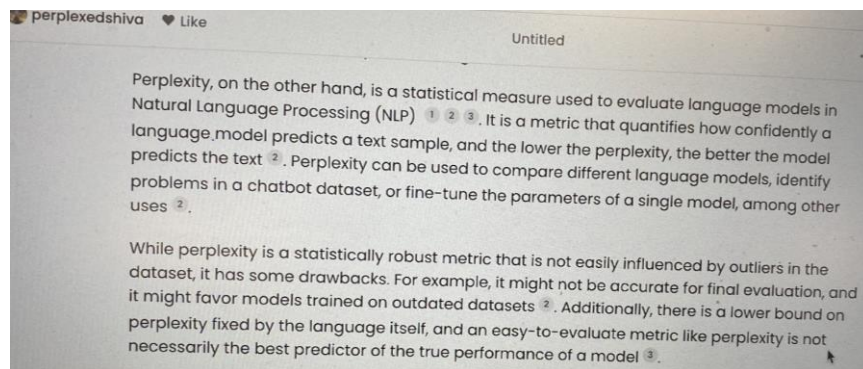
If help furnished by AI writing chatbots in the name of content generation and feedback for revision, including each affordance yielded by them, is taken as finalized content, the problem begins to arise. We have seen that AI's process of developing content is exactly similar to the current traditional model of writing. What *Bard* and *ChatGPT* can generate in one attempt looks like a five-paragraph essay. Trialswith *ChatGPT* and *Bard* have shown their writing is fractal, which means that it writes with some recognizable linguistic pattern, tonal pitch, terms of expression, and recurrently used modes of expression, argumentation, and presentation (Godwin-Jones 2022). This fractal-like, pattern-evocative, and genre-demonstrative approach on AI's part to generating writing at the touch of a button runs counter to the novel spirit of highly rated and revered pedagogies such as students' rights to their language (Smitherman 1995), linguistic justice (Baker-Bell 2020), the social construction of knowledge (Potter 1996), situated cognition (Roth and Journet 2013) and contrastive rhetoric (Connor 2012), second language writing and translingual practice (Silva & Wang 2020). Though efforts have been made to contain any disruptive repercussions of AI in all fields, with some strategic calls such as responsible AI (Google AI), value alignment, and technology humanization, they are insufficient. These efforts cannot fix the limitations and disruptive consequentiality stemming from what Timnit Gebru called 'the AI gold rush.'

Aside from this constraint, it has come to attention that users do not know AI's advantages and disadvantages. The extent of the consequentiality of any software or cutting-edge chatbot rarely becomes clear within a short period of its use. Only after the consistent application of breakthrough software can users be sure how and where a tool can be assistive and disruptive (Farazouli et al. 20230). To check on an AI-empowered tool's potential for impacting our normative and established practice, we must see a whole unfolding scenario in which AI will keep revealing its true nature, potency, and power to lead entire human endeavors on the path to what Christian Hugo Hoffmann (1697) calls "the technological singularity" (P.1697). Of all the parameters of AI's developmental tide, what strikes us the most is the stark truth that the available AI chatbots are not perfect. They have sprung into their being faster in anticipating their successive updates and new versions. Moreover, due to tech giants' involvement in actualizing the potential they acknowledged in the AI gold rush, it is still uncertain what the endpoint of the AI revolution will be. It is difficult to predict where the AI gold rush will lead. Considering these vistas of promises and perils, the best way forward for writing instructors, writing researchers, and students is the cultivation of a mindset that
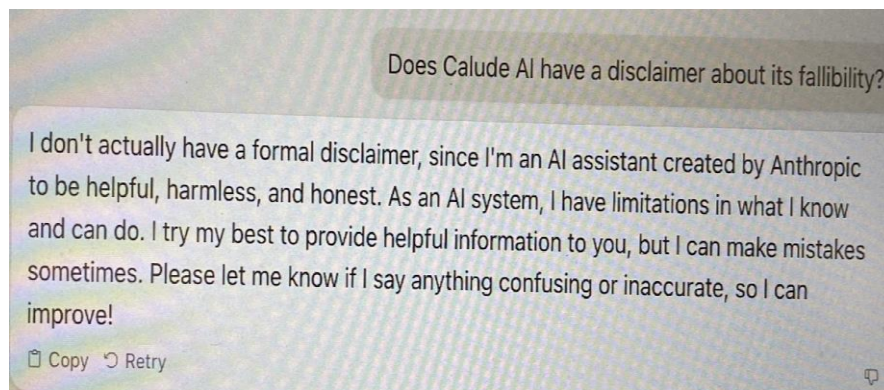
treats every sophisticated and mechanical content as part of the prewriting activity, especially brainstorming, as well as a sophisticated success in the search for a piece of background information on a subject matter, topic, and issue.
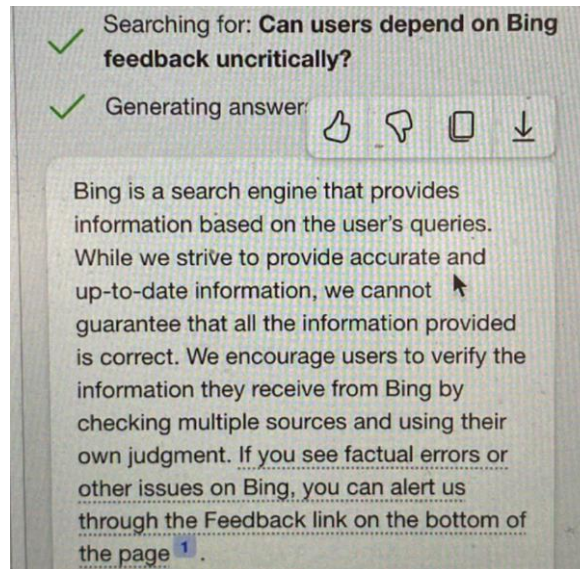
Confession on AI Chatbots' End

As said before, the confessional tone of almost all AI chatbots about their ability to claim accuracy, fairness, and precision should be accepted as a basis for postulating an assertion that every stroke of smartness demonstrated by AI during their usage by humans should be subsumed under prewriting part of process-driven writing and creativity. In this assertion resides a truly inspiring, safe, and secure fate of leveraging AI tools in alignment with our existing normative, justice-oriented, and practice-proven pedagogical frameworks. Here again, the exigency boils down to a confession of fallibility on the part of *Perplexity* AI, *Claude 2* AI, and New *Bing Chat*. The following third, fourth, and fifth screenshots bring into illustration the confession of the limit of AI chatbots that generate writing as though they are outpacing, surpassing, and out-inventing writers in flesh and blood:

Screenshot: III

Screenshot: IV

Searching for: **Can users depend on Bing feedback uncritically?**

Generating answer:

Bing is a search engine that provides information based on the user's queries. While we strive to provide accurate and up-to-date information, we cannot guarantee that all the information provided is correct. We encourage users to verify the information they receive from Bing by checking multiple sources and using their own judgment. If you see factual errors or other issues on Bing, you can alert us through the Feedback link on the bottom of the page 1 .

Screenshot: IV

The third screenshot above showcases how *Perplexity*, despite its apparent assertion that its metric is not influenced easily by outliers, admits its drawbacks. That is, what *Perplexity* offers is not to be taken as a final evaluation. Much as *Perplexity* performs at its best, it confesses that it is not the best predictor. When asked if *Claude 2* has some disclaimer concerning its fallibility and proneness to mistakes, it admits that it has limitations in what it knows and can do. To answer the question, "Can users depend on *Bing Chat* feedback uncritically?" *Bing Chatbot* writes, "We cannot guarantee that all information provided is correct." Based on evidence found in the screenshots mentioned above, it stands to reason that no matter how swiftly and inventively AI chatbots generate various types of writing—ranging from essays, narratives, lyrics, analyses, resumes, research statements, job applications, and recommendation letters—it would be in the best interest of the integrity and sanctity of our pedagogical and rhetorical practices to count AI's generative content as quasi-final, in-progress writing, or developed part of prewriting. With the enforcement of this stance on AI output comes a safe way of keeping the unprecedented repercussions of following the spree of deifying AI by fabricating a halo around the ongoing AI revolution at bay. Although banal and less impressive, this stance might prove pivotal to addressing deftly the perils and promises sparked by successive rounds of breakthroughs in the makeup of AI chatbots.

Though it may not be justifiable to describe any content generated by AI chatbots as part of a pre-search activity and preliminary research—in the interest of linguistic justice, students' right to their language, anti-racist pedagogical practices, linguistic pluralism, and some pivotal pillars of second language writing and translingual pedagogies—it is good for AI users, AI researchers, and AI enthusiasts to subsume every part of AI content under pre-search and preliminary research activity if they were to dodge having to fall prey to AI biases and attendant ethical entanglement. Alternatively, we can go a

step ahead and stretch the definition of prewriting, pre-search activity, and preliminary research. In other words, it might be worthwhile to broaden the definition of any part of prewriting, such as brainstorming, so that our existing writing practices could be amenable to tapping into all sorts of affordances stemming from the application of AI chatbots. For those who are in a dilemma about considering final product-looking AI content as part of prewriting, it would be germane to broaden the definitions of brainstorming, prewriting, and freewriting for AI users to keep at bay the risk of resorting to fallible and risk-prone AI content.

Whether we view seemingly finalized writing produced by AI as worthy of being subsumed under prewriting for the sake of benevolence or if we stretch the definitional bound of prewriting to skip having to give in to the tempting affordances of AI, it is imperative to explore the best way forward for leveraging pedagogical implications of AI chatbots, without compromising with our uplifting pedagogies, and without snagging at biases, including lacerating slights and slurs. Even if AI works with its superintelligence and tears apart the exceptionalism of human creativity and intelligence, such a stance saves us from both the immediate and far-reaching repercussions of relishing the idea of accepting AI writing as a finished and final product of writing.

To acknowledge AI users' passion for the diversity of AI affordances, *Bard* has recently added a slew of services. Google updated *Bard* and made it give audio responses to any query and curiosity of its users. Users can now listen to *Bard*'s responses out loud, which should be effective in some circumstances. Moreover, *Bard* has been updated so that it can give users an assortment of responses. The available responses can be casual, formal, informal, or factual. Users of *Bard* can choose any kind of response they like from these options. Additionally, *Bard* pins and renames conversations so that users can check the conversation later or at any time convenient. g *Bard* can also share its response to our queries and curiosities with our friends. Finally, *Bard* allows for the use of images in our prompt. All these new features and sources of diversified advantages and affordances accessible to us—due to *Bard*'s recent updates—have made *Bard* an intelligent machine with an apparatus of multisensory and multimodal rhetoric. A voice assistant is embedded on *Bard*, enabling users at large to practice listening; resultantly, provision is made on *Bard* for embedding images in each user's prompt to make it multimodal (Google Blog 2023). These updates on *Bard* appear to be accentuated by the exigency of tough competition. One or two updates on *Bard* were already accessible to users of the *New Bing* chatbot and Microsoft's Edge browser. These instances of updates and brutal facts about the AI gold rush are enough to showcase the evolving nature of the AI revolution. Given that chatbots are in the cumulative phase of their evolving sophistication and supremacy, it appears that the treatment of *New Bing Chat*, *Bard*, *ChatGPT*, *Claude 2*, *Perplexity*, and others as a supplemental leg up on human intelligence's relentlessly responsible and

normative operationalization promisingly demonstrates the best way forward for both AI enthusiasts and AI critics who are on the horns of AI dilemma.

With the incorporation of a voice assistant on *Bing Chat*, *Bard*, and other innovative AI chatbots, the interaction between chatbot user and chatbot has become a sort of conversation wherein the AI chatbot responds to every query and concern of users. The users can ask any question they have in their minds in the hope of getting as many practical suggestions as possible from AI. With booming innovation in AI, lots of conversational AI have appeared. Writing-assistive AI chatbots are not immune to the expanding influence of conversational AI. Many tech giants, such as IBM, have launched conversational AI to boost business by hearing and responding promptly, conversationally, and naturally. The impact of this fervor to innovate conversational AI paved the way for *Bard*, *Bing,* and other AI chatbots to work on a multisensory level. Since users can ask any question to the chatbots orally and the chatbots produce content and read it, the conversational and interactive relation between chatbots and users, which takes place on the platforms of voice AI appearsas a conversation between two peers. Just as a peer tends to offer their feedback and constructive suggestions without being nonjudgmental in a civil tone and timber, voice assistants-embedded conversational AI chatbots present relevant, commonsensical facts, information, and background knowledge to make appropriate decisions and choices. Hence, if we were to leave the issue of ambiguity associated with the budding hype around generative and conversational AI and eschew falling prey to AI's fallibility and vulnerability, we need not hold fast to AI content as if it is an end. We need to receive AI's writing, feedback, revisionary advice, comments, and directives as instrumental to honing human creativity and intelligence to graceful efficiency because AI is brought into being not to replace human intelligence but to augment it.

AI has gone swiftly from being a co-creator of knowledge and co-author of writing to being baptized as an unmatched intelligent machine that exceptionally demonstrates its generative power. As a consequence, AI enthusiasts and AI researchers alike appear to be caught off guard, having seen the almost miracle-looking generative functionality of AI chatbots. While transitioning from being curative to generative, humans' relation to AI has shifted from being attentive to intimately connected. In this budding intimacy of humans to AI, AI chatbots have gone beyond content generation to image production and from code writing to the composition of lyrics. The AI end users have paid attention to AI's general tenor of generative performativity and creativity. To be more specific, we all have been viewing AI vis-à-vis its caliber to generate content, that is, writing content, image production, code writing, et cetera. Suppose we were to be every bit diagnostic of the nexus between AI and writing. In that case, it appears that AI is not taking writing to the higher level of smoothness and sophistication of the writing process but the other way around. AI has exposed itself to us by making the writing process abundantly effortless, with massive advantages and affordances. While showcasing its creativity

and generativity, AI revealed its limitations, fallibility, and potential for causing a deluge of misinformation, disinformation, conspiracy theories, data racism, and junk science.

Let It Enrich, Not Invade: A Reflection on AI Pedagogy

If the landscape of the AI revolution is closely examined, what comes to the surface are two different phenomena: The first is the relentless drive to make AI chatbots equipped with new features so that they can provide all the affordances the users want second is AI content detection software such as ZeroGPT. On the one hand, tech giants are in a race to develop general artificial intelligence that will give rise to unimagined situations guided by technological singularity; on the other, they have been developing AI content detection software (Khali & Er 2023). A hectic race to evolve AI is underway. Simultaneously, the move to mitigate the spree of using AI chatbots in generating writing content has already started gathering steam. However, some AI content detection software's performance has not met our expectations. In this situation where currents and counter-currents of normative practices, ethics, hope, and pessimism are being fermented around the landscape of the AI revolution (Gkinko & Elbana 2022), it would be too early to make statements about what AI is bringing in rhetoric and writing, how it is transforming our established rhetorical practices, and composing process, how it is problematizing every aspect of learning space, and why AI revolution is so sudden and ground-breaking. This evolving trajectory of the AI revolution offers us a convincing ground to take every content AI chatbots write as part of prewriting, pre-search, and pre-research.

Emboldened by Stephen Hawking's prognostication about AI surpassing human intelligence at a point in the future, AI apocalyptics have been issuing an urgent call for the formulation of globally accepted guidelines on the usage of AI in all bases of human lives. Aside from the rise of this pessimistic prospect, there is another parallel development indicative of rabid infatuation with AI chatbot affordances (Chow 2023). This is why *Bard* is being updated by Google so that users can garner as many affordances as possible. All these tides of development push us to come to the sense that the terrain of the AI revolution is in its expanding phase. The nature of each mode of operation of AI writing software is not stable enough for users to stick to a certain anchor of certitude. Since writing instructors and students have aligned their teaching terrain and learning curve with digital imperative pedagogy, plenty of our practices associated with learning have steadily changed.

Because of the erasure of the digital divide and the growing accessibility of cutting-edge software and tools for writing and composing for students, the composing process has been changing (Shipka 2011). These shifting dynamics reached their tipping point with the arrival of sophisticated AI chatbots. Before the advent of AI chatbots, the act of writing directly on a computer by using writing software such as *Grammarly*, *Google*

Docs, *Wordtune*, *ProWritingAid*, and others enabled both experienced and budding writers to compose and revise simultaneously. For example, if we write on a computer or *Google Docs*, the computer or the software draws our attention to these errors, which is possible due to the installed software that is empowered by the algorithm. AI algorithm's power has become formidable, following the advent of text-generating AI chatbots that also work on written content and claim to offer any essential feedback in a variety of styles and languages, per the user's need. The choices, free expression, and both semantic and syntactic flexibility have started coming under the algorithmic grip without letting users know obviously that their rights to expressive and pragmatic choices have been exchanged with AI for some alluring affordances AI text generation machines have started to offer.

Algorithms and inherent mechanisms of AI can assist hundreds of users to improve their writing, editing, revisionary, and prewriting practices. But if we closely delve deep into the insidious and invidious tenor of our immersion in AI affordances, the growing scenario in which our linguistic, reflective, and critical choices have begun to be deemphasized in the event of a sizable assortment of varied AI affordances starkly demonstrates the solidifying prospect of AI algorithm determining user's tendency to make choices while expressing themselves through writing. With this scenario at hand, there is no chance to retreat to the pre-AI era of writing. Most notably, unlike the traditional interpretation that human nature is what John Tooby and Leda Cosmides (1990) call a product of genetics (nature) and memetics (culture), our nature in an era increasingly dominated by AI is subject to being determined by algorithms as well.

Let us say that human nature is no longer restricted to being determined by nature and culture, that is, by debates about the inherited and the acquired. Humans' dependence on digital gadgets that are empowered by algorithms and AI's impact on each area of writing and research, the rise of algorithms as a determinant vector that is getting deeply entrenched in learner's choices for generative engagement demonstrates what Kevin Slavin (2011) calls algorithm as being one of the inseparable dimensions of learning, literacy, rhetoric, research, and creativity. Thus, it stands to reason that applying any metric in the assessment of the shifting spectrum of scholarship related to literacy, research, rhetoric, and writing—consequent upon the sprawling application of the AI chatbots discussed above—would prove less efficacious and efficient with the added implication being that normative frameworks such as responsible AI, ethics of AI, value alignment for taking an evaluative stance on AI's mounting habitation in the learning curve are not potent enough to make a clear sense of the nexus between generative AI chatbots and human intelligence. In this scenario, the most convincing approach to making sense of the encounter between artificial and human intelligence is to exert receptivity to reconceptualize practices related to writing, research, literacy, and rhetoric by overstretching definitional bounds of our composing practices, research moves, and rhetorical regimens. With AI being entrenched in the fiber of our being, it

stands in our interest to wait and see AI repercussions and then let the metrics for the moderation of AI grow out of a f precariously productive and productively precarious coexistence between human intelligence and artificial intelligence.

In conclusion, just by seeing how *New Bing Chat*, *Microsoft Edge Browser*, *Bard*, *ChatGPT*, *Perplexity*, and *Claude* 2 work, anyone can surmise how deeply entrenched the tenor of AI pedagogy is and how those who have closely watched both the immediate and far-reaching repercussions of AI chatbots tend to review their established composing and rhetorical practices in a fungible manner, daring to put under prewiring and brainstorming even a finished and finalized content generated, in a swift and super bright mode, by sophisticated AI chatbots.

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