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Generative Artificial Intelligence and Responsible Tourism

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ABSTRACT: Generative Artificial Intelligence (AI) tools such as ChatGPT have taken the world by storm with their ease of adoption and perceived usefulness in performing expedited searches and sourcing for required information online. Such tools have also entered the tourism landscape, with consumers, businesses, and destinations seeking to tap into their immense potential and create personalized resources for their intended audiences. However, the rapid evolution of generative AI has almost ignored the ethical, moral, and responsible uses of these technologies. This research note is a timely commentary and introspection of the state of play and calls for greater reflexivity and responsibility to ensure that the tools are not abused to the detriment of tourism stakeholders.

KEYWORDS: responsible tourism; tourism technology; digital futures; technological disruption; knowledge economy

Introduction

At the end of November 2022, OpenAI released the now globally renowned generative AI tool ChatGPT, providing a simple yet user-friendly technology to create a quick reply in response to a prompt created by any user. In short, ChatGPT acts like a chatbot, though it provides a more comprehensive interaction with its user because it is equipped with significant data fed in a machine-learning environment with content up to 2022 (Panda & Kaur, 2023). As such, ChatGPT's popularity, ease of use, and perceived usefulness have taken the world by storm, with its server reportedly unable to cope with the volume of users in its earlier editions (Nah et al., 2023). Since then, developers of ChatGPT have designed further versions of the tool, including subscription-based models to differentiate markets and enhance features for their various needs.

The explosive growth of generative AI tools such as ChatGPT has led to other competitive products and services entering the market, including those from Google and Bing. Given their ubiquity, generative AI can be used across various disciplines and daily functions, including locating cooking recipes, solving computing functions, and creating tour itineraries, among others.

However, the deceptive simplicity of such generative AI has all but blanketed the conversations and debates about how it should be used responsibly, particularly in the context of responsible tourism. This research note seeks to expand and spark discussions as more and more people jump onto the generative AI bandwagon unabatedly.

Generative AI in Tourism

Academic interest in the meteoric rise of generative AI tools in tourism has been piqued, with various scholars seeking to explore their potential application across different aspects of the industry (inter alia, Carvalho & Ivanov, 2024; Dwivedi et al., 2024; Gursoy et al., 2023; Law et al., 2024). While such tools existed in other forms before the pandemic, the introduction of ChatGPT and subsequent competitors created more choices and features for end-users in free- and subscription-based models. Nonetheless, the ease and convenience of accessing such generative AI tools has triggered a wave of tourists and organizations seeking a quick and informative response to their queries based on given prompts (Li & Lee, 2024; Wong et al., 2023). Correspondingly, information from generative AI on tourism decision-making has provided some indicative evidence to suggest that users are influenced by the content they receive (Christensen et al., 2024). Potentially, this is because of the level of personalized information solicited by the end user, which gives a sense of total control over what and how knowledge is co-created (Wang, 2024). At present, generative AI is being used in tourism in various ways, such as interacting with chatbots like Oscar on Air New Zealand's website and crafting personalized itineraries, as in the case of Expedia.

As generative AI tools such as ChatGPT become more widely used and adopted, an emerging body of work has begun investigating AI-generated data quality and reliability issues. For instance, Zhang et al. (2024) found that the emotional and informative framing of content through generative AI tools enhances the perceived quality of such information for end-users. In addition, Kim et al. (2023) revealed that the potential errors in information derived from generative AI tools were moderated by the comprehensiveness of the contents. From a user perspective, the notion of personal innovativeness also suggests that those who are more predisposed to technologically mediated interactions and environments are more likely to be influenced by the contents they receive (Kim et al., 2024). All the same, Hsu et al. (2024) call for the need to discern generative AI content and corroborate these with other data sources elsewhere. However, the focus of extant literature remains transfixed upon user experiences and perceived satisfaction and value from engaging with generative AI. The lens of responsible tourism is hardly discussed, which triggers the need to elucidate glaring omissions and a critique of such tools in tourism. In this vein, some generative AI uses of responsible tourism can be observed in attractions such as museums, where visitors can encounter past eras and interact with historical cultures in more personalized ways, thereby enhancing their experiences at a destination.

(Ir)responsible Tourism

Irresponsible tourism, as its name suggests, is the opposite of sustainable and regenerative outcomes, where the benefits lie with third parties or influential players rather than the communities they serve (Volgger & Huang, 2019). Irresponsible tourism can also refer to touristic activities that are highly extractive, cause environmental degradation, and foster greater tensions between host and guest relations (Heslinga et al., 2021). Then, when framed

against the Sustainable Development Goals, irresponsible tourism disregards social or environmental concerns at the expense of exploiting economic gains (Assaker, 2024). In the case of tourism, technological advances such as Airbnb and Uber have certainly transformed visitor experiences, but their entry has raised questions of whether they contribute to the responsible tourism imperative or instead aggravate further irresponsible behavior when users or operators ignore wider societal goals such as affordable rent and licensing (Hwang, 2019). This, therefore, raises the question of the roles of emerging technologies, such as generative AI, and the roles they play in (ir)responsible tourism practices.

(Ir)responsible Tourism Uses and Abuses of Generative AI

One of the major concerns about generative AI is the notion that these emerging technologies will likely be detrimental to some aspects of the tourism workforce, particularly for those whose jobs become automated. Others (see, for instance, Ardichvili et al., 2024; Chowdhury et al., 2024) might point to the potential for these displaced employees to become trained and thereby repurposed or have jobs redesigned elsewhere, thereby achieving decent work (Sustainable Development Goal 8). This simplistic assumption has been challenged by Rajaram and Tinguely (2024) because it is essentially the most vulnerable workforce - those operating simple, repetitive, and menial tasks and perhaps taking pride in being able to do so. For instance, in the case of Malta, generative AI takes the form of a virtual travel agent named Marija, who acts as a central figure in disseminating and handling visitor queries on tourism-related matters in the country. The implication of such an impact is the reduction of opportunities for human tourist guides who would have otherwise benefitted by providing visitors with their services for a fee. The elderly and persons with disabilities are such a group of employees who may not or cannot be forced to have their work redesigned and be expected to work alongside generative AI, especially where there is now an even greater pressing call for diversity, equity, and inclusivity in the tourism workforce (Im et al., 2023). Under the auspices of responsible tourism, there is a need to also ensure that the jobs are appropriate and sustainable for the workforce with different needs, rather than unilaterally changing to be generative AI-led.

Generative AI has already been incorporated into creative works such as art, music, and designs for tourism and events (Fenwick & Jurcys, 2023). While these tools empower and enrich the work of designers and marketers, the ease with which such technologies can generate copious outputs (e.g., images and digital resources) can again compromise and challenge the experience and skill set of those who have previously spent time, money and effort to hone their craft. At present, there are already piracy lawsuits against those who have used generative AI to generate intellectual property rights from original copies of artwork or music and tapped on this goodwill to create new streams of revenue (Bayer, 2024; Senftleben, 2023). In a tourism and event example, the use of AI was used in an international art competition, and the submission became the winning entry, where the artist did not disclose the use of such technologies until after the prize was awarded (Metz, 2022). This raised ire and backlash from other entrants who felt that it was an unfair advantage and that the winner did not deserve to be crowned and had cheated. The industry is also witnessing a devaluation of the net worth of such creative artifacts, with those who know how to effectively engineer their prompts negotiating a lower fee from professional designers and marketers (Geiger & Iaia, 2024). This raises further questions about authenticity when generative AI manifests itself in tourism products and services and who should be responsible for the contents and their accuracy.

Responsible tourism is further complicated through the lens of generative AI when data is manufactured by such tools. Under the remit of research ethics, data falsification is a serious offense as it raises questions about the integrity of the study (Cheong et al., 2024). Yet, from a responsible tourism perspective, how should one interpret the validity of the research? Another question that is raised is: how can one replicate the study? The use of generative AI to provide data in an environment where funding and resourcing are gradually being eroded due to constraints in many countries and institutions may inadvertently drive researchers towards these 'low-hanging fruits'. Yet, scholars should proceed with caution, especially when key members of the research community call out such callous behavior and result in retractions of studies that will cause scholarly reputational damage in the long term.

The use of generative AI and its deceptive simplicity have strong ramifications in terms of the loss of human-human connection. In an environment that is already technologically saturated, these tools further distance human-to-human connection, which goes against the ethos of having responsible tourism give back to its local communities. Having generative AI recreate destinations in the metaverse is certainly immersive, but real-world destinations do not always benefit from these virtual spaces, nor do the royalties from the software and digital platforms always end up in the hands of local communities of interest (Leal et al., 2021). What has been created is a landscape of convenience and does little to foster valuable and sustainable forms of heritage conservation or cross-cultural understanding. Rather, generative AI amplifies the immersion and memorability of the user experience, but there is a significant chasm to cross when articulating responsible and sustainable practices in tourism (Majid et al., 2023).

A final bone of contention about generative AI and its contributions to irresponsible tourism lies with its requirement for significant energy consumption. Ludvigsen (2023) reported that in just the first few months of its introduction, ChatGPT matched the energy consumption of 175,000 individuals. Vincent (2024) argues that the use of generative AI to create an image uses almost as much energy as charging one's smartphone. In addition, users of ChatGPT are already estimated to consume an equal amount of 33,000 homes in the US (Crawford, 2024). Generative AI has a higher energy requirement than traditional search engines and so violates the principles of responsible consumption and production (SDG12). After all, users of generative AI may not know or are concerned about their energy consumption at the expense of instant gratification. This gross oversight is complicated because, as more and more people use such tools in areas such as tourism, they are becoming increasingly reliant on energy sources and are therefore unsustainable.

Conclusion

In conclusion, this research note paints a more nuanced account of the role that generative AI plays in terms of responsible tourism. At a cursory level, the ease of digitalized platforms for information search appears to reduce the need for unnecessary printing and resource waste. These generative AI tools reveal deeper tensions and fault lines that could render them less responsible and unsustainable practices for the sector.

Notwithstanding these criticisms, this research note calls for greater reflexivity in the use of generative AI in a responsible tourism manner. Both providers and consumers need to be made aware of the opportunities and challenges of using generative AI in a tourism context

and how they can work together to ensure that such practices are done in an ethical and informed setting. For instance, if generative AI were to be used by both the destination and the tourist, would all parties be prepared to contribute a portion of their revenue or purchases towards environmental preservation? Or can the generative AI tool be developed by local communities so they can create authentic insights and experiences for potential and existing visitors? Likewise, generative AI can nudge tourists towards more ethical behavior and identify potential partners that the visitors can seek to ensure that their travel choices are sustainable and reach the intended local communities.

Considering its energy-intensive landscape, the use of tools such as ChatGPT and other alternatives should be done sparingly rather than for purely hedonic motives. For instance, rather than just asking what the recommendations for itineraries at a given destination are, generative AI can prompt users to be more sustainable and also direct visitors to places where they can have authentic experiences with local communities. Finally, future studies should consider alternatives to generative AI as tools for responsible tourism and not let technology dictate the rules of engagement with local communities and their physical environments.

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