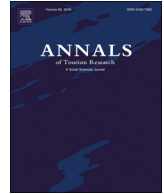


Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Annals of Tourism Research

journal homepage: www.elsevier.com/locate/annals

Research Note

Netnography in tourism – Beyond Web 2.0

Rokhshad Tavakoli^{a,*}, Paolo Mura^{a,b}^a Faculty of Hospitality, Food and Leisure Management, Taylor's University, No. 1 Jalan Taylor's, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia^b Center for Research and Innovation in Tourism, Hospitality & Food Studies (CRiT), Faculty of Hospitality, Food and Leisure Management, Taylor's University, No. 1 Jalan Taylor's, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia

ARTICLE INFO

Associate Editor: Scott Allen Cohen

Netnography, namely a qualitative approach to study cybercultures and communities through a computer-mediated medium (Kozinets, 1997), is increasingly receiving attention from social scientists. Indeed, scholars from different disciplines, including marketing and sociology (Bartl, Kannan, & Stockinger, 2016; Nind, Wiles, Bengry-Howell, & Crow, 2013) have acknowledged the importance of this method. In online communities, users can express themselves implicitly and explicitly by sharing their desires, expectations, experiences, and beliefs (Bartl et al., 2016). By doing so, they produce a large amount of information. The need of analyzing this large volume of available information has led to the development of various online methods and approaches, such as netnography, which have been designed to conduct research on the Web.

The findings of Bartl et al. (2016) research unveil that although almost a quarter of the papers on netnography focuses on tourism and/or leisure related topics, only a few of them were published in tourism journals. Likewise, Mkono and Markwell (2014) have pointed out that although netnography has not been totally neglected by the tourism academy, it has not been fully legitimized and used by tourism scholars. They believe that a lack of awareness and scarce confidence in applying this method could be the two main reasons for this status quo. These two reasons can be rooted in the limited tourism scholars' knowledge of information technology. While most of the papers that employed netnography in tourism used websites, blogs or social media platforms, namely platforms that constitute Web 1.0 and Web 2.0, the more advanced evolutions represented by Web 3.0, Web 4.0 and Web 5.0 are rarely contemplated by tourism scholars (see: Tavakoli, 2016; Tavakoli & Mura, 2015).

This research note discusses the developments of the existing Web platforms – from Web 1.0 to Web 5.0 – and their potential implications for netnography in tourism. More specifically, this work consists of two main parts. In the first, a brief literature review of the evolution of the Web is introduced to provide an overview of the existing online platforms. The second part casts light on the different dimensions of conducting netnography beyond Web 2.0 in tourism studies and possible future research avenues. By focusing on this relatively new approach, this work contributes to expanding our knowledge and understanding of research methodologies/methods in tourism in general and netnographic approaches in particular.

The evolution of the Web

The rise of netnographic approaches is mainly due to the evolutions of the Web and the emergence of online communities in various e-platforms. At the current time, we can trace the evolution of the web from Web 1.0 to Web 5.0. Web 1.0 is a static and read-only form of web, which provides minimum interaction between consumers and websites. This format did not allow users to publish

* Corresponding author.

E-mail addresses: Rokhshad.tavakoli@taylors.edu.my (R. Tavakoli), Paolo.mura@taylors.edu.my (P. Mura).<https://doi.org/10.1016/j.annals.2018.06.002>

Received 22 February 2018; Received in revised form 27 May 2018; Accepted 6 June 2018

0160-7383/ © 2018 Elsevier Ltd. All rights reserved.

or share information within the web page. Rather, users could only ‘consume’ these pages with a very little contribution to their content (Patel, 2013).

The next generation of the web, Web 2.0, is known as ‘the social web’ (Weber & Rech, 2010). This version of the web can connect communities with common interests and facilitates bi-directional interactions. For example, peer to peer interactions on platforms like TripAdvisor contributed to establish higher levels of trust on tourist products even if the trustworthiness of the reviews has been questioned (Filiari, 2015).

The third generation of the web, initiated by John Markoff in 2006, is also known as the ‘Semantic Web’ (Patel, 2013). According to Vieira and Isaías (2015), the idea of Web 3.0 was based on improving the functionalities of the existing services, such as enhancing data mining process, intelligent search along with recommendations, improved software agents and innovative personalized techniques. Moreover, multi-user virtual worlds are categorized under this level of the web. In this kind of environments, users can represent themselves as avatars and can interact with other users (Patel, 2013). For instance, Starwood Hotels launched their “virtual Aloft” in Second Life, in which virtual tourists can visit the virtual hotel and co-create the design of the real aloft in a virtual setting (Ehsani & Scott, 2009).

‘Ubiquitous web’, ‘symbiotic web’ and ‘Ultra-Intelligent Electronic Agent’ are the terms used to define Web 4.0 (Patel, 2013, p. 416). In this level, technology allows machines and humans to interact symbiotically. In short, machines are so advanced to read and analyze the contents of the web and consequently decide what to execute. For example, “digital friend of travel” will be integrated into smart gadgets very soon and will help tourists to handle all the travel-related matters (Soava, 2015, p. 112). KLM “Blue Bot” – a self-learner system – can be referred to as an additional example. It can help users to book a ticket on Messenger or Google Assistant.

The latest version of the web, known as Web 5.0, provides complex and immersive interactions between machines and humans. Benito-Osorio, Peris-Ortiz, Armengot, and Colino (2013) refer to Web 5.0 as a sensorial and emotional web that enables computers to interact with human beings. For example, facial expressions can be personalized and added to the avatars in real time by using specific headphones. Furthermore, real-time interactions between humans and virtual humans become possible due to the artificial automatic human-like behavior (Llagues Asensio et al., 2014). The virtual human museum guide in the ‘Museum of Science in Boston’ is a tangible example of how visitors can interact with virtual machines (Traum et al., 2012).

Netnography in tourism using Web 3.0, 4.0 and 5.0

Web 3.0 is not a new platform; yet, it is not as popular among tourism and hospitality service providers as it is among millennia. In Web 3.0, virtual, augmented and mixed realities allow customers/tourists to undergo highly immersive and multisensorial experiences. Interactive brochures, which can convey information beyond simple texts and photos, are an example of Web 3.0 augmented reality technology. Netnography in tourism could explore whether and how these particular forms of promotional material play a role in mediating visitors’ experiences. Virtual realities’ experiences represent another subject of investigation that netnography could tackle using web 3.0. In this respect, netnographic approaches could cast light on tourists’ experiences of 3D virtual hotels and destinations, which are already popular in virtual worlds like Second Life. Moreover, netnography could provide additional insights into tourism providers’ experiences and challenges, which in turn could help tourism scholars to have a better understanding of both demand and supply. From a socio-cultural perspective, issues concerning avatar behaviour (Tavakoli & Mura, 2015), virtual identities, including gendered identities (Tavakoli, 2016), could also be explored through Web 3.0.

Evolving from Web 3.0, Web 4.0 technology paves the way to more complex netnographic studies. An example of Web 4.0 is represented by phones’ personal assistants, which may make tour guides as obsolete in future holiday experiences. A netnographic study on the experience of tourists employing phones’ personal assistants could contribute to enhance the effectiveness of these machines’ learning process. Moreover, Geospatial tools, interactive guides, action tracing technology and location-based applications are some of the existing Web 4.0 technologies that require additional analysis and exploration by netnographers in tourism.

As the most recent development of the web, Web 5.0 employs artificial intelligence to produce emotions and respond to environmental stimuli. An example of this development is an AI concierge robot adopted by Hilton, known as ‘Connie’. The robot is able to answer tourists’ questions and learn from these interactions to adapt to individuals’ needs. By conducting netnography on Web 5.0, also known as the “web of thought”, emotional relationships between customers/tourists and machines could be explored. In this regard, netnographic approaches could employ virtual reality headsets or/and brain wave detectors to explore the extremely immersive tourist experiences they create.

Netnographies have been employed in tourism to explore the experiences of three main groups. Tourists represent the first group and most netnographies have focused on them. The second is the suppliers, such as the owners of tourism businesses (e.g. travel agents or TripAdvisor). Finally, the developers of these platforms, who play a major role in producing interactions between the first two groups, represent the third and most ignored group in netnographic approaches to research. Developers have a crucial role on the social construction of the platforms. Moreover, they are able to change and modify the platforms based on the feedback received from their customers.

One of the main issues concerning netnography in tourism refers to the methods utilized for collecting empirical materials. Most of the papers claiming to employ netnography in tourism, which were mainly conducted on Web 2.0, are mainly based on the analysis of online texts, mostly produced by tourists. Online interviews with the participants are also utilized as a way to produce empirical material. Other methods, such as online participant observation (Tavakoli & Mura, 2015), online focus group discussions and action research methods have been relatively neglected. Since the majority of the netnographic studies were conducted on Web 1.0 or 2.0 platforms, the methods were mainly concerned on analyzing textual or video formats. However, conducting research on the Web 3.0, 4.0 and 5.0 could be more innovative, as the platforms are more dynamic and dialogical. In this case, interactions not only could

occur between humans but also between humans and machines. For example, ‘intelligent assistants’ like travel applications (KLM Blue Bot for booking flights) or smart personal assistants (e.g. ‘Google Assistant’ or ‘Siri’) may help the tourists to have satisfactory travel experiences. Varfolomeyev, Korzun, Ivanovs, and Petrina (2014) believe that these personal assistants can help individual tourists on trip planning and guide the tourists during their travels.

With regards to the challenges arising in conducting more immersive forms of netnography, one may argue that online approaches may be perceived as “more detached” than traditional qualitative methods. In this regard, netnography may lead to a loss of “authenticity” of data. Importantly, it needs to be emphasized that the traditional/face to face ways of collecting empirical material, such as interviews, focus groups and observations, can still be utilized in netnographic studies. In other words, it is important to reiterate that netnographic approaches can complement (and add to) the “traditional” qualitative approaches to research. In this respect, netnographic approaches that employ Webs 3.0, 4.0 and 5.0 may lead to more trustworthy and “authentic” forms of empirical material.

Furthermore, most of the times the researcher’s role in netnographies is limited to the analysis of existing online material or interviews. Most of the authors employing netnography in tourism do not state their prolonged engagement. In this respect, we would like to contend that the level of engagement and immersion of the researcher into the computer-mediated context of the study needs to be discussed in greater detail by tourism scholars. This rather passive role of the researcher is evident in the literature as online observations are rarely reported in tourism netnographic studies. Moreover, the researcher’s role as an instrument in netnography should be further emphasized in tourism research as most of the times researchers tend to exclude their voices in netnographic texts.

Acknowledgment

The work on which this paper is based was funded by a Flagship project from Taylor’s University (project code TUFU/2017/004/02).

References

- Bartl, M., Kannan, V. K., & Stockinger, H. (2016). A review and analysis of literature on netnography research. *International Journal of Technology Marketing*, 11(2), 165–196. <http://dx.doi.org/10.1504/IJTMKT.2016.075687>.
- Benito-Osorio, D., Peris-Ortiz, M., Armengot, R. C., & Colino, A. (2013). Web 5.0: The future of emotional competences in higher education. *Global Business Perspectives*, 1, 274–287. <http://dx.doi.org/10.1007/s40196-013-0016-5>.
- Ehsani, E., & Scott, C. (2009). Using virtual worlds as collaborative environments for innovation and design: Lessons learned and observations from case studies in architectural projects. *The 27th conference on education in computer aided architectural design in Europe* (pp. 523–531). Istanbul: Computation: The New Realm of Architectural Design.
- Filieri, R. (2015). Why do travelers trust TripAdvisor? Antecedents of trust towards consumer-generated media and its influence on recommendation adoption and word of mouth. *Tourism Management*, 51, 174–185. <http://dx.doi.org/10.1016/j.tourman.2015.05.007>.
- Kozinets, R. (1997). “I want to believe”: A netnography of the X-Philes’ subculture of consumption. *Advances in Consumer Research*, 24, 470–475. Retrieved from <http://acwebsite.org/volumes/8088/volumes/v24/NA-24>.
- Llargues Asensio, J. M., Peralta, J., Arrabales, R., Bedia, M. G., Cortez, P., & Peña, A. L. (2014). Artificial intelligence approaches for the generation and assessment of believable human-like behaviour in virtual characters. *Expert Systems with Applications*, 41(16), 7281–7290. <http://dx.doi.org/10.1016/j.eswa.2014.05.004>.
- Mkono, M., & Markwell, K. (2014). The application of netnography in tourism studies. *Annals of Tourism Research*, 48, 289–291. <http://dx.doi.org/10.1016/j.annals.2014.07.005>.
- Nind, M., Wiles, R., Bengry-Howell, A., & Crow, G. (2013). Methodological innovation and research ethics: Forces in tension or forces in harmony? *Qualitative Research*, 13(6), 650–667. <http://dx.doi.org/10.1177/1468794112455042>.
- Patel, K. (2013). Incremental journey for World Wide Web: Introduced with Web 1.0 to recent Web 5.0 – A survey paper. *International Journal of Advanced Research in Computer Science and Software Engineering*, 3(10), 410–417.
- Soava, G. (2015). Development prospects of the tourism industry in the digital age. *Young Economists Journal / Revista Tinerilor Economisti*, 12(25), 101–116.
- Tavakoli, R. (2016). My journeys in second life: An autonetnography. In C. Khoo-Lattimore, & P. Mura (Eds.). *Asian genders in tourism*. Channel View Publication.
- Tavakoli, R., & Mura, P. (2015). “Journeys in Second Life” – Iranian Muslim women’s behaviour in virtual tourist destinations. *Tourism Management*, 46, 398–407. <http://dx.doi.org/10.1016/j.tourman.2014.07.015>.
- Traum, D., Aggarwal, P., Artstein, R., Foutz, S., Gerten, J., Katsamanis, A., ... Swartout, W. (2012). Ada and Grace. Direct interaction with museum visitors. *International conference on intelligent virtual agents* (pp. 245–251). Berlin, Heidelberg: Springer. <http://dx.doi.org/10.1007/978-3-642-33197-8-25>.
- Varfolomeyev, A., Korzun, D., Ivanovs, A., & Petrina, O. (2014). Smart personal assistant for historical tourism. *Recent advances in environmental sciences and financial development* (pp. 9–15). Athens, Greece.
- Vieira, J., & Isaías, P. (2015). Web 3.0 in web development. In T. Issa, & P. Isaia (Eds.). *Artificial intelligence technologies and the evolution of Web 3.0* (pp. 209–228). Hershey, PA: IGI Global. <http://dx.doi.org/10.4018/978-1-4666-8147-7.ch010>.
- Weber, S., & Rech, J. (2010). An overview and differentiation of the evolutionary steps of the web XY movement: the web before and beyond 2.0. *Handbook of Research on Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications*. IGI Global:12–39.