

BIG DATA, NETNOGRAPHY AND SMART TOURISM

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Abstract— The magnitude of data that is available online pertinent to travel & tourism industry is gaining a steady growth and it exists in the form of organized data (formal), unorganized data (informal), partially structured (a mix of formal & informal), textual, pictorial and audio-visual forms. The advantages of the big data relevant to tourism industry encompasses accounts of events in real-time that trumps the efficacy of traditional modes of data collection procedures like surveys etc especially studies on service perception and satisfaction analysis in tourism (Alaei et al., 2017). For a tourism business, access to big data like ‘feedback’ of tourists (solicited or unsolicited), information access patterns and mobility behavior forms a base for developing of customer profiles, service or product recommendation accuracy, therefore aiding the organization to gain an edge over the competitors. The much coveted smart ‘avatar’ of tourism in the upcoming future would consist of upgradation of decision making processes, intensification of the experiences of the tourists, up to the minute business models and a unified and coordinated business ecosystem that will be collectively driven by big data (Vecchio et al., 2018). Smart tourism rests on the pillars of maneuverability, innovativeness, ingenuity, self-nurturability as well as judicious expenditure on building an info-structure that would assist in accessing and interpreting relevant consumer data (Xiang et al., 2016) and big data consists of a major technology associated with smart tourism (Celdrán-Bernabeu et al., 2018). ‘Netnography’, that has received much acceptance within research in business and social sciences (Kozinets, 2015), must be acknowledged in this scenario. This research note explores the relationship between the three – big data, netnography and smart tourism and the marketing implications of tourism taking the three into consideration.

Keywords— *big data, netnography, smart tourism, tourist review websites*

1. NETNOGRAPHY AS A METHOD OF RESEARCH IN TOURISM

For exploration of the consumer experiences in the tourism and hospitality sector, the application of netnographical method is growing by leaps and bounds due to evolution of the internet as well as development of online communities that share common motivations and that facilitates two-way interactions. (Tavakoli et al., 2018). Social media has transformed how customers gain more control over telling about their experiences to others, share opinions and educate others with their acquired knowledge (Sajjadian., et al., 2018). The studying of interactions that happen on online social forums and that which enable researchers to access areas which would not have been possible through traditional means, is called netnography (Lehner-Mear, 2019).

Originally propounded by Kozinets in 2002, netnography is referred to as ‘virtual ethnography’, ‘cyber ethnography’, or ‘webnography’ (Mkono et al., 2014). New age social science research methods facilitate researching upon new areas and help in illuminating the concealed dimensions of social life.

The fast-growing participation in online forums by people and the data that is generated through these are considered when it comes to netnography (Mkono & Markwell, 2014). Indeed, ‘the Internet as a source of useful exploratory data on leisure activities is unparalleled in the history of science’ Stebbins (2010). The term ‘netnography’ refers to a method that aims to understand ‘digital tribes’ or people having similar tastes and preferences in products or services or even sharing similar experiences (Bartl et al., 2016). Netnography a viable exploratory method of research (Kozinets, 2010; Wu et al., 2014), consists of the following phases: entrée or the identification of relevant forum, data collection and finally the analysis of content qualitatively after classifying, encoding and contextualization of the responses (Mortara et al., 2013). Netnography is characterized by uninformed and inconspicuous presence of the researcher and observation of interactions of individuals online (Lehner-Mear, 2019). Netnography as a method, is more economically feasible and consumes lesser time than other techniques, allows access to

broader cohorts of respondents and allows greater capacity and flexibility for observation and analysis (Xun, 2010).

Netnography encompasses methods like naturalism, immersive research etc. (Wang et al., 2017) and when it comes to data analysis, the viability of manually interpreting the data gathered through ethnographical method has been already showcased (Mkono, 2013). Netnography is an easily implementable method that provides specific steps to be followed across various segments of social science researchers, can include collection and analysis of videos, sounds, images as well as textual data and can be combined with other research methods including in person interaction with respondents. (Costello et al., 2017). Researcher's position in netnographic studies could be passive or active, overt or covert: the passive-overt researcher is an observer, the passive-covert researcher is a lurker, the active-overt researcher is a participant and the active covert researcher is a spy (Björk et al., 2012).

2. NETNOGRAPHIC RESEARCH LEADING TO SMART TOURISM

The question here is, how netnographic research can pave the way for smart tourism of the almost-future? "Smart" has been acknowledged as a catchword that implies the progresses on the socio-economic and technological fronts driven mainly by a lot of factors including one major being the "big data" (Gretzel, 2015). And netnography consists of consideration of the big data that is a repository of consumer interactions (Knudsen et al., 2014). Netnographic research is equipped with the power of getting up-close and personal, without being intrusive. The future of tourism lies in intuitive marketing, where one must take into consideration the seemingly small giveaways of a potential tourist's future buying intentions. In this context, we can compare the evolution of the Web (Tavakoli et al., 2019) along with the evolution of the marketer (Dreyfus and Dreyfus' 2005):

Table I. Marketing proficiencies compared with version of Web

S.No.	Type of marketer (Dreyfus and Dreyfus' 2005)	Version of Web (Tavakoli et al., 2019)
1.	Novice marketer	Web 1.0, the static form of web offering the least interaction between customer and website
2.	Advanced beginner marketer	Web 2.0, the 'social web' offering bi-directional communication for the first time
3.	Competent marketing performers	Web 3.0, the 'semantic' web paving the way for data mining process
4.	Proficient marketing performers	Web 4.0, the 'ubiquitous' or symbiotic' web that allows machines to read and examine contents of the web and come up with suggestions
5.	Virtuoso marketer employing intuitive marketing	Web 5.0, the 'sensorial' or 'emotional' web that allows computers to interact with human beings including reading the latter's emotions

With the Web getting equipped to read and react to human emotions, intuitive marketing would have to consider 'more-than-human netnography' – a term coined by Lugosi and Quinton (2018). Therefore, smart tourism will not only be driven by big data alone but by a smarter approach to gathering, analysis and interpretation of the big data.

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