

Exploring a Neuroscientific Perspective of Travel Benefits and Decision-Making

Betsy Ng*¹
Gloria Ho²

¹National Institute of Education, Nanyang Technological University Singapore
²Nanyang Technological University, Singapore

Summary

The present commentary offers some guidance to the future direction of neuroscientific research in travel benefits and decision to travel. Travel benefits refer to the desirable outcomes from taking a vacation or pleasure trip [1]. Examples of travel benefits are health, socialization and involvement [2]. Involvement, which is a motivational variable toward travel, involves decision-making with respect to travel [3]. Decision-making is a process that involves many sub-decisions, occurring continuously from intention to deciding "where to go" and beyond [4]. Most of the time, when individuals decide to travel a particular destination, they base on contextual facts or description. Others may decide on perceptions or evaluative judgements of their prior travel experiences. Hence, decision-making process is complex and behavioural or self-report measures may not be sufficient. Although there are empirical evidence in travel benefits, there is still a lack of decision-making research in the field of tourism. Furthermore, the nexus between neuroscience and travel remains relatively under-researched.

Neuroscience methods such as Electroencephalography (EEG) and functional Magnetic Resonance Imaging (fMRI) could complement the existing behavioural methods of travel benefits. For instance, dopamine is considered a key substrate of intrinsic motivation [5] and it has immediate effects on behaviour [6]. Midbrain dopamine neurons transmit signals in response to rewarding and non-rewarding salient experiences [7]. As such, dopamine can be used as an indicator of travel experiences and behaviour. An enhanced activity within the dopaminergic value system will indicate intrinsic motivation when an individual engages in travel activities (i.e. involvement). Furthermore, increased dopamine level in striatum and prefrontal cortex is associated with positive affect and volitional action control [8].

Besides providing scientific evidence of travel benefits, neuroscience research also contributes to the decision-making process of travel. Decision-making process is an important area of investigation at the confluence of tourism, psychology and neuroscience. During the process of decision-making, an individual has to balance the costs and benefits of travel after careful deliberation. It is important to note that the choice to travel can differ in decision-making from description compared with decision-making from experience. In addition, involvement is a significant predictor of some aspects of the decision to travel, suggesting that individuals with high levels of involvement are more likely to travel abroad than those with low involvement [3].

One possible direction for future research is to examine the role of dopamine in decision-making to travel. Based on existing knowledge, there is no research that examines the role of dopamine in influencing emotions of pleasure or happiness when performing a travel decision-making task. Hence, it may be a potential research to investigate the activity of dopamine neurons in both decision-making in travel choice and behaviour, as well as subjective feelings of happiness relating to the receipt of travel benefits.

In summary, there is potential in neuroscience research to investigate the travel benefits and decision-making process. Nevertheless, self-report or behavioural measures are still needed to complement the neuroscientific data. Together, behavioural and neuroscientific data will build a complete and evidence-based travel or tourism research, as well as provide a contemporary support for the health benefits and decision-making process.

References

1. Chen CC, Petrick JF, Shahvali M. Tourism experiences as a stress reliever: Examining the effects of tourism recovery experiences on life satisfaction. *Journal of Travel Research*. 2016;55(2):150-160.
2. Ahn YJ, Janke MC. Motivations and benefits of the travel experiences of older adults. *Educational Gerontology*. 2011;37(8):653-673.
3. Prebensen NK, Woo E, Chen JS, Uysal M. Experience quality in the different phases of a tourist vacation: A case of northern Norway. *Tourism Analysis*. 2012;17(5):617-627.
4. Smallman C, Moore K. Process studies of tourists' decision-making. *Annals of Tourism Research*. 37(2):397-422.

Article Information

DOI: 10.31021/jnn.20181120
Article Type: Short Communication
Journal Type: Open Access
Volume: 1 **Issue:** 4
Manuscript ID: JNN-1-120
Publisher: Boffin Access Limited

Received Date: 25 July 2018
Accepted Date: 22 August 2018
Published Date: 25 August 2018

*Corresponding author:

Betsy Ng
Research Scientist
National Institute of Education
Nanyang Technological University
Singapore
E-mail: betsy.ng@nie.edu.sg

Citation: Ng B, Ho G. Exploring a Neuroscientific Perspective of Travel Benefits and Decision-Making. 2018 Aug;1(4):120

Copyright: © 2018 Ng B, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 international License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

5. Baik JH. Dopamine signaling in reward-related behaviors. *Front Neural Circuits*. 2013 Oct;7:152.
6. Rutledge RB, Skandali N, Dayan P, Dolan RJ. Dopaminergic modulation of decision making and subjective well-being. *J Neurosci*. 35(27):9811-9822.
7. Bromberg-Martin ES, Matsumoto M, Hikosaka O. Dopamine in motivational control: rewarding, aversive, and alerting. *Neuron*. 2010 Dec;68(5):815-834.
8. Rigoni D, Demanet J, Sartori G. Happiness in action: The impact of positive affect on the time of the conscious intention to act. *Front Psychol*. 2015 Sep;6:1307.