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Tell Me at What Time You Usually Wake Up, I'll Tell You What Type of Traveler You Are: An Investigation of the Relationship Between Destination Canada "Explorer Quotient" Segmentation Method and Chronotype

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Introduction

Time is the only finite resource nobody can get more of, regardless of finances, status or life situation. There is thus a strong interest from a wide range of disciplines such as biology (ex.: Reddy and O'Neill, 2009) and psychology (ex.: Díaz-Morales, 2007) to understand individual differences regarding time management and sleeping patterns, and their influence on behaviours.

Chronotype

From a biological standpoint, individuals differ in their chronotype (also called *diurnal preference*), a trait that reflects their circadian rhythms (from the Latin "circa": *about* or *approximately*, and "diem": *day*) (Reddy and O'Neill, 2009). These physical, behavioural and psychological changes are driven by the internal biological clock and follow roughly a 24-hour cycle (Reddy and O'Neill, 2009).

Chronotype ranges on a continuum from extreme morningness to extreme eveningness, with most people falling in the middle (Natale and Cicogna, 2002). Individuals exhibiting extreme morningness, also called *morning persons* or *larks*, rise in the early hours of the morning and go to bed early at night, while those exhibiting extreme eveningness, also called *evening persons* or *owls*, rise in the late hours of the morning and go to bed late at night (Horne and Österberg, 1976, 1977).

The influence of chronotype goes beyond sleeping schedules. The interest in chronotype was first driven by the goal of determining the best time for teaching to optimize learning (Laird, 1925). Since then, there has been extensive research on chronotype in psychology and biology, among other disciplines. However, to date, very few studies have investigated its effects on consumer decisions and behaviours.

Tourism

In a world of intense globalization, tourist destinations must compete with almost every other country in the world to attract tourists. To succeed, tourist destinations need to segment their market and go after tourists who represent the best fit for their unique selling proposition, and tailor their offering to the specific characteristics and time preferences of their target markets. To do so, tourist destinations need to look beyond basic psychographics (i.e., attitudes, beliefs, values, motivations and behaviours) and look for better ways to match "the right consumer with the right [experience] at the right time" (common wisdom), since timing is key.

Literature Review

Explorer Quotient (EQ)

The "Explorer Quotient (EQ)", developed by Destination Canada in collaboration with Environics (2015), is a segmentation system based on psychographics (i.e., attitudes, beliefs, values, motivations and behaviours). It sheds light on traveller segments, also known as "explorer types". It allows tourist destinations and organizations to tailor their offering to the EQ profile of their target markets to *make the destination come alive* in the mind of travellers at all stages of their trip.

Chronotype

Previous research focused on the personality traits associated with chronotype. Morning persons were found to be more thought-guided than owls (Díaz-Morales, 2007). They prefer to base their decisions on tangible and concrete information, trusting their experience and observing phenomena (Díaz-Morales, 2007). They are also more likely to consider the future consequences of their actions (Stolarski, Ledzińska and Matthews, 2013). To the contrary, eveningness was repeatedly found to be related to impulsivity (Eysenck and Folkard, 1980; Matthews, 1988). "Evening types (ET), compared to morning types (MT), showed more pronounced lack of planning, tendency to act impulsively without thinking, seeking of excitement and novel experiences, and willingness to take risks just for the sake of these types of experiences," (Muro, Gomà-i-Freixanet, Adan and

Cladellas, 2011, p.694). Therefore, being more thought-guided and conscious than owls, larks are expected to plan their trip for a longer period ahead of their departure.

Objective

The aim of the present research was to investigate the mediating influence of chronotype on the relationship between the nine "explorer types" of the United States market and the length of planning prior to the trip.

Methodology

A survey was conducted through an online panel among United States residents from eight states (California, Florida, Illinois, Maine, Massachusetts, New Hampshire, New Jersey, New York). A total of 7000 persons participated in the study (59% women, average age = 48).

Chronotype was measured using the morningness-eveningness reduced scale (Adan and Almirall 1991). Length of planning prior to the trip was measured as the number of days the consumer plan his/her trip for prior to travelling to the tourist destination (Lehto, O'Leary and Morrison 2004), while the EQ segments were based on the 20-item scale developed by Destination Canada and Environics (2015).

Results

Explorer Types and Chronotype

An ANOVA with the nine "explorer types" as the independent variable and chronotype as the dependent variable revealed that the EQ segments are significantly related to chronotype ($F(8, 6991) = 14.45$, $p < .001$). More specifically, "virtual travellers" have the highest level of morningness of all "explorer types" ($M = 16.98$; SD = .20, $p < .05$). They place a high importance on organizing their trip themselves and are uncomfortable with "the uncertainties of new places and cultural differences" (Destination Canada and Environics, 2015), a portrait consistent with larks. To the contrary, "free spirits" have the highest level of eveningness of all "explorer types" ($M = 15.36$; SD = .10, $p < .05$). They are "open-minded, experimental and adventurous, with a penchant for risk" (Destination Canada and Environics, 2015), a portrait consistent with owls.

Chronotype and Length of Planning Prior to the Trip

A linear regression with chronotype as the independent variable and the length of planning prior to the trip as the dependent variable revealed that chronotype significantly influences planning ($F(1, 6998) = 45.56$, $p < .001$). Morning persons plan their trip for 89.24 days (SD = 1.63), while evening persons plan for 65.57 days (SD = 2.89).

Explorer Type, Chronotype and Length of Planning Prior to the Trip

A follow-up analysis to investigate the mediating role of chronotype on the relationship between the "explorer types" and the length of planning prior to the trip (Hayes 2016, Process model 4, 5000 samples) revealed a direct effect of the "explorer types" on the length of planning prior to the trip ($\beta = 1.65$, SE = .42, 95% CI: [.8338, 2.4754]), and an indirect effect through chronotype ($\beta = .16$, SE = .04, 95% CI: [.0930, .2603]). Chronotype thus mediates the relationship between the "explorer types" and the length of planning prior to the trip.

Conclusion

The findings of this study demonstrated that chronotype is closely related to the psychographics of the "explorer types", and contributes to explain the differences in the planning behaviour of tourists. Tourist destinations and other organizations should thus tailor the timing of their promotional and informational efforts to the chronotype of their target markets, by starting to engage with morning tourists earlier than with evening tourists. Moreover, they could adjust the schedule of their tourist experiences to the internal biological time of their target markets, not just to their psychographics. For instance, while a morning city tour may be optimal for larks like "virtual travellers", a nighttime city tour could be preferable for owls like "free spirits".

Further research should be conducted to investigate the full implication of chronotype on the preferences and behaviours of travellers.

References

Adan, A., and Almirall, H. (1991). Horne and Östberg Morningness-Eveningness Questionnaire: A Reduced Scale. *Personality and Individual Differences*, *12*(3), 241-253.

Destination Canada, and Environics (2015). EQ Research Refresh.

Díaz-Morales, J. F. (2007). Morning and Evening-Types: Exploring their Personality Styles. *Personality and Individual Differences*, *43*(4), 769-778.

Eysenck, M. W., and Folkard, S. (1980). Personality, Time of Day, and Caffeine: Some Theoretical and Conceptual Problems in Revelle et al. *Journal of Experimental Psychology: General*, *109*(1), 32-41.

Hayes, A. F. (2016). PROCESS Macro.

Horne, J. A., and Östberg, O. (1976). A Self-Assessment Questionnaire to Determine Morningness-Eveningness in Human Circadian Rhythms. *International Journal of Chronobiology*, *4*(2), 97-110.

Horne, J. A., and Östberg, O. (1977). Individual Differences in Human Circadian Rhythms. *Biological Psychology*, *5*(3), 179-190.

Laird, D. A. (1925). Relative Performance of College Students as Conditioned by Time of Day and Day of Week. *Journal of Experimental Psychology*, *8*(1), 50-63.

Lehto, X. Y., O'Leary, J. T., and Morrison, A. M. (2004). The Effect of Prior Experience on Vacation Behavior. *Annals of Tourism Research*, *31*(4), 801-818.

Matthews, G. (1988). Morningness-Eveningness as a Dimension of Personality: Trait, State, and Psychophysiological Correlates. *European Journal of Personality*, *2*(4), 277–293.

Muro, A., Gomà-i-Freixanet, M., Adan, A., and Cladellas, R. (2011). Circadian Typology, Age, and the Alternative Five-Factor Personality Model in an Adult Women Sample. *Chronobiology International*, *28*(8), 690–696.

Natale, V., and Cicogna, P. (2002). Morningness-Eveningness Dimension: Is it Really a Continuum? *Personality and Individual Differences*, *32*(5), 809-816.

Reddy, A. B., and O'Neill, J. S. (2009). Healthy Clocks, Healthy Body, Healthy Mind. *Trends in Cell Biology*, *20*(1), 36-44.

Stolarski, M., Ledzińska, M., and Matthews, G. (2013). Morning Is Tomorrow, Evening Is Today: Relationships Between Chronotype and Time Perspective. *Biological Rhythm Research*, *44*(2), 181-196.