Vacation from work: A ‘ticket to creativity’?
The effects of recreational travel on cognitive flexibility and originality

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Abstract
Recreational travel may increase creativity by relieving workers from stress, providing diversifying experiences and increasing positive emotions. Consequently, vacations may boost creativity, apparent in a greater variety (flexibility) and originality of ideas after work resumption.

In our longitudinal field study, creativity (measured by Guilford’s Alternative Uses Task; independently scored by three raters) was assessed in 46 workers before and after vacation. Potential precursors for creativity changes (i.e. work load, vacation hassles, vacation destination and positive affect) were also explored.

Cognitive flexibility increased whereas originality remained the same after vacation. None of the precursors explained variance in creativity changes.

Although vacations seem to increase chances on creative insights by raising the amount of available cognitive elements (flexibility), they do not necessarily lead to higher levels of originality (uncommon, remote and clever ideas). Research in larger samples is required to further explore mechanisms that may explain why travel seems to enhance creativity.

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1. Introduction

Travelling seems to broaden the mind. Famous artists like Paul Gaugin, Ernest Hemingway and Igor Stravinsky created their most admired works during or directly after a period abroad. Scientists like Henri Poincare and Freeman Dyson reputedly cracked the most difficult scientific problems of their career while they were travelling. Apart from Nobel-prize winning geniuses who are inspired by travelling, two out of three American executives believe that vacations can improve their creativity (Keefe & Chandler, 2008). Despite the abundance of narrative evidence for and the widely shared opinion about a close connection between travelling and creativity, research on this relationship is scarce. Therefore, in this paper we examine the impact of recreational travel on creativity. In doing this, we focused on working people taking a vacation from their daily work and we integrated theories and empirical findings from tourism, leisure science and applied psychology.

Creativity can be defined as “[...] the production of novel, useful ideas or problem solutions (Amabile, Barsade, Mueller, & Staw, 2005, p. 368) and can be conceived as a key factor that drives civilizations forward, and that helps individuals adapt to changes and to solve everyday problems (Ritter, 2012). Cognitive flexibility is
conceptualized as the mental core of creativity and an essential component of real-life creativity (Beghetto & Kaufman, 2007; Hennessey & Amabile, 2010). It refers to the ability to break ordinary patterns of thought, to overcome functional fixedness and to avoid a reliance on conventional ideas or solutions (Guilford, 1967). Although flexibility increases the probability on creative insights and is considered a necessary ingredient for creativity, it is not sufficient to judge a person’s level of creativity. After all, a great diversity of ideas is no guarantee for a highly creative idea. The quality of generated ideas is equally important. Originality refers to this aspect of creativity and it relates to the final product of an idea generation process. Ideas that are uncommon, remote and clever are considered original (Silvia et al., 2008). In this study, we will focus both on the process (flexibility) and the product of creative thinking (originality).

In order to understand the presumed link between travelling and creativity, the first step in our journey is to explore the theoretical mechanisms that may underlie this relationship. Supposedly, three factors may foster creative thinking during and after travelling. Firstly, when working people travel, they are relieved from job demands and job stressors that are normally acting upon them (e.g., Etzion, 2003; Westman & Eden, 1997; Westman & Etzion, 2001). According to the Conservation of Resources Theory (Hobfoll, 1989) and the Effort-Recovery Model (Meijman & Mulder, 1998) high job demands like time pressure, role ambiguity and emotional demands deplete psychophysiological resources. This lack of resources may interfere with creative thoughts and actions. In his Neural Network Model of Creativity, Martindale (1999) hypothesized that stressed people primarily display routinized, habitual, well-rehearsed behaviour patterns, because their attention is focused on the stressors with the result that creative ideas are less likely to come to awareness. Their thinking tends to be convergent (i.e. fast, accurate, logical, standard). By contrast, the attention of people who do not feel stressed or tensed is not captivated by negative stimuli. Consequently, their thinking may be more divergent and flexible. Several studies confirmed this assumption (e.g., Baer & Oldham, 2006; Ohly, Sonnentag, & Plunkte, 2006; Van Dyne, Jehn, & Cummings, 2002). If employees are freed from job stress and if they can fully recover from work load during a prolonged period of respite, cognitive and physical resources become available again. Accordingly, the probability of creative ideas increases.

Secondly, recreational travel provides an excellent opportunity for diversifying experiences. According to the Evolutionary Theory of Creativity, mere exposure to more and increasingly divergent information raises creativity (Simonton, 1999). Actually, research showed that even a simple action like changing the normal sequence of making a sandwich can enhance cognitive flexibility (Ritter et al., 2012). Travelling offers numerous opportunities for unique experiences. Although the type of activities people tend to engage in during vacation is related to the type of activity they favour during their daily free time (Brey & Lehto, 2007), vacationers do not have to work and can spend a much greater amount of their time on leisure activities. This breaks their daily routines. Holidaymakers may for example get up and eat at different times of the day than usual and they fill the time they would normally work with self-chosen activities like sightseeing, visiting tourist attractions or going for a stroll. In addition, for many people, especially Europeans, travelling often involves going abroad. Hearing and speaking a foreign language, tasting exotic food, marvelling at different natural surroundings and witnessing unfamiliar cultural habits (Chen & Chen, 2010) may violate well-established cognitive schemas and increase the number and the breadth of cognitive elements available for association. Several studies have indeed shown that these divergent, multicultural experiences are associated with creativity (e.g., Leung, Maddux, Galinsky, & Chiu, 2008; Maddux, Adam, & Galinsky, 2010). For instance, Leung and Chiu (2010) demonstrated that students who watched a short presentation about cultural differences between America and China wrote more creative stories in a story-writing task afterwards than students who had not seen this presentation.

Thirdly, recreational travel increases positive emotions. Various studies have shown that vacations increase levels of happiness, positive affect, well-being and life satisfaction (e.g., Chen, Lehto, & Cai, 2013; De Bloom, Geurts, & Komplier, 2010; Kühnel & Sonnentag, 2011; Nawijn, 2010; Strauss-Blasche, Ekmeckioglou, & Marktl, 2000). In accordance with the Broaden- and Build Theory, these positive emotions encourage people to explore, learn and play which broadens their scope of attention, cognition and actions. This in turn improves creative thinking (Fredrickson, 2001). A similar idea underlies Isen’s assumption that positive affect leads to defocused attention which increases the probability of unlikely combinations of ideas (Isen, 1999). In previous studies, positive emotions were indeed related to higher levels of creativity (e.g., Amabile et al., 2003; Baas, De Dreu, & Nijstad, 2008; Davis, 2009; Isen, Daubman, & Nowicki, 1987; Isen, Johnson, Mertz, & Robinson, 1985; Lyubomirsky, King, & Diener, 2005).

Although vacation from work provides fertile soil for these three well-known precursors of creativity (i.e. stress relief, diversifying experiences, and positive emotions), the number of studies which investigated the relation between travel and creativity remained very limited until now. To date, only few laboratory studies demonstrated that subjects with multicultural experiences performed better on creativity tasks than subjects without such experiences (e.g., Leung & Chiu, 2008, 2010; Leung et al., 2008; Maddux et al., 2010). However, most of these studies focussed on longer periods abroad (i.e. living abroad) instead of shorter holiday travels.

To our knowledge, only Maddux and Galinsky (2009) conducted three experiments on the relation between travelling abroad and creative problem solving. In an experiment with 205 students, they demonstrated that correctly solving the Duncker Candle Problem (Duncker, 1945) was associated with the number of months participants reported to have lived abroad, but not with the number of weeks participants have spent travelling. In the second experiment, 108 students engaged in a negotiation task. Again, the amount of time a student previously has lived abroad, but not the time a student has travelled, predicted whether the participant could reach a creative deal. In the third experiment, the researchers made 65 students imagine and write about a day living or travelling abroad respectively. Creativity levels, measured by the Remote Associates Test (Mednick, 1962), were higher for students who thought about living abroad, whereas students visualizing a day travelling had similar test scores as students thinking of a day at home.

Although these experiments rendered valuable first insights, they have three major drawbacks. Firstly, students’ estimations of the total amount of time living and especially travelling abroad in their lifetime may be unreliable, especially in people who travel frequently. Secondly, the ecological validity of the experimental conditions (i.e. ‘thinking about living abroad’ and ‘thinking about travelling abroad’ respectively) is questionable because they may not resemble a real travel experience. Thirdly and most importantly, reversed causal pathways are likely: these experiments fail to reveal whether travelling causes rising levels of creativity or whether creative people like to travel and tend to go abroad more often. Consequently, longitudinal studies outside the laboratory with repeated measurements before and after a real travel period are highly needed (see also recommendation in Maddux & Galinsky, 2009).
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