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TITLE: The relation between personality traits and psychographic positions of
travel destinations

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Abstract

Understanding potential visitors is one of the fundamental tasks for researchers and businesses, destination marketing organizations as well as many other stakeholders in tourism domain. Despite the fact that Internet has become one of the major marketing channels for hospitality and tourism, researchers indicate that there is a notable gap in understanding how to effectively use social media in travel destination marketing. The present study investigates the relationship between personality characteristics and travel preferences in the context of social media. Personality was measured using Big Five Factor model, while travel preferences were represented by Plog's typology of tourists and psychographic positions of tourist destinations. A data set of 6887 social media users was obtained and subjected to logistic regression analyses. Findings indicate that different personality traits, such as Openness, Extroversion, and Neuroticism can predict psychographic positions of tourist destinations. Openness was found to be significantly related to venturer type, while extroversion and neuroticism are related to dependables. Results of the study provide a better understanding of how differences in individual's personality traits influence preferences for travel destinations. The main implications of this research would be related to marketing, especially in social media context. Understanding the personality of a customer and precisely targeting the key audience can significantly improve marketing efforts of travel-related businesses.

Keywords: Big Five Personality Factors, Social Media, Travel Destinations

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Foreword

This research has been conducted under the supervision of Marit Gunda Gundersen Engeset, PhD, whom I would like to thank for helping me to get an access to the data, for her insight and expertise, for her patience and readiness to answer all my questions, all of which greatly assisted the research.

I would like to thank Dr David Stillwell and Dr Michal Kosinski for providing an access to myPersonality project and the valuable information that allowed to conduct this study on a large scale.

I am thankful to my friends, who always reminded me that there is also life to enjoy.

And I am truly grateful to my family for their endless love, who always support me in my endeavors. Sağ Oluñız.

1. Introduction

Understanding potential visitors is one of the fundamental tasks for researchers and businesses, destination marketing organizations as well as many other stakeholders in tourism domain (Miguens & Mendes, 2008). One of the key elements of service, tourism and hospitality industries are people. Tourism industry hosts countless occasions of human interactions, which involves consumers, service staff, management, and different environments dealing with each other on a daily basis. The personal behavior, events, and memories that occur in the course of such interactions directly affect individual's travel experiences (Larsen, 2007; Wirtz, Kruger, Scollon & Diener, 2003). Different people with various personal characteristics require different approaches, such characteristics in psychology are referred to as personality (Murray, 1938). Gaining a better understanding of traveler's personality, and the role it plays in tourism industry would benefit not only a tourist, but probably all the players in the field.

Personality has often been used as a basis for the purposes of market segmentation (Gretzel, Mitsche, Hwang, & Fesenmaier, 2004). Particularly in tourism industry, Plog (1974) has defined individual travel behavior types of tourists, based on a personality scale of allocentrism – psychocentrism. Where allocentrics are considered to prefer unfamiliar, novel trips, but psychocentrics choose more common and familiar activities. Among others, Cohen (1972), categorized tourists into four groups, based on their preference of specific novelty/excitement and familiarity/security combination when traveling, such as organized mass tourist, individual mass tourist, explorer, and drifter. Smith (1989), suggested seven types of tourists based on their perception of local norms, such as charter tourists, mass tourists, incipient mass tourists, unusual tourists, off-beat tourists, elite tourists and explorers (Basala & Klenosky, 2001). In more recent studies based on Plog's description of traveler types, the findings report an

empirical support that personality traits may influence the travel style and choice of holiday destinations (Gretzel et al., 2004; Lepp & Gibson, 2008), travel-related activities, as well as other decisions made during vacation (Madrigal, 1995; Nickerson & Ellis, 1991). Furthermore, identifying personality of a customer during initial interaction with a travel agent has been suggested to be a more effective way of understanding and directing the customer to a preferable destination (Griffith & Albanese, 1996).

Personality traits are considered to be static and accurate predictors of behavior over time and across different situations (Goldberg et al., 2006). One of the most commonly used personality measure is referred to as the “Big-Five” model or “Five-Factor Model” which consists of extroversion, neuroticism, agreeableness, conscientiousness, and openness to experience as basic dimensions of an individual’s personality (John, 1990). Many scholars have found it to be a very steady, consistent and reliable tool for measuring personality across different research fields (Costa, McCrae, 2008). Particularly, studies of consumer behavior, that employed Five-Factor Model, have reported a relationship between personality of customers and their preferences for certain products, stating that personality type is an important indicator of brand choice (Aaker, 1997).

In tourism domain, researchers suggested that some personality traits may influence a choice of corporate meeting destination (Ariffin, Ahmad, & Ishak, 2008), while other traits, such as extroversion and self-as-entertainment affect leisure activity preferences (Barnett, 2006; Barnett & Klitzing, 2006). A personality trait of sensation seeking has been linked to the concept of tourist behavior, especially associated with the search for stimulation and Cohen’s novelty role (Lepp & Gibson, 2008). Personality traits are also found to have an impact on travelers’ online consumer generated media creation (Yoo & Gretzel, 2011). While Five-Factor Model is

being considered as a universal tool for personality trait measurements, few studies use this approach in travel behavior research (Leung & Law, 2010).

1.1. Theoretical Positioning and Problem Statement

Many years of psychology research indicated that a fundamental construct of personality traits could define individual behavior and preferences (Allport, 1962). These findings provide countless practical implications, since understanding of individual's personality may allow us to predict behavior and preferences across different frameworks and situations. Personality assessment tools and questionnaires have been proven to be able to predict human behavior in many contexts, for example in studies on job performance (Barrick & Mount, 1991), use of social media (Golbeck, Robles & Turner, 2011), political attitudes (Soldz & Vaillant, 1999; Gerber et al., 2010). Furthermore, research on consumer behavior in tourism (Cohen, Prayag & Moital, 2014), and on personality in tourism and hospitality context (Leung & Law, 2010), implies that personality factors could be used to understand, describe, and potentially predict travel behavior and choices of tourists. According to Horner & Swarbrooke (2016), personality is considered to be a determining factor of tourist motivations, perceptions and behavior. However, measurement of personality in tourism field focused primarily on specific traits, rather than being based on underlying well-established scales, such as the International Personality Item Pool (Cohen et al., 2014; Goldberg et al., 2006).

From a practical perspective, understanding how personality influences travelers' preferences may help to improve marketing efforts, in order to adapt products to individual personality traits, target specific groups more precisely, and communicate with customers in a better way (Chen, Pavlov & Canny, 2009). Social media has recently become one of the most important factors influencing tourist behavior, and being used during all stages of travel cycle:

during pre-trip travel planning, on-site experiences, and post-trip feedback processes (Cohen et al., 2014). Even though in recent years both tourism businesses and customers are widely embracing social networks, the effective ways of utilization and management of the social media still remain mainly unexplored to academics and practitioners (Leung, Law, Van Hoof & Buhalis, 2013). In view of the increasing importance of social media as a marketing tool before, during and after the trip, the current paper aims to investigate how big-five personality factors, such as Openness, Conscientiousness, Extroversion, Agreeableness and Neuroticism, affect consumer behavior in tourism industry, and how a personality type may be related to individual's travel destination preferences.

From a methodological perspective, a growing use of information technologies and social media by tourists, may provide researchers with new methods of data collection, allowing to expand our knowledge on travel behavior. Researchers suggest that such sources allow the collection of different types of consumer behavior data, which is also more accurate (Cohen et al., 2014). Taking into consideration that social media profiles reflect actual personality, not self-idealization (Back et al., 2010), Facebook, as a social network, can be a powerful research tool for social sciences, which allows to avoid many limitations of traditional data collection techniques (Kosinski et al., 2015). Ability to collect and analyze large amounts of data enables emergence of computational social science (Lazer et al., 2009). A growing number of studies are utilizing given novel and innovative methods, implying that personality traits can be accurately predicted from social media records (Kosinski, Stillwell & Graepel, 2013; Youyou, Kosinski & Stillwell, 2015).

While tourism research covers a wide range of issues, there is a notable gap in the area of personality and information technologies, indicating that online personality in the travel context

is a fairly unexplored field (Leung & Law, 2010). Despite a growing and successful use of social media as a source for data collection, to my knowledge, there are no prior studies in tourism field based on such methods.

Therefore, the main research question is this paper is: “Does personality influence travel destination preferences, and how?” The present study set out to better understand the nature of relationship between personality and travel behavior, firstly by exploring which particular dimensions of personality may be related to individual’s travel preferences. Secondly, the study aims to find out whether online profile information, and basic demographic data obtained from social media can be used to predict traveler’s preferences in tourism context. Finally, the study should investigate how and to what extent our choices of specific travel destinations or activities depend on individual differences in personality traits.

1.2. Structure

The present thesis has the following structure. Chapter 1 includes introduction, theoretical background and positioning, as well as reasons to choose this topic and its importance. Chapter 2 presents an extensive theoretical review of the main concepts, such as travel behavior, social media, and personality. Chapter 3 provides details about the methodology and analyses used in this paper, followed by the results in chapter 4. Chapter 5 covers discussions, limitations, and possible implications. The study ends with a conclusion, followed by references, and appendixes.

2. Literature Review

This chapter begins with a section about travel behavior and an overview of the most widespread tourist classification approaches. Followed by a review of theoretical contributions and conceptualizations of traveler types, and a description of destination segmentation model

chosen for analysis. The next chapter goes over to definition of social media foundations, mechanisms of Web 2.0, and impact of online communities. Subsequently, empirical evidence of upcoming challenges and opportunities of social media in tourism field were shown. The following chapter defines the terms of personality and personality traits, as well as describes dimensions of the Five Factor Model. Finally, relations between the constructs in a tourism context are presented, followed by hypotheses and a conceptual model of this study.

2.1. Travel Behavior

Research suggests that consumer behavior consists of a variety of decisions, activities, experiences that satisfy consumer needs and desires, including activities related to obtaining, consuming and disposing of products and services. One of the most researched topics in the area of marketing is considered to be consumer behavior, often in tourism area being referred to as ‘travel behavior’ or ‘tourist behavior’ (Cohen et al., 2014).

Among the most notable travel behavior styles that have been developed by scholars, it is worth mentioning the ones that were initially introduced by Cohen (1972), Plog (1974), and Smith (1989). Cohen’s novelty-familiarity typology ranges from tourist’s interaction with familiar and comfort environment to unknown and even rough experiences. The *organized mass tourist* is characterized as the one who prefers to travel without leaving the comfort of home environment, which typically includes pre-planned itineraries, guided tours and air-conditioned buses. The *individual mass tourist* is to some extent similar to the previous, relying on travel plans and schedules that provide the comfort of familiarity. Individual mass tourists prefer visiting popular destinations and typical tourist attractions, yet being less dependent on group arrangements. The *explorer* is considered to be a category of people willing to leave their

comfort zone in pursuit of some novelty in travel, but in case of tough conditions ready to return back. Explorers prefer making travel arrangements themselves, get off the beaten path, and try to interact with locals, yet still rely on comfortable means of transportation and living conditions. Lastly, the *drifter* is characterized as someone who is ready to leave all comforts of home environment behind and strive for novelty. Usually as a solo traveler, the drifter prefers to go on a trip with a very tight budget and no detailed itineraries, avoid tourist attractions, and stay with locals, often sharing meals and more authentic experiences (Cohen, 1972).

According to Plog's (1974) typology model, travel choices are related to individual's psychographic personality type, varying from psychocentric on one end of a scale to allocentric on the other. On one hand, psychocentrics choose more familiar and common destinations, while allocentrics, on the other hand, prefer various activities and unusual trips. Psychocentric were later labeled as *Dependables*, and allocentrics as *Venturers* (Plog, 2001). In line with given model, travelers can be represented on a scale as Dependable (psychocentric), Near Dependable, Centric Dependable, Mid-Centric, Centric Venturer, Near Venturer, and Venturer (allocentric). While dependable and venturer personalities are believed to represent a small fraction of tourists (2.5% and 4% accordingly), most of the population is spread between the two extremes, with the majority falling into mid-centric ranges. Mid-centrics represent a mixture of different travel personality types that may lead an individual one way or another. The author implies that travel destinations go through a process of evolution, being firstly discovered and popularized by allocentric venturers, later, as infrastructure develops, dominated by less adventurous mid-centrics, and finally becoming more familiar and attractive to dependables (Plog, 1974; Plog, 2001).

Finally, Smith (1989) categorized tourists into seven types, including charter tourist, mass tourist, incipient mass tourist, unusual tourist, off-beat tourist, elite tourists and explorer. Smith’s typology ranges from explorers, who are considered to be more of anthropologists rather than tourists, to charter tourists, traveling in large groups, arriving on buses, being shown certain highlights in a limited time, and taken to a next attraction. Remaining categories range on a scale of willingness to explore and learn new things by interacting with local lifestyle, or, in contrast, consume what a destination has to offer in a familiar setting.

Research on the underlying construct of travel behavior is mainly based on the three models discussed above. While some scholars support one approach or another, there is still a lack of consensus on how travelers should be classified, and the tourism market segmented. Despite the differences in travel typologies, all three models can be viewed in a continuum of Cohen’s familiarity/novelty levels preferred by travelers. Based on Basala and Klenosky (2001), **Figure 1** summarizes the novelty-familiarity continuum, with those who seek a high level of familiarity on one end of the continuum, and those who look for novel experiences on the other.

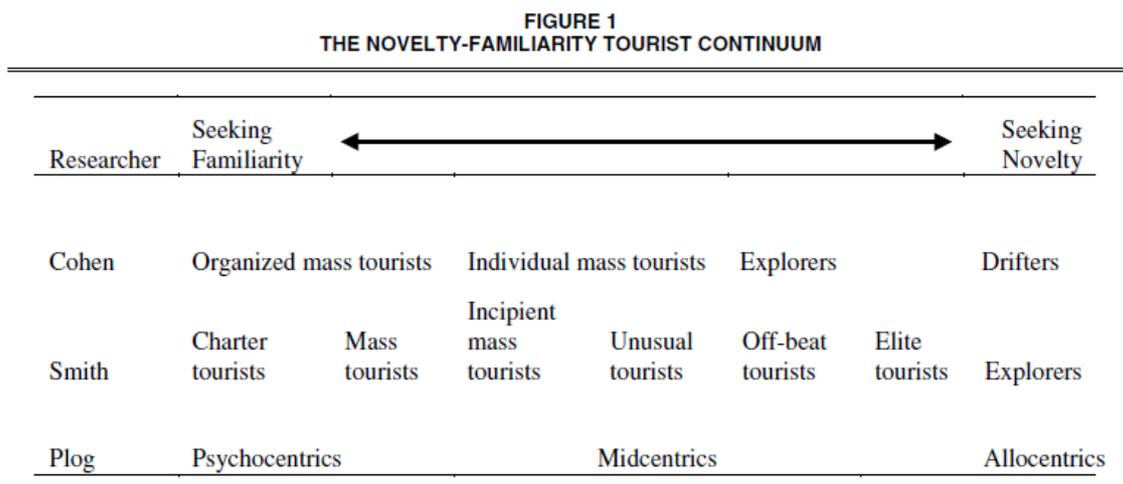


Figure 1. Novelty-Familiarity Continuum (Basala & Klenosky, 2001)

Previous empirical research based on Plog's typology represents an interesting perspective for current study due to the model's relation to personality traits. Nickerson and Ellis (1991) compared Plog's allocentric/psychocentric model to activation theory, suggesting that allocentric/psychocentric typology is correlated with energy dimensions, and proposed a new and more complicated activation model of travel personality. As a result, suggesting a four-dimensional model of tourist typology, with two original psychographic dimensions, and two additional energy dimensions. Madrigal (1995) investigated the relationship between personal values and Plog's traveler types, and their ability to predict the travel style. The study indicated that there is a significant correlation between the two, yet personal values are better than traveler type classification in differentiating between individual and group travelers. Griffith and Albanese (1996) have examined the correlation between Plog's model, fundamental theoretical constructs and actual travel behavior. In the study both construct and external validation for allocentric/psychocentric classification have been tested, by using alternative forms of measurement, and relating the measurement instruments to actual travel behavior. As a result, the authors provided an empirical support for Plog's allocentric/psychocentric typology model of travelers, and indicated that this model could be a basis for future research on travel behavior and psychographic segmentation (Griffith & Albanese, 1996). In view of continuous research and advancement of initial ideas, the construct of travel typology has gone through the process of significant improvement. Over decades, in an attempt to find out why destinations rise and fall in popularity, Plog (2001) has eventually proposed a revised and updated scale of traveler types that ranges from dependables to venturers. Thus, **Figure 2** represents a new set of travel destinations preferred by different types of tourists.

Psychographic positions of destinations (2001)

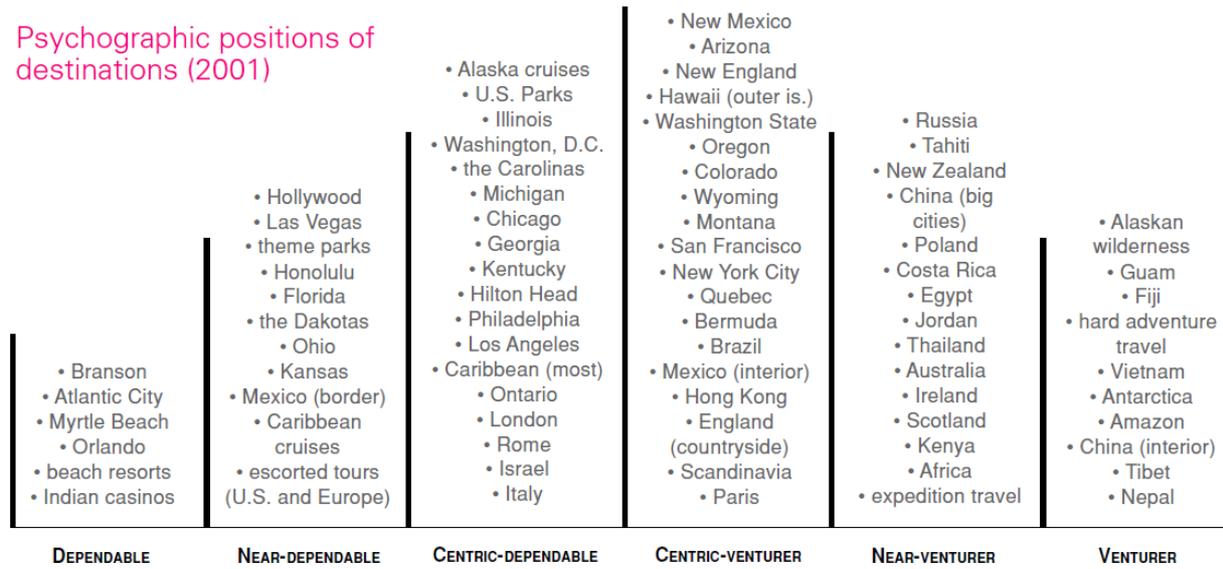


Figure 2. Psychographic positions of destinations (Plog, 2001).

Taking into consideration many different factors outlined by researchers that may explain tourist behavior, the author of present study hypothesizes that leisure travel destination choice (e.g. where to go), as well as preferred activities (e.g., what to do) are influenced by personality traits. Description of traveler types by Cohen, John, and Plog, outlined in **Figure 1**, represent the scale of the typology of tourists. Plog’s (2001) classification of destinations (Fig. 2) represents in current study the destination preferences.

2.2. Social Media

The term of social media has been defined as “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content” (Kaplan & Haenlein, 2010, p. 61). In other words, social media can be described as an online application, where all users are able to create, publish and share information, and at the same time communicate in a more collaborative way. Social

networks have recently revolutionized Internet from being a broadcasting platform into a platform that allows anyone to become a broadcaster, introducing a number of various implications for individuals, businesses, and researchers (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). Facebook is an excellent example of social media application, which is used by many successful businesses as a platform to establish company or product fan pages, maintain relations with public, improve brand image (Kaplan & Haenlein, 2010; De Vries, Gensler, & Leeflang, 2012). According to Back et al. (2010), such Facebook Pages can be described as online communities, used by consumers to create, discuss, *Like* and share information on any topic. Facebook Like can be defined as an instrument provided to Facebook users to show their positive association with online content, such as textual information, pictures, videos, other forms of media, as well as Facebook Pages (Kosinski et al., 2013). Social media users are free to engage with any kinds of online communities, including Facebook pages of products, activities, restaurants, tourist attractions, or even create one of their own, if it does not exist yet. Kietzmann et al. (2011) noted that due to its user-generated nature, online communities today are able to significantly impact company's reputation, sales, or even survival. In a recent remarkable publication in Science journal, Lazer et al. (2009) discussed an importance of big data, its unprecedented potential for the future of scientific research, and noted the emergence of computational social science. However, the authors acknowledged that digital records of human activity are mostly proprietary, owned by technology enterprises like Google, Facebook, or government institutions like National Security Agency, and are unavailable for open academic environment (Lazer et al., 2009). On the other hand, Kosinski et al. (2015) demonstrated that Facebook can also be a powerful research tool for social sciences. The platform has a large and diverse user base, it can be used as a source for data collection, consisting of individual

demographic information, behavioral data and social interactions. MyPersonality project has been launched as a Facebook application in 2007, where users were able to take Big Five personality test, among many others, in order to get a feedback on their personality in return. With users' consent, the authors have recorded data of their psychographic tests and Facebook profile information, which includes age, gender, friends list, geographic location, religion, political views, favorite music, movies, and Facebook Likes, from more than 10 million participants (Kosinski et al., 2015). Researchers have shown that such data allows conducting of numerous psychological and social studies. Taking into account empirical evidence discussed above, it is safe to conclude that social media has a substantial impact on our everyday lives, bringing modern societies various challenges and opportunities.

Regarding hospitality and tourism domain, social media along with search engines are reported to be the biggest trends, shaping the industry nowadays (Xiang & Gretzel, 2010). Travelers have widely adopted social media and are using social networks in order to search for information, describe their experiences, share travel stories, pictures, videos, and exchange feedback. According to Leung et al. (2013), previous empirical research from a tourist's perspective has been predominantly focused on the use and impact of the social media during initial travel planning processes, while supplier-related studies focused mainly on leveraging the social media for promotion, distribution and management purposes. The authors indicate that social networks are becoming a strategically important tool for businesses to be competitive in the tourism industry (Leung et al., 2013). According to Xiang and Gretzel (2010), social networking sites are becoming more and more valuable sources of information for travelers, comprising a significant part of the search engine results, thus, indicating an increasing importance of social networks in the area of online tourism and hospitality. Social media is an

excellent marketing channel for a new product or service, helping companies create new business models based on consumer feedback, and advertise new offers to potential customers (Chung & Buhalis, 2008). Building relations and engaging with customers through social media is found to be vital for tourism and hospitality companies in order to maintain trust, and improve consumer loyalty (Wang and Fesenmaier, 2004). Yoo and Gretzel (2011) recognized an enormous potential of online communities in electronic word of mouth creation, which has the greatest influence on such travel-related decisions, as accommodation, travel activities and dining place choices. The user generated content that serves as a source of trustful information for travelers, can also be of a great use for businesses and academics. Tussyadiah and Fesenmaier (2009) proposed that user generated media on social networks had gradually influenced destination awareness and consequent decision-making on destination choice. A strong understanding of how a travel destination is viewed by potential visitors is reported to be vital for effective marketing of a country on social media (Stepchenkova & Morrison, 2006). Kasavana, Nusair, and Teodosic (2010) acknowledged the growing importance of Facebook and online communities for hospitality businesses. Facebook has also been reported to be the most widely used tool for social media marketing among hotels (Chan & Guillet, 2011). Stankov, Lazic and Dragicevic (2010), found that about a half of the national tourism organization in Europe are using Facebook as a tool for effective marketing strategy. The authors, however, imply that most of the countries are not utilizing the full potential of user-generated content advantages offered by Facebook, such as Facebook Pages and Groups. Facebook has become an alternative marketing channel for tourism and hospitality businesses, destination marketing organizations and even countries, enabling them to create a brand page that also functions as an online community. Users, by liking the brand page, become members of such communities, which allows them to get the news and

insights, information about products, promotions and offers, send inquiries directly to the organization, share experiences and feedback among each other. Gretzel and Fesenmaier (2016) have recently examined the relationship of travelers with travel companies and destinations via Facebook. The authors indicated that 21,6% of their respondents who have liked a travel-related company fan page were mostly motivated by deals and offers; while 36,6% of those who became fans of destination pages were mostly motivated by information needs and emotional connection. These findings imply that user's connection to Facebook pages, such as hotels, restaurants, airlines, attractions and destination marketing organizations, is a valid indicator of travel preferences. Thus, the information about Facebook Likes from myPersonality project dataset would accurately reflect individual's travel preferences.

Taking into consideration the emergence of computational social sciences (Lazer et al., 2009), the importance of social media in tourism domain (Leung et al., 2013), use of Facebook as a research tool (Kosinski et al., 2015), and travelers' relationships on Facebook (Gretzel & Fesenmaier, 2016), this paper aims to employ a unique approach to study the relationship between travel destinations and personality, based on large-scale data obtained from myPersonality project.

2.3. Personality

For quite a long time the term of personality has been a subject of debates and discussions in the academic world, thus there is still no consensus among psychologists on how it should be defined. The American Psychological Association refers to personality as specific differences in individual patterns of thoughts, feelings and behavior, which consists of two broad areas, such as individual variations in particular personality types, and identifying how different

parts of a human mind are combined together (Allport, 1961, Murray, 1938). Initially introduced by Thurstone (1934), the Five-Factor Model of personality, also called the Big Five, has later been strongly validated and gained increasing support within research community (Goldberg 1990; Goldberg, 1992; John et al., 1990; McCrae & Costa, 1987). Although several other dimensions of personality have been introduced and studied before, the Five-Factor Model became a well-established typology of personality factors (Goldberg 1993). Based on this model, the International Personality Item Pool (IPIP) developed into one of the most widely used personality measurement tools (Costa & McCrae, 2008; Goldberg et al., 2006). The Big Five traits are reported to be accurate across many domains and different contexts (Gerber et al., 2010; John et al., 1990). Furthermore, in a 45-year long study, Soldz & Valliant (1999) verified model's stability over the course of life. According to this model, personality of an individual can be described as a mixture of five particular traits, such as *Openness*, *Conscientiousness*, *Extroversion*, *Agreeableness* and *Neuroticism*.

Openness to experience (Openness) is generally associated with curiosity, imagination, intelligence and appreciation for culture. Individuals with high Openness scores are creative, open-minded, like new ideas, knowledge and experiences. On the opposite, people with low Openness tend to be conservative, modest, prefer familiar and traditional values (Barrick & Mount, 1991).

Conscientiousness can be defined as one's ability to be organized, efficient, and determined (Barrick & Mount, 1991). It measures individual's preference for a systematic approach to life in contrast to a spontaneous one. Usually described as consistent, reliable, and punctual, conscientious individuals enjoy planning, pursue long-term goals, and have a strong will for achievements (Costa & McCrae, 1992). Non-conscientious people tend to be more

spontaneous, relaxed, and easy-going. They are less concerned about plans and considered to be more tolerant (Costa & McCrae, 2008).

Extroversion was defined as a tendency to search for stimulation in the external world, while introversion, on the other hand, is characterized by preference of low levels of external stimulation. Extroverts are more outgoing, talkative, and sociable. They enjoy being in the center of attention, and make new friends more easily. Introverts prefer solitude, privacy, keeping their emotions inside and being in a smaller company (Costa & McCrae, 2008).

Agreeableness has been characterized as a tendency of being likable by others. Individuals with agreeable personality are usually described as friendly, helpful, cooperative, and forgiving; they trust people and adapt to their needs. People who score low on Agreeableness are considered to be non-compliant, more focused on themselves, and more confident in themselves. They are also less likely to compromise, less compelled by public opinion or social expectations (Costa & McCrae, 2008).

Neuroticism can be defined as emotional instability. Sometimes the term Emotional Stability is used to describe the same personality trait, but in an opposite way. Neuroticism refers to rapid mood changes, anxiety, depression and insecurity. Individuals who score high on Neuroticism are often feeling anxious, pessimistic, worried and unstable. Reversely, personalities scoring low on Neuroticism, or high Emotional Stability, are described as calm, less stressful and less nervous (Barrick & Mount, 1991; Costa & McCrae, 2008).

Thus, descriptions of personality traits can be summarized, as shown in table 1

Table 1

Summary of Big-Five Personality Factors

Personality	Low	High
Openness	conservative and traditional	liberal and artistic
Conscientiousness	spontaneous and impulsive	organized and hard working
Extraversion	contemplative	engaged with outside world
Agreeableness	competitive	trusting and cooperative
Neuroticism	laid back and relaxed	easily stressed

2.3.1. Personality traits and travel destinations

Since human interactions are one of the major components of service industry, personality traits play a substantial role in tourism area. Due to this fact, Leung and Law (2010), indicated that personality in relation to hospitality and tourism context has gained a significant interest within scientific community, as well as among practitioners. However, the authors found that most of the research based on the Five-Factor Model focused on employee and service staff personality. Literature research suggested that despite relation of travel destinations and Big Five personality traits is a fairly unexplored field, it is important to understand individual needs and wants of a tourist (Cohen, 2014; Leung & Law, 2010). As a result, several articles employing some of the Five-Factor taxonomy traits from traveler's perspective were analyzed, providing an interesting insight into how personality traits might affect travel behavior. Barnett (2006) found that gender, race and personality traits have significant impact on different types of leisure activity preferences. Namely, authors linked Extraversion with social activities, and Emotional Stability (low Neuroticism) was correlated with the preference for active sports. Research in

tourism area often related Openness to experience with novelty – familiarity continuum, indicating that high openness usually leads to novelty seeking, while conservative people may prefer familiarity (Lepp & Gibson, 2008; Leung & Law, 2010). From a tourists typology perspective, conscientiousness may be slightly related to organized mass tourism, while non-conscientiousness to venturous or drifter type. Ariffin et al. (2007), explored novelty preference for corporate meeting destination choice, and found that Openness and Agreeableness are significantly related to novelty destination choices. While openness to experience positively correlated with novelty-seeking, negative relation with agreeableness trait explained novelty-avoidance (Ariffin et al., 2007). Extraversion and neuroticism, on the other hand, have been found to have significant and positive effects on familiarity (Huang, Gursoy, & Xu, 2014). Different adventure travel types, such as soft-adventure, hard-adventure, luxury travel, and camping, have been reported to be influenced by different personality traits. Thus, agreeableness was found to be significant predictor of adventure in general, while motives for camping included conscientiousness and agreeableness traits (Scott & Mowen, 2007; Schneider & Vogt, 2012). According to Yoo and Gretzel (2011), extraversion, openness, agreeableness, and conscientiousness are all positively correlated to travel-related feedback and media creation, while neuroticism is found to be a barrier for the latter.

The literature review of previous empirical contributions to the topic indicates the existence of a significant relationship between the concepts of tourist typology and personality in general. Due to the universal nature of Five-Factor Model of personality (Costa & McCrae, 2008; Goldberg et al., 2006), the acknowledged need for a use of such underlying tool in travel behavior research (Cohen et al., 2014; Leung & Law, 2010), the current paper aims to explore the relationship between the two.

2.4. Proposed hypotheses and conceptual model

Based on review of the literature discussed above, the present study proposes the conceptual research model (Fig. 3) for a better understanding of relationships between the constructs, as well as the following hypotheses:

H1: Openness trait has a positive effect on Venturer typology

H2: Conscientiousness trait has a positive effect on Dependable typology

H3: Extraversion has a positive effect on social aspects of Dependable typology

H4: Agreeableness has no significant effects on traveler typology

H5: Neuroticism trait has a positive effect on Dependable typology

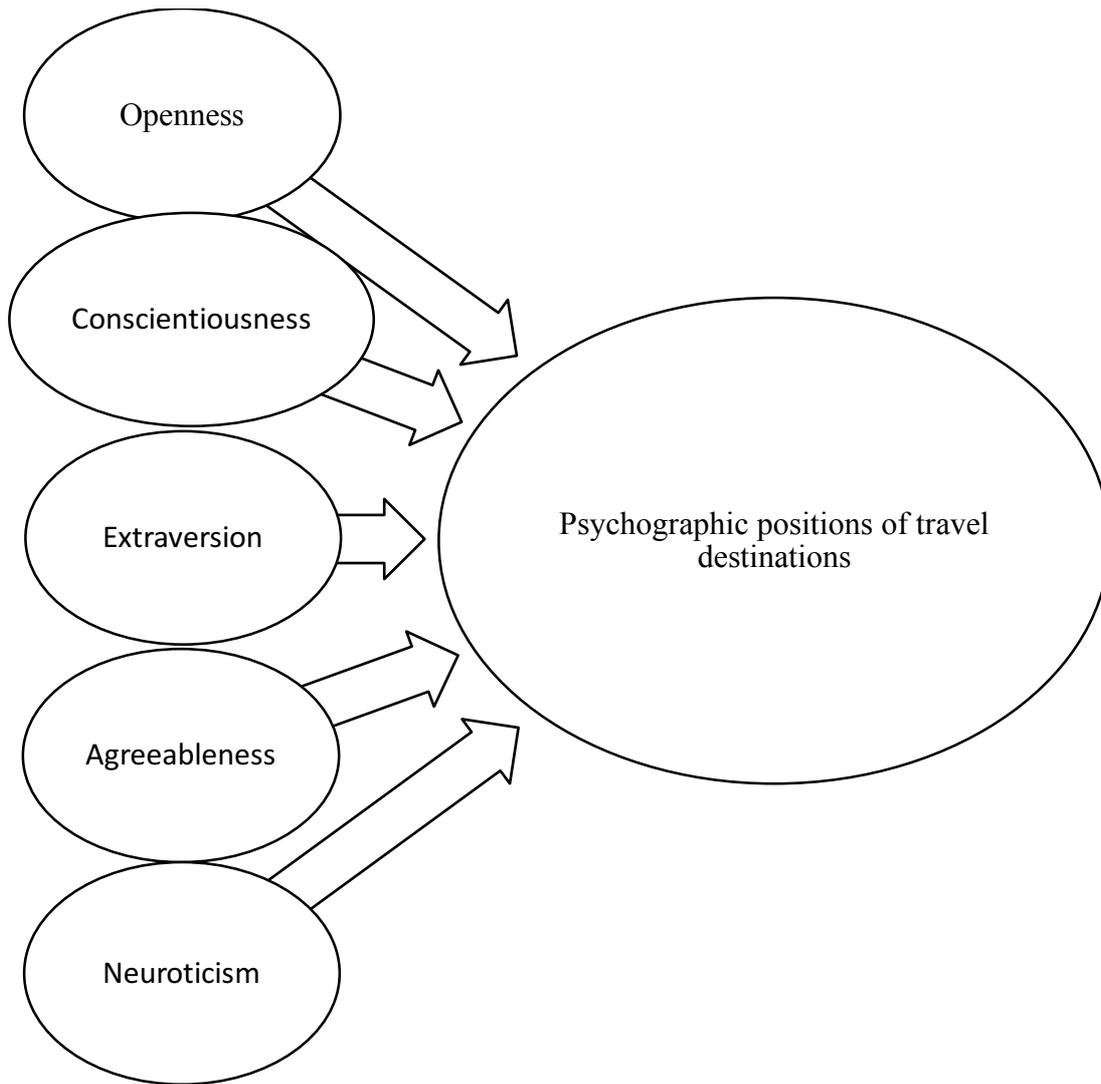


Figure 3. Conceptual model

3. Method

This section describes how the study was conducted in terms of design, sample, data collection and analyses. Five underlying personality factors that may influence individual's destination preferences have been identified. These factors include Openness, Conscientiousness, Extroversion, Agreeableness, and Neuroticism personality traits. In addition, it was hypothesized that personality traits can also predict belonging to certain tourist typology group. In order to analyze the relationship between these two constructs, the current research follows a study design and methods described further.

3.1. Design

In order to find meaningful answers to research questions a descriptive research design has been chosen, with individual's personality and travel destinations as the unit of analysis. According to Neuman (2014) research is an ongoing process that accumulates knowledge gradually over time, constantly improving understanding, producing valuable information, and reducing bias. Empirical evidence in social sciences is can be divided into qualitative and quantitative data. Quantitative research method relies on such data collection techniques as: experiments, surveys, content analysis, and existing statistical sources. This study follows surveys and existing statistical sources for collecting data. Survey is a data collection method that uses a questionnaire in order to record and obtain participants' answers. The collected responses are then summarized and presented for analysis. The obtained results from a sample can be generalized to a bigger group or the whole population. Existing Statistical Sources – is a data collection technique that address the research question by analyzing previously collected information in a new way (Neuman, 2014).

The current paper utilizes a descriptive research design, as the main purpose of this study is to find out a relation between independent and dependent variables. Psychographic position of travel destinations is a dependent variable, and Big-Five personality factors are independent variables. This study follows a quantitative research method by collecting data from secondary sources, such as myPersonality project database (Kosinski et al., 2015). Five-Factor personality scores (Goldberg et al., 2006) were obtained through online surveys on myPersonality Facebook application, using International Personality Item Pool (IPIP) for Costa and McCrae's (2008) NEO-PI-R questionnaire. Also, Facebook Likes that represent participants' interests, and basic demographic information, were recorded by the application and used for the purposes of this study.

3.2. Sample

As mentioned above, Big-Five Factor scores were obtained from myPersonality project, whose founders kindly granted an access to their databases for academic research purposes. MyPersonality was a popular Facebook application, which allowed users to participate in online psychometric surveys. In addition to psychological profiles, the application recorded users' Facebook profiles, which consisted of their age, gender, locale, and Facebook Likes. The survey participants were highly motivated to answer honestly and carefully because the only reward they received for participation was feedback on their personality results. Such approach would ensure high validity of the responses (Neuman, 2014). The database consists of nearly 6 million test results, and more than 4 million Facebook profiles, coming from respondents with different backgrounds, age groups, and cultures. (Kosinski et al., 2015). Around 3.1 million responses were collected by using IPIP questionnaires between 2007 and 2012. Since users were highly

motivated to get a feedback on their personality, the measures resulted to be quite reliable, with Cronbach's alpha >0.8 . Demographic data consists of 4.3 million profile details, including age, gender, relationship status, and geo-location information. Facebook Likes database consists of 19 million records, used to obtain individual travel preferences, such as destinations, activities, etc. Facebook Likes dataset has been analyzed using Plog's (2001) typology of tourists and classification of travel destinations. 44 Facebook Pages corresponding to Plog's psychographic positions of destinations (Fig. 2) were chosen for further analysis. Thus, present study focuses on a sample of 16615 individuals who "liked" or, in other words, expressed their positive association with selected destination pages. According to Pallant (2005) five cases per item is sufficient for most examples of data analysis. Another rule of thumb based on a number of individual predictors suggested that achieved sample would have an adequate size for desired power and effect sizes (Tabachnick & Fidell, 2013). The quantity of available information allowed to conduct the study on a considerably bigger scale than previous research on personality and travel behavior.

3.3. Data Collection

During research design, a lot of attention has been paid to tourism market segmentation approaches. Therefore, due to strong empirical support, Plog's (1974, 2001) delineation of tourist types was used as a basis for data collection in this study. The author of this paper decided to examine myPersonality Facebook Likes dataset for six categories of travelers, such as dependables, near-dependables, centric-dependables, centric-venturers, near-venturers, and venturers. Based on Figure 2, for each type of destination or activity, a corresponding online community on Facebook has been selected. These included official Facebook pages of

destination marketing organizations, national tourism organizations, tourist information offices, and travel-related businesses. As a result, fan pages listed in Table 2 were chosen for analyses, based on their conformity with Plog's tourist typology and reappearance in the dataset.

Table 2

Facebook Pages Included in Analyses

Typology	Facebook Pages
Dependable	Branson, Atlantic City, Myrtle Beach, Visit Orlando, VacationMyrtleBeach, Orlando - ALL STAR Vacation
Near-Dependable	Visit Las Vegas, Royal Caribbean International, Six Flags Magic Mountain, Universal Studios CityWalk - Hollywood, VISIT FLORIDA, Visit Miami
Centric-Dependable	Lake Tahoe Visitors Authority, visitPA, Discover South Carolina, Explore Georgia, Explore Chicago, Yellowstone National Park, Visit London, Rome - Italy, Hilton Head Vacation Rentals
Centric-Venturer	Visit Norway, Travel Oregon, Brazil, Hong Kong, Glacier National Park Montana, Link Paris
Near-Venturer	New Zealand 100% Pure, Costa Rica, Thailand, Visit South Africa, Tourism Ireland, Scottish Dream Tours, Global Expeditions, Australia
Venturer	Tourism Fiji, Vietnam Travel, Mountain Climbing, Tibet, Mount Everest

Facebook Like is a mechanism that allows social media users to express their positive association with an online content. According to Gretzel and Fesenmaier (2016), individuals "Like" a travel destination page on Facebook in order to express a genuine interest in it, and a travel company page to get the latest information about deals and offers. Thus, it was safe to

assume that fan page “Likes” reflect individuals’ preferences, or in our case - travel destinations. Assuming that being a fan of the Facebook community listed above indicates preference for such travel activity or destination, it was also considered as belonging to a corresponding tourist behavior typology. If participants liked a chosen Facebook page, then they scored 1 in a matching traveler type, otherwise they scored 0. In total 16615 participants who liked 44 different travel-related Facebook pages constituted a sub-sample for this study. More detailed statistics regarding frequency distribution of traveler types in corresponding groups can be found in Table 3.

The demographic information dataset was explored to identify age, gender, country of residence, relationship status. Age was provided by date of birth and by number of years in numerical form. The gender was coded as 0 = females, 1 = males. Relationship status was coded as 0 = single, 1 = in a relationship, 2 = married, and etc.

Personality was measured using 5-point Likert scales and Big Five Factors model (Goldberg et al., 2006). The IPIP versions of revised NEO-PI-R questionnaire (Costa and McCrae, 2008) were implemented in myPersonality application on Facebook, due to high reliability of the items on a large, international scale (Kosinski et al., 2015). Respondents participated in an online survey, assessing their own behavior description on a 5-point Likert scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). The IPIP tool measures all five dimensions of personality described in theoretical review. For example, items used to evaluate Openness included “I have a vivid imagination”, “I enjoy thinking about things”, “I do not like poetry” (negatively related); Conscientiousness – “I complete tasks successfully”, “I need a push to get started” (negative); Extraversion – “I do not mind being the center of attention”, “I make friends easily”; Agreeableness – “I am easy to satisfy”, “I hold a grudge”

(negative); Neuroticism – “I fear for the worst”, “I feel comfortable with myself”(negative).

Additionally, six secondary facet scores of each of the main personality domains were assessed.

As a result, the online test provided a report, consisted of a brief description of each personality dimension and individual’s score on them. Therefore, participants were motivated to answer honestly and thoroughly, in order to get an accurate description in return (Kosinski et al., 2015).

Which in addition to strong face, convergent, and discriminant validity of NEO PI-R tools (Costa & McCrae, 2008; Goldberg et al., 2006), ensures a high validity of this online version (Neuman, 2014).

3.4. Data Analysis

IBM SPSS Statistics 21 was used to analyze the data. First of all, Facebook Pages related to travel typology construct were identified and used for extensive data extraction process. 16615 individual user profiles out of 1.8 billion user-like associations were extracted from Facebook Likes dataset. The user profiles were then grouped into six categories of traveler’s types. Each group has been assigned with a number from 1 to 6 accordingly. This sub-sample was then merged with demographic (4.3 million records) and Big-Five personality scores (3.1 million) datasets. As a result, 16615 respondents, who expressed an interest in a certain travel-related online community, stated their age, gender, relationship status, country and responses to Big-Five personality traits questionnaire, have been chosen for further analysis.

A descriptive summary of each variable is represented with corresponding tables and figures. Internal consistency for the personality scale was tested by Cronbach’s alpha. In order to measure validity of the results factor analysis, correlation analysis and regression analysis were

utilized. Hypotheses were tested by finding relations between personality and each travel behavior type.

Due to the fact that participants were categorized into six groups of traveler types based on their Facebook likes (e.g. “liked” the page corresponding to the group or not), the data of tourist typology construct was categorical. Whereas Five Factor of Personality scores were measured with 5-point Likert scale. Thus, logistic regression analysis method was chosen as a tool that allows us to test the model of this study and to predict the categorical outcomes (Pallant, 2005). In order to accommodate the aim of the study, which is finding out if Big-Five personality traits are related to psychographic positions of destinations, and whether personality traits can predict the preference for these destinations based on the data obtained from social media, six different tourist typology groups were tested with logistic regression.

4. Results

This chapter describes details of the analyses and findings of this study. The description of the achieved sample is presented in the beginning, followed by an outline of descriptive statistics. The next section demonstrates the assessment of reliability and validity of the measurement instruments. The final section presents the results of the main analyses.

4.1. Achieved Sample

A total number of 16615 responses was collected. However, due to the fact that Plog's (2001) delineation of destinations was represented from American perspective (e.g. American beach resorts of South Carolina and Florida are considered as familiar, or dependable destinations), it was decided to narrow down the sample to respondents from the United States only. Country of origin was extracted from demographic information dataset, which has also improved the quality of the achieved sample, since a lot of non-traveler type of respondents were removed (for example, Australians who were fans of Australia destination page). After exclusion of invalid questionnaire results, 6778 responses, or 83.8% out of 8090, constituted the achieved sample of this study ($N = 6778$). The sample consisted of mostly female respondents (67%), while 33% were male. The mean age of respondents was 30 years old ($SD = 12.34$), with the minimum age of 15 and the maximum of 106. Regarding the relationship status, 50% of respondents were single, 22.5% in a relationship, and 20% - married. As mentioned above, all nationalities other than the US were excluded from the sample.

Regarding psychographic typology of the travelers, Near-Venturer, Near-Dependable, and Centric-Dependable types comprised the largest proportion of the sample, with 28.3%,

22.7% and 19.6% respectively. Such distribution was in line with Plog's (2001) description of tourist types, and was also reflected by repetitiveness of the travel-related fan pages on Facebook.

Table 3

Tourist Type Frequency

	Frequency	Percent	Valid Percent	Cumulative Percent
Dependable	1176	14.5	14.5	14.5
Near-Dependable	1834	22.7	22.7	37.2
Centric-Dependable	1588	19.6	19.6	56.8
Centric-Venturer	949	11.7	11.7	68.6
Near-Venturer	2286	28.3	28.3	96.8
Venturer	257	3.2	3.2	100.0
Total	8090	100.0	100.0	

Table 3 shows details about the number of respondents that represented each category of the tourist typology.

4.2. Descriptive Statistics

Five dimensions of personality were measured with a 40-item version of the IPIP, where each trait was represented by 8 items (Goldberg, 2006). A shorter version of the questionnaire was chosen due to a higher response rate, which resulted with a bigger sample, extracted for this study. Table 4 represents descriptive statistics for the scales of each of the Big 5 personality traits, such as Openness, Conscientiousness, Extroversion, Agreeableness and Neuroticism, labeled as *O C E A N* accordingly. More detailed statistics for construct and item level are given in **Appendix A**.

With scores slightly above the midpoint for conscientiousness, extroversion, and agreeableness scales, somewhat lower for neuroticism scale and above the midpoint for openness, the population analyzed in this study was on average organized, social, cooperative, and open to new experiences. These results are in line with the scores of general population (Costa & McCrae, 2008), except for extraversion scale, which is slightly higher in this sample.

Table 4

Descriptive Statistics

	Mean	<i>SD</i>	Variance	Skewness		Kurtosis	
				<i>SE</i>		<i>SE</i>	
O	4.0058	.64248	.413	-.623	.030	.219	.059
C	3.5685	.73995	.548	-.182	.030	-.334	.059
E	3.6998	.80653	.650	-.523	.030	-.136	.059
A	3.6415	.70406	.496	-.458	.030	-.061	.059
N	2.7418	.82410	.679	.164	.030	-.415	.059

$n = 6778$

Before the analysis, variance, skewness and kurtosis scores were assessed in order to evaluate the distribution of constructs and items. A rule of thumb of skewness and kurtosis scores below 2.58 in large samples was met (Field, 2005). With sufficient variance for all 5 constructs and negatively skewed distribution for all constructs except for neuroticism (which is usually negatively related to the rest), the measures were considered appropriate for further analysis (Tabachnick & Fidell, 1996).

4.3. Validation

Validation of the measurement instruments is the next step, which is essential to perform before analyzing the data. According to Neuman (2014), it is important to make sure that the items actually measure what is defined by constructs. The following section begins with reliability analysis, in order to evaluate the internal consistency of the constructs first (Churchill, 1979). The face, convergent, discriminant and nomological validity of the constructs were then assessed. Factor analysis was used for convergent validity assessment, correlations between constructs – for discriminant validity and nomological validity.

4.3.1. Reliability

Each of five dimensions of the personality was measured with 8 items. In addition, some of the items were initially worded negatively, and consequently the scales were reversed. Therefore, Cronbach's alpha was used in reliability analyses of personality constructs, in order to test the internal consistency of the measures. Table 5 demonstrates values of Cronbach's alpha for 5 measures of personality. Item-level results of the reliability analysis can be found in Appendix A.

Table 5

Reliability

	Cronbach's alpha
Openness	.678
Conscientiousness	.809
Extroversion	.823
Agreeableness	.784
Neuroticism	.834

For most of the constructs Cronbach's alpha value satisfied the requirements of reliability test, with acceptable scores ranging from .78 to .83 (Nunnally, 1978). Openness to experience trait demonstrated a slightly lower value of .68, which is still considered as satisfactory. The value of alpha if the item deleted does not improve significantly. The problem might have been in initially negatively worded questions, as inter-item correlations indicate good correlations between items that were reversed. In addition, shorter versions of the IPIP are known to have a slightly lower alpha values, whereas longer versions, such as 100-item or 336-item pool, score significantly higher on internal consistency with the same questions (Goldberg et al, 2006).

4.3.2. Face Validity

Face validity and content validity are commonly verified by recognition of the measures or constructs within the scientific community. In other words, if the study was based on "the shoulders of the giants", then it is more likely to measure what it is intended to measure (Churchill, 1979, Neuman, 2014). The current study was based on theoretical and methodological approaches that are widely acknowledged in academic world. The Five-Factor Model of Personality and the International Personality Item Pool is considered as fundamental and most widely used tool among researchers in psychology field (Costa & McCrae, 2008; Goldberg et al., 2006; John et al, 1990). Plog's psychographic typology of tourists and positions of destinations (1972, 2001) were developed, validated and improved over the course of several decades, gaining a strong support within tourism domain (Basala & Klenosky, 2001, Griffith & Albanese, 1996). The emergence of computational social science and the use of social media as a research tool become increasingly valued by academics and effectively utilized by large

companies (Kosinski et al, 2015, Lazer et al, 2009). Therefore, presence of face validity of measures in the present study can be asserted.

4.3.3. Convergent Validity

Principle component analysis have been carried out in order to demonstrate the convergent validity of personality dimensions. Sufficient Kaiser-Meyer-Olkin Measure of Sampling Adequacy value of .88 confirmed an adequate sample size (Pallant, 2005). Significant result of Bartlett's Test of Sphericity at .000 has also supported factorability of the measures (Pallant, 2005). As expected, one component has been extracted for each of the 5 constructs with eigenvalues exceeding 1, detailed structure of factor loadings is shown in **Appendix B**. The extracted components explained 43.3% of the total variance, varying from 6.5% to 9.8% (Table 6). The interpretation of the five components is consistent with the Five-Factor Model of personality. The results of factor analysis support the use of Big Five personality scales as separate scales (Pallant, 2005).

Table 6

Total Variance

Component	Total	% of Variance	Cumulative %
1	3,927	9,818	9,818
2	3,922	9,805	19,623
3	3,551	8,877	28,500
4	3,298	8,245	36,744
5	2,612	6,530	43,275

Note: Extraction Method: Principal Component Analysis.

4.3.4. Discriminant Validity

The aim of Pearson's correlations analysis carried out in this section is to demonstrate discriminant validity by showing that the constructs diverge (Neuman, 2014). Significant correlations that were found among all five measures of personality, are in line with discriminant validity requirement of all correlations to be significantly less than 1 (Burnkrant & Page, 1982). Table 7 presents outcomes of bivariate correlation analysis between five personality factors. In addition to presented divergence of the constructs, a negative correlation of Neuroticism with the rest of the factors confirmed nomological validity. As suggested by research in psychology (Goldberg et al, 2006), Neuroticism trait is reversely related to other traits of Big-Five personality model. Since the constructs behave as expected in theory, a nomological validity requirements are satisfied (Churchill, 1979). Further examinations of relations between the constructs outlined in the following chapter, extends the support for these statements.

Table 7

Correlations Between Personality Factors

	O	C	E	A	N
O	1				
C	.044**	1			
E	.161**	.165**	1		
A	.051**	.216**	.168**	1	
N	-.061**	-.330**	-.362**	-.380**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).

4.4. Findings

This section presents the results of logistic regression analysis and hypotheses test. As mentioned before, participants were categorized into six groups of traveler types based on their Facebook likes. Users who “liked” the page corresponding to each group were coded as 1, otherwise they were coded with 0. Due to the fact that personality traits measured with 5-point Likert scales were independent variables, and categorical values of psychographic positions of tourists were dependent variables, a logistic regression analysis was decided to be the most appropriate tool for the purposes of this study (Pallant, 2005). In order to answer the research questions, six different analyses for each group of tourist typology were carried out. Testing the hypotheses reveals how exactly five factors of personality are related to tourists typology and psychographic positions of destinations, and whether personality traits can predict the preference for these destinations, based on the data obtained from social media.

Relations between five personality factors and six categories of tourists also reveal how constructs interact with each other and provide further support for convergent validity, divergent validity and nomological validity.

4.4.1. Dependable

According to Plog (2001) dependables is the archetype of tourists on one end of the psychographic scale, with venturers on the other. It was hypothesized that this category of travelers would have the lowest score on openness trait (H1), high scores on extraversion (H3), conscientiousness (H2), neuroticism traits (H5), and not affected by agreeableness (H4).

To test these hypotheses, personality factors and dependable type were included in logistic regression. Zero-block test indicated that all five personality traits are predictive variables. Highly significant model chi-square shows predictive capacity, or in other words, the

model including the predictors (personality traits) is significantly better than the model without them (Field, 2005). The overall accuracy of classification demonstrates that the current model predicts 85.2% of the cases (Field, 2005). Details can be found in Appendix C. Coefficients for the predictors in the model are presented in Table 8.

Table 8

Logistic Regression Dependable

	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>Sig.</i>	Exp(<i>B</i>)
O	-.455	.052	76.332	1	.000	.635
C	-.046	.050	.858	1	.354	.955
E	.219	.047	21.637	1	.000	1.245
A	-.029	.053	.296	1	.587	.972
N	.187	.049	14.342	1	.000	1.206
Constant	-1.026	.420	5.981	1	.014	.358

Predictive Variables: O, C, E, A, N.

Significantly positive relations of extraversion and neuroticism traits with dependable type were found. Openness is significantly negatively related to this category. These findings confirm hypotheses H1, H3, and H5, however influence of conscientiousness (H2) was not confirmed. The neuroticism trait *B* value of .187 can be interpreted as a 1 unit increase on neuroticism score is associated with .187 increase in the logit variable, which in this case means being in dependable group (Field, 2005). However, it is important to mention that predictive capability of this model is based on inputs from all five personality traits combined (Pallant, 2005). The odds ratio of $\text{Exp}(B) = 1.206$ of belonging to dependables with 1 unit increase on neuroticism scale also depends on values of the remaining traits. The negative *B* value of openness trait indicates that it is reversely related to dependables. In other words, participants who

score high on openness to experience are less likely to be dependable, which is in line with theory and proposed hypothesis.

4.4.2. Near-Dependable

As expected, near-dependables were significantly and slightly less negatively influenced by openness trait. This type of tourist typology is also significantly related with conscientiousness and extraversion factors, as seen in Table 9. Significant values of omnibus tests of model coefficients indicate predictive capacity the overall model.

Table 9

Logistic Regression Near-Dependable

	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>Sig.</i>	Exp(<i>B</i>)
O	-.201	.045	19.766	1	.000	.818
C	.110	.042	6.721	1	.010	1.116
E	.139	.040	12.085	1	.001	1.149
A	-.019	.045	.186	1	.666	.981
N	-.067	.042	2.526	1	.112	.936
Constant	-1.088	.360	9.148	1	.002	.337

Predictive Variables: O, C, E, A, N.

4.4.3. Centric-Dependable

Regarding centric-dependable type, the omnibus tests of model coefficients did not return significant chi-square values ($r = .134$). Five factor personality scores do not seem to be accurately predicting this category, yet a general trend of declining relation with extraversion, neuroticism and increasing relation with openness persists (Table 10).

Table 10

Logistic Regression Centric-Dependable

	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>Sig.</i>	Exp(<i>B</i>)
O	-.007	.048	.019	1	.889	.993
C	.034	.044	.604	1	.437	1.035
E	.091	.042	4.828	1	.028	1.096
A	.055	.047	1.321	1	.250	1.056
N	.097	.044	4.931	1	.026	1.102
Constant	-2.309	.380	36.868	1	.000	.099

Predictive Variables: O, C, E, A, N.

4.4.4. Centric-Venturer

With significant ($r = .000$) chi-square value of omnibus tests, the logistic regression analysis indicates that personality traits are predictive for centric-venturer travel typology.

In addition, the significant values of openness trait now demonstrates a positive relation ($B = .264$), compared to negative in all three typologies described above. Significant and increasingly negative results are also found for extraversion and neuroticism factors. These finding support the notion that centric-venturers are more introverted and emotionally stable. Results are presented in Table 11.

Table 11

Logistic Regression Centric-Venturer

	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>Sig.</i>	Exp(<i>B</i>)
O	.264	.063	17.699	1	.000	1.302
C	-.067	.055	1.485	1	.223	.936
E	-.341	.050	46.198	1	.000	.711
A	-.064	.059	1.171	1	.279	.938
N	-.197	.055	12.924	1	.000	.821
Constant	-.863	.471	3.350	1	.067	.422

Predictive Variables: O, C, E, A, N.

4.4.5. Near-Venturer

With significant model prediction capacity (see Appendix C), openness and extraversion traits are also found to be significantly related to near-venturer type. The values of Exp(*B*) above 1 indicate that as the predictor increases, the odds of the outcome increase too, whereas if Exp(*B*) < 1, then with increasing score on personality trait, the odds of the outcome decrease (Field, 2015). As presented in Table 12, a positive and increasing impact of openness trait, further supports hypothesis H1.

Table 12

Logistic Regression Near-Venturer

	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>Sig.</i>	<i>Exp(B)</i>
O	.308	.044	48.577	1	.000	1.361
C	-.061	.039	2.489	1	.115	.940
E	-.118	.036	10.533	1	.001	.889
A	.040	.042	.890	1	.346	1.040
N	-.003	.039	.006	1	.938	.997
Constant	-1.655	.337	24.068	1	.000	.191

Predictive Variables: O, C, E, A, N.

4.4.6. Venturer

Finally, the venturer type, described by Plog (2001) as the opposite of dependables on psychocentric-allocentric spectrum, is most positively and significantly predicted by openness to experience. Neuroticism and extraversion are also significant predictors, yet demonstrate a negative relation. Significant omnibus tests value of $r = .010$ is considered acceptable (<0.5), indicating that the model is a significant fit for the data (Field, 2005).

Table 13

Logistic Regression Venturer

	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>Sig.</i>	<i>Exp(B)</i>
O	.337	.115	8.550	1	.003	1.401
C	-.006	.098	.004	1	.952	.994
E	-.191	.091	4.432	1	.035	.826
A	-.090	.105	.732	1	.392	.914
N	-.218	.098	4.906	1	.027	.804
Constant	-3.128	.855	13.382	1	.000	.044

Predictive Variables: O, C, E, A, N.

Summarizing the results, there is evidence that Big-Five personality traits are related to psychographic positions of traveler types. In five cases out of six, the regression analyses revealed that personality can predict individual's position on a tourist typology. However, each factor of personality behaves in a different way. There is a strong relationship between openness to experience and all kinds of venturers. The $\text{Exp}(B)$ value of openness dimension in centric-venturer (1.302), near-venturer (1.361), and venturer types (1.401) increases, increasing the odds of belonging to these groups. The same value of centric-dependable, near-dependable, and dependable types gradually decreases, indicating that there is a clear trend. Conversely, neuroticism and extraversion demonstrate a similar trend on a scale from dependable to venturer types, although it is less clear. Agreeableness did not demonstrate significant effects as expected, conscientiousness, however, has shown significant results only in near-dependable group.

Thus, hypotheses H1, H3, H4, and H5 were confirmed, while H2 was not. The fact that measures behaved as they were expected in theory has further supported validity of constructs (Churchill, 1979).

5. Discussion

Firstly, this chapter discusses the overall reliability and validity of findings presented above and how they answer the main research questions of this paper. Secondly, the main strengths and weaknesses of present research are outlined. Finally, discussion of theoretical, methodological and management implications of the findings is provided.

Long before the study began, the author of this paper had planned it to be standing on the shoulders of giants. The basis of this paper were most prominent and well-known theoretical contributions to different fields of research that are widely used and acknowledged in the

academic world. The literature review went through a scrupulous procedure of assessing each article this paper refers to. Only those published materials that satisfied rigorous quality requirements have been chosen for consideration. Firstly, the publications were checked if they come from a well-known, peer-reviewed scientific journal. Then, the impact of the articles in the academic world was assessed, including the number of citations, as well as reviews and validations by other researchers. As a result, the face validity was achieved, as described in section 4.3.2.

To sum up, the Big-Five personality scales used in this study were based on one of the most widely accepted models of personality (Goldberg et al, 2006). The measures of personality were highly reliable, with perhaps a little lower internal consistency among items measuring openness factor. In addition to strong face validity, personality measurement tools have also demonstrated strong convergent validity and discriminant validity. Due to the fact that the data on psychographic positions of travel destinations was categorical, it was not viable for testing internal consistency, or convergent validity using factor analysis. However, with strong face validity the constructs behaved as they were expected in the theory, providing support for nomological validity.

Plog's traveler types were described on a scale from dependables to venturers, with remaining four categories between the two extremes. Venturers were characterized as curious, seeking new experiences, prefer new products, etc. Dependables on the other hand are more conservative, cautious, and restrictive (Plog, 2001). These characteristics are notably similar to what is measured by openness to experience. In addition, such similarities between other factors of personality and psychographic types of tourist can be found. Venturers prefer to be alone, which is related to introversion (the opposite of extroversion). Dependables being uncertain and

with low self-confidence can be explained by neuroticism. Based on these assumptions, as well as other empirical contributions in tourism context, five hypotheses of this thesis were proposed. The aim of testing these hypotheses was to answer the main research question of this paper: “Does personality influence travel destination preferences, and how?” Perhaps, answering it explicitly and fully might seem a bit too ambitious, yet the present paper contributes to a better understanding of the relationships between personality traits, tourist types and travel destinations.

Mean values of each personality trait scores grouped according to psychographic positions of destinations are presented in Appendix D. It is noticeable how mean scores on the openness scale gradually increase from the lowest scores on dependable group to the highest on adventurer. A decreasing trend for extraversion and neuroticism can also be found, with some minor exceptions though. Same kind of findings were observed during logistic regression analyses, but they could not be interpreted as separate predictors, since logistic regression measures performance of the model as a whole (Pallant, 2005). This implies that personality traits interacted with tourist typology as it was hypothesized in the literature review, reflecting the existing theory. Thus, corroborating the notion of the validity of constructs. The predictive capacity of the model revealed in five out of six regression analyses, suggests that psychographic positions of travel destinations are not only influenced by personality factors, but can also be predicted by the latter. As a result, such traits as openness (H1), extraversion (H3), and neuroticism (H5) are found to have an impact on travel destination preferences. Agreeableness (H4) did not show significant effects, as it was assumed from the review of theory. Conscientiousness (H2) has demonstrated significant results only for near-dependable group, which was also anticipated, but in general this hypothesis was rejected.

5.1. Limitations

The present paper demonstrates strengths as well as weaknesses. Perhaps the data collection is the main contributor to both of them. As mentioned before, the data was not collected personally by the author by means of survey, but obtained from secondary source, namely myPersonality project database (Kosinski et al, 2015). The personality has been measured with well-established tools (Goldberg et al, 2006), and a remarkable sample size allowed to conduct this research on a significantly larger scale, than it was done before. On the other hand, the data on traveler typology or destination preferences could not be represented by ordinal scale, as it was not measured by survey, but recorded in categorical form. Participants who liked a Facebook page that corresponds to a certain group of Plog's typology scored 1 or 0, resulting in six types of travelers. Thus, the categorical type of data could not be tested for reliability by using Cronbach's alpha, or convergent validity by using factor analysis. Nevertheless, the results of the data analysis have demonstrated that the constructs were measuring what they are set out to measure (Churchill, 1979).

One might also speculate that information obtained from social media cannot represent individual's actual behavior. In other words, if a person "liked" a page on Facebook it does not indicate his preference for certain destination. However, several studies show empirical evidence that social media profiles reflect actual personality, not self-idealization (Back et al., 2010), Facebook can be actually used as a research tool (Kosinski et al, 2015), and that people "like" Facebook pages of tourist destinations or travel-related businesses in order to express their genuine interest or follow information about the offers (Gretzel & Fesenmaier, 2016). It can be argued that this kind of approach to conduct the study might involve research errors, or might not

be as accurate, compared to traditional ways of collecting the data. But it worth mentioning that every method has its advantages and disadvantages. In this case, the respondents participated in surveys in order to receive a feedback on their personality. They also “liked” certain pages without being monitored, and only later provided consent to record that information for academic research. These facts imply that there is a much smaller chance for bias errors in such approach, compared to a traditional.

Regarding the sample, initially this study consisted of 16615 responses from all over the world. But a large amount of them was not representative, since Plog positioned destinations from American tourist’s perspective. Also, some of the users might have liked their home country pages out of patriotic feelings instead of being interested in it as a traveler. This was especially noticeable among responses from Australia, Vietnam, and the UK. For these reasons, it was decided to clean up invalid results and narrow down the sample to respondents from the US only. A large amount of data to work with allowed to achieve a final sample of 6778 participants.

5.2.Implications

From theoretical perspective, exploring how five factors of personality are related to psychographic positions of travel destinations demonstrated that openness has the largest effect on a psychocentric - allocentric scale. The more individuals are open to experience the higher the likelihood of them to belong to venturer type. Reversely, more conservative personalities tend to be closer to dependables. This finding is not innovative, as relation of openness trait with novelty-familiarity continuum has been studied before. However, it confirmed that constructs interact with each other. In addition, a slightly smaller influence of neuroticism and extraversion

traits was found. Combined in a logistic regression analysis, the model based on all five traits has shown predictive capabilities. Each trait of the Five-Factor Model consists of several facets of personality, which can be measured with longer versions of the IPIP. The further research should explore whether a different combination of personality factors, or their facets will result in improved prediction capacity. Conscientiousness and agreeableness did not show significant results in most of the cases, yet their facets could also be explored deeper. Since the interaction between the constructs was confirmed, this model may be useful to explore psychographic positions of other destinations, or how a destination is perceived by a different population (e.g. from Asian perspective).

From methodological perspective, this study empirically supports the notion that social media can be a source of accurate data for research. Although the main research question was to find out whether personality has an impact on travel preferences, the present research was based on a data obtained from social media. Especially the psychographic positions of destinations were derived from Facebook Likes. The fact that the findings were in line with previous research in tourism domain implies that methods used in this paper actually work. This is not a surprise, since many academics claim that social media is a source of valuable research information (Back et al, 2010; Cohen et al, 2014; Kosinski et al., 2015). There are still many challenges to address, such as obtaining the data, testing it for validity and reliability, and most important if it can be representative of general population. But taking into consideration numerous advantages of large datasets and unbiased responses, methodological approaches utilized in this paper should be developed further. This will help to avoid limitations of traditional data collection techniques, improve prediction models across disciplines, and perhaps make a research process easier.

From a practical perspective, the main implications of this research would be related to marketing. The main reason for psychographic classification of tourist destinations was to find out why destinations rise and fall in popularity (Plog, 2001). According to Plog (2001), destinations go through a process similar to a product life cycle, first being discovered and popularized by venturers, rising in popularity towards centrals, and then falling as becoming dependable. Therefore, it is important to appeal to each type of travelers, and this is where personality comes in handy. Understanding a customer is essential for any kind of business. Targeting each type of tourists with a message based on their personality would be the most effective way of marketing a destination. This was the reason the author of the thesis has chosen this topic. Another reason is that Facebook can be not only a powerful research tool, but also a powerful marketing tool. Theoretical and methodological knowledge developed in this study could be and should be applied in current practical use. Big data and computational social science are the two areas where such knowledge is most commonly utilized (Lazer et al., 2009).

6. Conclusion

Despite the fact that Internet has become one of the major marketing channels for hospitality and tourism, a literature review revealed that there is a small number of published articles related to travel consumers' personality traits. The present paper has investigated the impact of personality characteristics, measured by Big Five Personality factors, on travel preferences, such as Plog's typology of tourists and psychographic positions of tourist destinations. The concept of psychographic typology of travelers described in literature review was found to have a lot in common with individual's personality. As it was hypothesized, most of the Big Five personality factors (Openness, Extraversion, and Neuroticism) have an impact on destinations preferences.

Most researchers agree that human relations are central to tourism and hospitality, therefore a better understanding the relationships between personality characteristics and travel behavior provides significant theoretical and practical implications. With the growth of social media platforms as one of the major marketing channels for tourism industry, many products and services can be improved to better fit the individual's personality. Understanding the personality of a customer and precisely targeting the key audience can significantly improve marketing efforts of travel-related businesses.

Thus, this topic presents an interesting area for further research.

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Appendix

Appendix A

Table A1

Personality Items, Descriptive Statistics and Reliability

Constructs and items	<i>n</i>	Items	<i>M</i>	<i>SD</i>	<i>α</i>	<i>α</i> if item deleted
<i>Openness</i>	6778	8			,678	
Have a vivid imagination O,+			4,44	,818		,642
Do not like poetry O,-			3,93	1,218		,646
Avoid philosophical discussions O,-			3,97	1,120		,643
Enjoy wild flights of fantasy O,+			3,87	1,181		,655
Can say things beautifully O,+			3,98	1,008		,651
Am not interested in abstract ideas O,-			4,06	1,065		,634
Enjoy thinking about things O,+			4,56	,736		,651
Do not enjoy going to art museums O,-			4,02	1,225		,661
<i>Conscientiousness</i>	6778	8			,809	
Complete tasks successfully C, +			3,97	,891		,777
Need a push to get started C,-			3,01	1,222		,784
Am always prepared C, +			3,35	1,061		,782
Shirk my duties C,-			3,74	1,096		,788
Do things according to a plan C, +			3,30	1,073		,807
Waste my time C,-			2,96	1,197		,783
Follow through with my plans C, +			3,76	,945		,785
Mess things up C,-			3,36	1,102		,792

<i>Extraversion</i>	6778	8			,823
Do not mind being the centre of attention E, +			3,46	1,173	,813
Make friends easily E, +			3,87	1,152	,793
Keep in the background E,-			3,16	1,196	,791
Avoid contact with others E,-			3,85	1,169	,802
Cheer people up E, +			4,32	,796	,818
Don't talk a lot E,-			3,69	1,257	,792
Warm up quickly to others E, +			3,73	1,128	,802
Have little to say E,-			3,92	1,133	,806
<i>Agreeableness</i>	6778	8			,784
Hold a grudge A,-			3,18	1,257	,758
Believe that others have good intentions A, +			3,70	1,013	,758
Cut others to pieces A,-			3,92	1,236	,748
Am easy to satisfy A, +			3,60	1,083	,772
Suspect hidden motives in others A,-			2,74	1,206	,768
Am concerned about others A, +			4,43	,791	,772
Get back at others A,-			3,58	1,225	,756
Make people feel at ease A, +			4,08	,870	,774
<i>Neuroticism</i>	6778	8			,834
Feel comfortable with myself N,-			2,32	1,180	,810
Often feel blue N, +			2,79	1,230	,809
Get stressed out easily N, +			3,14	1,289	,814
Am not easily bothered by things N,-			2,95	1,255	,831
Am relaxed most of the time N,-			2,45	1,120	,813
Dislike myself N, +			2,17	1,227	,807
Seldom feel blue N,-			3,08	1,205	,817
Fear for the worst N, +			2,85	1,351	,820
Positive wording of the item labeled +, negative with -					

Appendix B

Table B1

Factor Structure of Principal Component Analysis

	Component				
	1	2	3	4	5
Get stressed out easily N, +	.718				
Am relaxed most of the time N,-	.653				
Dislike myself N, +	.647				
Often feel blue N, +	.630				
Fear for the worst N, +	.622				
Seldom feel blue N,-	.614				
Feel comfortable with myself N,-	.588				
Am not easily bothered by things N,-	.527				
Complete tasks successfully C, +		.729			
Am always prepared C, +		.683			
Follow through with my plans C, +		.681			
Shirk my duties C,-		.636			
Waste my time C,-		.620			
Need a push to get started C,-		.609			
Do things according to a plan C, +		.578			
Mess things up C,-		.504			
Dont talk a lot E,-			.744		
Keep in the background E,-			.704		
Have little to say E,-			.656		
Make friends easily E, +			.654		
Being the centre of attention E, +			.642		
Warm up quickly to others E, +			.578		
Avoid contact with others E,-			.557		
Cheer people up E, +			.451		

	Component				
	1	2	3	4	5
Am not interested in abstract ideas O,-				.629	
Avoid philosophical discussions O,-				.585	
Have a vivid imagination O, +				.583	
Enjoy thinking about things O, +				.574	
Enjoy wild flights of fantasy O, +				.534	
Do not enjoy going to art museums O,-				.524	
Do not like poetry O,-				.511	
Can say things beautifully O, +				.480	
Cut others to pieces A,-					.654
Am concerned about others A, +					.646
Get back at others A,-					.633
Believe that others have good intentions A, +					.611
Hold a grudge A,-					.516
Am easy to satisfy A, +					.506
Suspect hidden motives in others A,-					.464
Make people feel at ease A, +					.430

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.^a

Positive wording of the item labeled +, negative with -

a. Rotation converged in 6 iterations.

Appendix C. Logistic Regression Analyses

Table C1.

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Model	Dependable	101.544	5	.000
	Near-Dependable	48.419	5	.000
	Centric-Dependable	8.434	5	.134
	Centric-Venturer	61.262	5	.000
	Near-Venturer	59.003	5	.000
	Venturer	15.069	5	.010

Table C2

Classification Table

Type	Yes	No	Overall Percentage
Dependable	1001	5777	85.2
Near-Dependable	1531	5247	77.4
Centric-Dependable	1332	5446	80.3
Centric-Venturer	778	6000	88.5
Near-Venturer	1916	4862	71.7
Venturer	220	6558	96.8

Note: Step 1. The cut value is .500

Yes indicates belonging to category, No - not

Appendix D

Table D3

Mean Values

Type		O	C	E	A	N
1. Dependable	<i>M</i>	3.8479	3.5238	3.7425	3.5984	2.8302
	<i>n</i>	1001	1001	1001	1001	1001
	<i>SD</i>	.67049	.72639	.81249	.70598	.84813
2. Near-Dependable	<i>M</i>	3.9528	3.6297	3.7739	3.6609	2.6741
	<i>n</i>	1531	1531	1531	1531	1531
	<i>SD</i>	.65858	.74409	.80371	.69528	.79665
3. Centric-Dependable	<i>M</i>	4.0087	3.5799	3.7348	3.6558	2.7624
	<i>n</i>	1332	1332	1332	1332	1332
	<i>SD</i>	.63893	.73937	.79208	.69535	.82207
4. Centric-Venturer	<i>M</i>	4.0760	3.5400	3.5482	3.6206	2.7152
	<i>n</i>	778	778	778	778	778
	<i>SD</i>	.63835	.71741	.80938	.74213	.81230
5. Near-Venturer	<i>M</i>	4.0868	3.5442	3.6618	3.6479	2.7565
	<i>n</i>	1916	1916	1916	1916	1916
	<i>SD</i>	.60291	.74752	.80533	.69449	.82902
6. Venturer	<i>M</i>	4.1218	3.5876	3.6461	3.6334	2.6536
	<i>n</i>	220	220	220	220	220
	<i>SD</i>	.60269	.76583	.80180	.74962	.87008
Total	<i>M</i>	4.0058	3.5685	3.6998	3.6415	2.7418
	<i>n</i>	6778	6778	6778	6778	6778
	<i>SD</i>	.64248	.73995	.80653	.70406	.82410

