

The Effects of Co-Creation and Satisfaction on Subjective Well-Being

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ABSTRACT

Co-creation is centered on the idea of the consumer as a creator of value, interacting with a company to “co-create” value. As the concept of co-creation gains popularity among many industries, it is receiving increased attention from researchers. Although many topics are being researched with this new topic, one of the essential missing links is what outcomes can be expected from participation in co-creation. By identifying the relationship between co-creation, satisfaction, and subjective well-being, service providers can change strategies and implement a platform for creating unique experiences, allowing tourists to become more physically and emotionally engaged.

An online survey using panel data from a commercial firm was used to gather 561 completed questionnaires. Co-creation, satisfaction, level of involvement, and subjective well-being were measured using different scales which have been adapted from previous works which are discussed in the literature review.

The analysis consisted of several steps including a profile of respondents based on descriptive statistics, a simple correlation analysis of all the summated variables, and simple correctional analyses which looked at the relationships between co-creation and satisfaction, co-creation and subjective well-being, and satisfaction and subjective well-being.

This study contributed to the growing body of knowledge in understanding the perceived value of tourism experiences by establishing a theory based empirical link

between co-creation and subjective well-being via satisfaction. This aspect of tourism experiences had not yet before been empirically demonstrated.

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Chapter 1

Introduction

Background of Study

Co-creation is an upcoming topic and trend in today's hospitality industry. As competitors continue to compete for business, a fundamental importance on customer interaction is becoming noticed as a key aspect of maintaining an advantage in the market. In studying co-creation, researchers are interested in finding what factors affect value creation and co-creation. There is also much emphasis on how and why customers participate in the co-creation process, and what are the customers' thoughts and feelings about interacting in the value adding services.

The concept of co-creation stems from the service-dominant logic proposed by Vargo and Lusch (2007). As opposed its counterpart, goods-dominant logic, service-dominant logic is focused on the exchange of service. Under service-dominant logic, one service is exchanged for another service as parties contribute to the creation process by sharing knowledge and resources. Through this interaction a more beneficial product or service is made, and value is added since resources are shared by both parties. Service-dominant logic embraces the ideals of value-in-use and co-creation. In this concept it is stated that, "the customer is always a co-creator of value," (Vargo and Lusch, 2006). This implies that, "value creation is always interactional and that together, the supplier and customers have the opportunity to create value through customized, co-produced, offerings," (Payne, Storbacka, & Frow, 2006, p. 96).

Value co-creation suggests that "consumption is co-produced by a supplier and its customers," (Wang, Hsich, & Yen, 2011, p. 135). It is connected with the idea that the time and effort tourists put into their travel planning are valued differently from other goods and services (Prebensen, Vitterso, and Dahl, 2013, p. 2). In other words, its main concern is that the more

involved someone is with a buying or planning process, the more value they will receive from the product or service, as they helped contribute to the final product. Co-creation believes that customers or tourists value the final product or service more after they have used some of their own personal resources and have had input in the product generating process.

The purpose of co-creation is for value to be created for both stakeholders (depending who is involved) and the setting. The goal is that the final product or service be valued more greatly after stakeholders have had the opportunity to add personal resources and have had input in the product or experience generating process. Co-creation involves changing the way the organization/provider interacts with individuals, including employees, customers or any stakeholder. It requires setting up new modes of engagement for these individuals, or experience environments, which allow these individuals to insert themselves in the value chain of the organization/provider. The idea of co-creation is to set free and combine the creative energies of many people, so that it transforms both their individual experience and the economics of the organization/provider that enabled it (Gouillart, 2010). In doing so, consumers collaborate with companies in order to empower themselves, exert influence, gain recognition and enjoy themselves. This is done so that consumers may voice their opinions about products and brands and serve as influencers that can shape brand conversations worldwide.

While participating in co-creation, the tourist or customer brings in various types of personal resources such as time, effort, money, and knowledge. Through the interactions and assistance in the value creation process, the tourist as a consumer then becomes part producer as opposed to a mere user. It is believed that the more the customer puts into an experience, through time and effort, the more they will acquire in terms of positive experience value (Prebensen *et al.*, 2013, p. 2). The converging of activities between supplier and producer create

such a method of co-creation that it guarantees the delivery of ‘unique’ value to customers, as no two customers will ever experience the same added-value since every interaction is different (Cova, Dalli, & Zwick, 2011, p. 233). Table 1.1 provides definitions of the characteristics of co-creation.

With the expected benefits of co-creation, it can be questioned as to what influence this process will have on a tourist’s quality of life, or more specifically on their subjective well-being. Thus, the study aims to investigate the effects of co-creation and experience outcomes such as satisfaction, involvement, and subjective well-being of the tourist as a consumer.

Characteristics of Co-creation

Based on the following literature review, co-creation can be defined by four concepts:

Table 1.1: Characteristics of Co-creation

<p>Collaboration between the Company and the Customer To create value by developing a personalized, unique, experience for customers</p>
<p>Emphasizes the Co-Production of New and Improved Products Including their features and attributes with customers’ direct involvement in the idea-generation, and concept development stages of the innovation process</p>
<p>Value-Creation is Moving from a Goods-Dominant Logic to a Service-Dominant Logic Where the customers and their experience are the key as customers seek out personalized value to satisfy their situational needs</p>
<p>It is Ongoing, Adaptable, Personalized, and Unique Firm-centric innovation is being put to the side, and rather experience environments are used to generate value by continuously working with individual customers</p>

Theoretical Foundation

Goods-Dominant Logic and Service-Dominant Logic

While goods-dominant logic strives to maximize profit through the efficient production and distribution of value-added products, under service-dominant logic, one service is exchanged for another service as parties contribute to the creation process by sharing knowledge and resources. Through this interaction a more beneficial product or service is made, and value is added since resources are shared by both parties.

Co-creation revolves around the idea that, “the customer is always a co-creator of value,” (Lusch & Vargo, 2006, as cited by Cova & Salle, 2008, p. 271). The concept of co-creation stems from many theories, especially goods-dominant logic transforming into service-dominant logic. As more focus is placed on the customer and less on the products themselves, firms must find ways to enhance the customer experience and include them in the product/service delivery. In this manner, each interaction between the customer and organization/provider is different, therefore each delivery is ‘unique’; no two value-creations will ever be the same (Cova, 2011, p. 233).

Today’s co-creation research is greatly focused on the role of the customer and the firm/provider in the co-creation process. Contrary to popular belief, it is not the customers who get opportunities to engage themselves in the supplier's process, but the supplier who can create opportunities to engage itself with its customers' value generating process (Grönroos, 2008, p. 299). This expands the original theory by Lusch and Vargo to say, “The customer is always a co-creator and suppliers only create the resources that make it possible for customers to create value for themselves (Cova *et al.*, 2008, p.271).” In this manner, value is no longer produced by the provider, but by the customer value generating process (Grönroos, 2008, p. 299).

The Descriptive Co-creation Framework

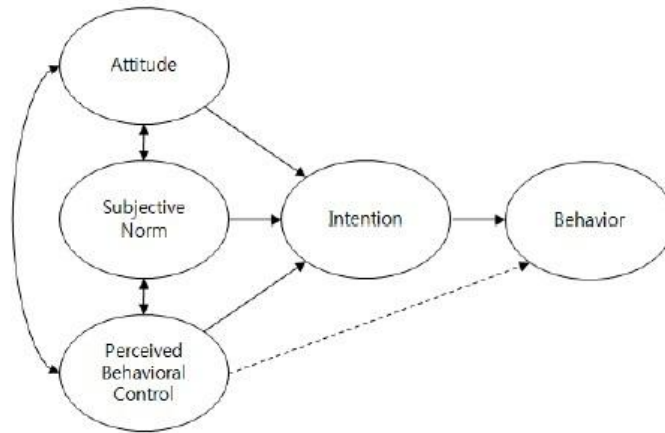
The descriptive co-creation framework designed by Etag (2008) is frequently used in co-creation research. This framework consists of five stages: the development of antecedent conditions related to macro-environmental factors and changes in consumer culture, the development of motivations that encourage consumers to engage in co-creation, the calculation of co-creation cost benefits, activation during which consumers become fully engaged in the co-creation activities, and the generation of outputs and evaluation of the co-creation process (Shaw *et al.*, 2011, p. 209). This framework not only highlights the stages of the co-creation process, but links it with many fundamental principles of service-dominant logic.

Theory of Planned Behavior

The theory of planned behavior identifies three traits that help predict when someone is likely to carry out a behavior: (1) such a behavior will lead to a desired outcome value, (2) their important referents will value and approve of the behavior, and (3) they have the necessary resources, abilities, and opportunities to perform such behaviors (Lee, 2012, p. 30). These traits in turn, set the stage of the theory of planned behavior as the main antecedents for predicting intended behavior and have been since labeled, attitude toward behavior, subjective norm, and perceived behavioral control. This theory is relevant to co-creation as it has already been used and shown applicable in many contexts, including some from the hospitality and tourism industry. This theory is particularly beneficial in depicting the antecedents of co-creation as it explains why people have an intention to perform a particular behavior.

Figure 1.1 illustrates the theory of planned behavior as developed by Ajzen, 1991:

Figure 1.1: The Theory of Planned Behavior (Ajzen, 1991)



Statement of the Problem

Thus, the theoretical underpinning of the study is guided by a combination of both the service-dominant logic framework and the theory of planned behavior.

As the concept of co-creation gains popularity among many industries, it is receiving increased attention from researchers. Many researchers are interested in the antecedents that come before the co-creation process has begun, as well as the attributes which affect the co-creation process. In particular researchers desire to discover what factors affect value creation and co-creation. There is also much emphasis on how and why customers participate in the co-creation process, and what are the customers' thoughts and feelings about interacting in the value adding services. With increased research, many debates have risen such as what is the consumer's role in co-creation, and if the consumer is now viewed as a producer, what is the role of the supplier/provider?

Other research questions whether or not co-creation really exists. This stems from the fact that consumers might not always realize that they are assisting in the value creation process.

Another cause of disbelief in co-creation is that it is hard to define and often times does not vary greatly from standard customer service. Further studies are concerned with how to entice consumers to take part in the interaction process which is vital to the existence of co-creation, and others focus on how much enjoyment consumers receive from taking part in such interactions. The nature of experiences in tourism and hospitality is as such that the simultaneous production and consumption of goods and services naturally leads tourists as consumers to be part of the production system.

With the growing focus on co-creation, these are just a few of the main topics that have been introduced and have begun to be studied. However, since the concept of co-creation is so new it remains unknown as to what constitutes co-creation, what causes it, and how individuals may get involved. Also, the after effects of co-creation are unknown as currently even the antecedents are undefined. If benefits of co-creation cannot be determined, then it will be harder for suppliers to entice consumers to participate in the co-creation process and some suppliers will not believe setting up platforms for co-creation will be worth the effort without realizing benefits which come from it.

While it is believed that the more the customer puts into an experience, through time and effort, the more they will acquire in terms of positive experience value, there is no concrete evidence supporting this speculation (Prebensen *et al.*, 2013, p. 2). Additionally, since the topic is relatively new, there are many concepts which are not yet agreed upon and many scholars hold to their own personal beliefs and ideas as information and data are collected. Without a concrete base for conducting research, there is a wide variety of opinion and hypotheses that are being explored. The purpose of this thesis is to examine the underlying dimensions of the construct of co-creation and its effects on behavioral consequences such as satisfaction, involvement, and

subjective well-being of the tourist. In doing so, the results of the study may help tourism companies/providers/destinations to establish policies supporting co-creation, provide greater direction for future research, and help enhance the subjective well-being, and overall life, of tourists.

Research Questions

The research questions being asked in this investigation are:

1. What are the underlying dimensions of co-creation in the context of the tourism experience?
2. In what ways does the level of participation in co-creation affect how satisfied a tourist becomes with his/her vacation experience?
3. How does the level of participation in co-creation affect the impact satisfaction has on a tourist's subjective well-being?
4. In what ways does the level of participation in co-creation affect a tourist's subjective well-being?

Objectives of this Study

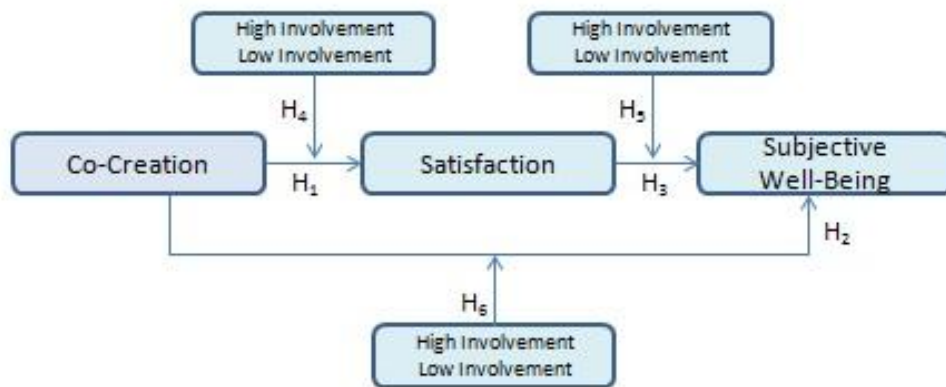
The research objectives of this investigation are:

1. To investigate the relationships between: participation in co-creation and satisfaction with the vacation experience, participation in co-creation and a tourist's subjective well-being, and satisfaction with the vacation experience and a tourist's subjective well-being.
2. To explore how the levels of participation in co-creation affect: how participation in co-creation influences satisfaction with the vacation experience, how satisfaction with the vacation experience influences subjective well-being, and how participation in co-creation influences subjective well-being.
3. To test whether the proposed model is appropriate to predict the influence co-creation has on a tourist's subjective well-being.

Model

From the proceeding literature review, the following model was created to reflect the study questions, regarding its dimensions, and expected outcomes. The model looks at the relationship between co-creation and satisfaction and the effects on subjective well-being, either directly or indirectly.

Figure 1.2: Co-creation Model and the Relationship with Satisfaction and the Impact on Subjective Well-Being



Contribution of this Study

This study will create a better understanding of co-creation and creating value in experiences by providing a clearer definition of co-creation and observing the aftereffects from the co-creation process in the context of the tourism experience. With a more concrete definition of co-creation, tourism researchers will be able to find common ground in which to conduct research and will be able to establish co-creation as its own unique topic instead of merely a fad, or as another term for customer service. A greater knowledge of co-creation and how it functions will help develop the roles for both the setting and tourists as it will be learned what causes co-creation and what procedures exist in the process of participating in co-creation. With clear roles, the co-creation process can be taught to service providers and tourists so that the

process may be adopted and implemented within the hospitality and tourism industry so that experiences may become more personalized. These teachings will then yield more successful service delivery and therefore customer satisfaction and loyalty as an end result. Only with these understandings can the positive benefits for firms and tourists be understood ensuring that society is utilizing co-creation to capacity.

As these positive benefits are expected to primarily be seen through increases in a tourist's subjective well-being, a greater understanding of co-creation will yield answers as to how to improve not only a tourist's experience, but their quality of life. As tourists more greatly understand the co-creation process and how they may participate, they will gain a larger say in their vacation experience. As a result, each aspect of their trip will be personalized to fit their needs and lifestyle and they will not have to sacrifice any aspect which results from selecting from prepackaged alternatives. With increased interaction with the service provider in the vacation planning process, the setting can learn better how to work alongside of tourists and tourists will be more willing to participate in the co-creation process. As a result, it could be measured as to how participation in the vacation planning process affects one's quality of life, in particular, subjective well-being.

The study will contribute to the growing body of knowledge in understanding the perceived value of tourism experiences by establishing a theory based empirical link between co-creation and subjective well-being via satisfaction. This aspect of tourism experiences has not been empirically demonstrated. Firstly it will rate the different attributes of co-creation according to each individual's experience with co-creation. Next tourists' satisfaction with the co-creation experience as well as overall vacation experience will be calculated to see the influence collaboration has on overall satisfaction. Then the study will measure the level to

which respondents agree or disagree with statements regarding their quality of life both during and after their vacation experience. Lastly, the study measures co-creation based on the level of involvement, regarding how much input the tourist had in the development of their vacation experience and how much cooperation and sharing was done between both parties in the planning/development process. Therefore with hard evidence, it can be further proven that co-creation does exist and should be considered a topic of its own. This evidence will become even more valuable if it can be shown that co-creation positively affects a tourist's subjective well-being.

Definitions of Terms

Co-creation

Co-creation is characterized by four main components. The first is collaboration between two parties, typically between the service provider and the tourist. The goal of this collaboration is for value to be created by developing a personalized, unique, experience. The second is that it emphasizes the co-production of new and improved products/services, including their features and attributes with tourists' direct involvement in the idea-generation, and concept development stages of the innovation process. The third is concerned with the fact that value-creation is moving from a goods-dominant logic to a service-dominant logic. In this method, tourists and their experiences are the key as customers seek out personalized value to satisfy their situational needs. Lastly, co-creation is ongoing, adaptable, personalized, and unique. As so, firm-centric innovation is being put to the side, and rather experience environments are used to generate value by continuously working with individual customers.

In this particular study co-creation is measured with five items that are reflective of these concepts which focus on the tourist's need for social interaction, their comfort level while

working with a travel professional, how easily the setting allowed co-creation to occur, the enhancement of the vacation experience as a result of the tourist's participation in the selected activity, and the tourist's confidence in their ability to collaborate with a travel professional.

Satisfaction

The fulfillment or gratification of a desire, need, or appetite. In service, satisfaction refers to how products or services meet or exceed the expectations of the tourist.

Subjective Well-Being

The general well-being of people and societies. It is not only concerned with monetary issues, such as income and standards of living, but incorporates the environment, physical and mental health, education, recreation and leisure time, and social belonging all of which affect an individual's daily life (Uysal, Perdue, Sirgy, 2012).

Chapter 2

Literature Review

As the concept of co-creation gains popularity among many industries, it is receiving increased attention from researchers. Many researchers are interested in the antecedents that come before the co-creation process has begun, as well as the attributes which affect the co-creation process. With increased research, many debates have risen such as what is the consumer's role in co-creation, and if the consumer is now viewed as a producer, what is the role of the supplier? Some research questions whether or not co-creation really exists, mainly due to the fact that consumers might not always realize that they are assisting in the value creation process. Other studies are concerned with how to entice consumers to take part in the interaction process which is vital to the existence of co-creation, and others focus on how much enjoyment consumers receive from taking part in such interactions.

Introduction

Co-creation is an upcoming topic and trend in today's hospitality industry. As settings continue to compete for business, a fundamental importance on tourist interaction is becoming noticed as a key aspect of maintaining an advantage in the market. In studying co-creation, researchers are interested in finding what factors affect value creation and co-creation. There is also much emphasis on how and why tourists participate in the co-creation process, and what are the tourists' thoughts and feelings about interacting in the value adding services.

The concept of co-creation stems from the service-dominant logic proposed by Vargo and Lusch (2007). As opposed its counterpart, goods-dominant logic, service-dominant logic is focused on the exchange of service. Under service-dominant logic, one service is exchanged for another service as parties contribute to the creation process by sharing knowledge and resources.

Through this interaction a more beneficial product or service is made, and value is added since resources are shared by both parties. Service-dominant logic embraces the ideals of value-in-use and co-creation. In this concept it is stated that, “the customer is always a co-creator of value,” (Vargo and Lusch, 2006). This implies that, “value creation is always interactional and that together, the supplier and customers have the opportunity to create value through customized, co-produced, offerings,” (Payne, Storbacka, & Frow, 2006, p. 96).

Value co-creation suggests that “consumption is co-produced by a supplier and its customers,” (Wang, Hsich, & Yen, 2011, p. 135). It is connected with the idea that the time and effort tourists put into their travel planning are valued differently from other goods and services (Prebensen *et al.*, 2013, p. 2). In other words, its main concern is that the more involved someone is with a buying or planning process, the more value they will receive from the product or service, as they helped contribute to the final product/service. Co-creation believes that tourists value the final product or service more after they have used some of their own personal resources and have had input in the product/service generating process.

While participating in co-creation, the tourist brings in various types of personal resources such as time, effort, money, and knowledge. Through the interactions and assistance in the value creation process, the tourist then becomes part producer as opposed to a mere user. It is believed that the more the tourist puts into an experience, through time and effort, the more they will acquire in terms of positive experience value (Prebensen *et al.*, 2013, p. 2). The converging of activities between supplier and producer create such a method of co-creation that it guarantees the delivery of ‘unique’ value to customers, as no two customers will ever experience the same added-value since every interaction is different (Cova, Dalli, & Zwick, 2011, p. 233).

With the growing focus on co-creation, these are just a few of the main topics that have been introduced and have begun to be studied and understood. Since the topic is relatively new, there are many concepts which are not yet agreed upon and many scholars hold to their own personal beliefs and ideas as information and data are collected. Without a concrete base for conducting research, there is a wide variety of opinion and hypotheses that are being explored. The aim of this literature review is to summarize the current findings to date, compare what has been found, and create a model through which empirical data may be collected in order to identify attributes which may be used to measure co-creation, develop a deeper understanding of co-creation and creating value in experiences, and contribute to the growing body of knowledge in understanding the perceived value of tourism experiences.

Theories

Co-creation revolves around the idea that, “the customer is always a co-creator of value,” (Lusch & Vargo, 2006, as cited by Cova & Salle, 2008, p. 271). The concept of co-creation stems from many theories, especially goods-dominant logic transforming into service-dominant logic. As more focus is placed on the customer and less on the products themselves, firms must find ways to enhance the customer experience and include them in the product delivery. In this manner, each interaction between the customer and organization is different, therefore each delivery is ‘unique’; no two value-creations will ever be the same (Cova, 2011, p. 233).

The theory of planned behavior does not measure actual behavior, but rather what determinants can explain the co-creation intention formulation. Many previous hospitality and tourism studies have used the theory of planned behavior in explaining tourists’ intentions to travel and participate in certain activities. Therefore Lee (2012) adopted the model in the context of tourism co-creation to provide a model of tourist co-creation intention explaining what factors

influence tourists to have the intention to become involved in tourism co-creation (p. 32). In adopting the model, Lee (2012) replaced attitude as originally proposed in the theory of planned behavior with perceived benefits and perceived costs as the determinants of intention to co-create. This was done to further examine how tourists evaluate the outcome of a particular behavior based on their perceptions of benefits and costs associated with that behavior. One's behavioral outcome is defined to be "the difference between the perceived benefits and costs and intention toward a specific behavior" and is found to increase when the difference is positively higher (Lee, 2012, p. 36). The cost/benefit analysis conducted by a tourist postulates that an individual's intention to co-create will be influenced by their evaluation of perceived benefits (Lee, 2012, p. 37). In addition to modifying attitude, Lee (2012) added the ability to co-create as an indicator of intended behavior.

In conclusion of his study, Lee (2012) found support of all of his hypotheses. It was found that perceived benefits, subjective norms, and ability to co-create were identified to have significant positive impacts on the intention to co-create. On the other hand, perceived costs had a significant negative impact on the intention to co-create, giving support to the last hypothesis (Lee, 2012, p. 79). In general, the co-creation model proposed and created by Lee (2012) illustrates that the four antecedent constructs (perceived benefits, perceived costs, subjective norm, and ability to co-create), are all effective predictors for the intention to co-create. Therefore Lee's model (2012) is useful in predicting tourists' intention to participate in co-creation activities in the context of tourism.

Pine and Gilmore (1998, 1999) studied the growing importance of consumer experience and how it must be enhanced in order to satisfy the customer. In developing a memorable experience, they found that excellent design, marketing, and service delivery are a must both for

consumer participation and for the connection which links the customer to the experience event. This relates to co-creation, and getting consumers involved, so that they can remember the experience and are satisfied with the level of service they receive (Shaw, Bailey, & Williams, 2011, p. 209).

Today's co-creation research is greatly focused on the role of the tourist and the setting in the co-creation process. Contrary to popular belief, it is not the tourists who get opportunities to engage themselves in the service provider's process, but the service provider who can create opportunities to engage itself with its tourists' value generating process (Grönroos, 2008, p. 299). This expands the original theory by Lusch and Vargo to say, "The customer is always a co-creator and suppliers only create the resources that make it possible for customers to create value for themselves (Cova *et al.*, 2008, p.271)." In this manner, value is no longer produced by the setting, but by the tourist value generating process (Grönroos, 2008, p. 299). Additionally, as value is generated primarily by the tourist, co-creation could be expanded to be the coming together of any two parties, whether it is the tourist and the travel professional, or two tourists, in an attempt to create additional value in an experience.

Lusch and Vargo (2007) developed six key factors that impact a tourist's contribution to the co-creation process: expertise, control, consumer capital, experiential benefits, economic benefits, and time (Shaw *et al.*, 2011, p. 209). If settings can learn to engage these factors and incorporate them into the service offering, then they will gain a competitive advantage as each setting will have more resources in order to get tourists involved in the value creation process.

Concepts

How is Value Created and What is Value Co-creation

Value creation is "a process through which the user becomes better off in some respect or which increases the customer's well-being" (as cited in Vargo *et al.*, 2008, by Grönroos, 2011, p. 282). Grönroos defines value creation as, "the customer's creation of value-in-use," (Grönroos, 2011, p. 282). Others believe that, "there can be no value without the customers incorporating the firm offering into his or her life," (as cited in Vargo and Akaka, 2009, by Grönroos, 2011, p. 287). This indicates that value is created by the user, who is also the one to experience the added value, and therefore the user determines what and how much value is created. However, "the service provider could be invited to join in this process as a co-creator," (Grönroos, 2008, p. 288). Therefore it is the setting that gains the most from value creation, as tourists are the creators, and settings only benefit when they are invited to participate in the process with tourists (Grönroos, 2011, p. 296).

Co-creation is defined as "a constructive customer participation in the service creation and delivery process requiring meaningful and co-operative contributions," (as cited in Auh, Bell, McLeod, and Shih, 2007, by Shaw *et al.*, 2011, p. 208). Vargo and Lusch (2006) believe that value co-creation suggests that "there is no value until an offering is used - experience and perception are essential to value determination," (Vargo, 2008, p. 148). These definitions indicate that for co-creation to take place both the tourist and the setting must be involved and cooperatively work together in order to create a better service or product offering, which in turn will enhance the value for the tourist.

In Shaw, Bailey, and Williams (2011), the authors used a series of case studies in order to demonstrate how the process of co-creation is changing, and to show the importance of the

tourist as an operant. The case studies were obtained from a survey that was part of a research project focusing on internationalization and innovation in the hotel industry (Shaw *et al.*, 2011, p. 210). In the study, interviews with a focus on innovation, knowledge, and co-creation were given. Further studies were conducted in an attempt to see value co-creation in action as certain hotels placed Apple products in certain rooms in order to see how customers used them. In doing so, customers were explained that it was a trial basis and hotels asked for guest feedback. This alone had the tourists involved in the process, but in doing so, the hotels learned what the guests would like to see, and how they can make the overall stay more interactive and beneficial for the tourist, thus increasing their participation in co-creation, which in turn enhances their overall satisfaction (Shaw *et al.*, 2011, p. 211).

Value-in-Use and Exchange-Value

Aristotle was the first to consider value-in-use and exchange-value; however he was never able to fully understand the latter. He only got as far as deducing that "although something holds parties of exchange together, it does not hold the same value as the substance exchanged" (Vargo, 2008, p. 147). Adam Smith (1776) noted that value can have two different meanings: the utility of some particular object and the power of purchasing other goods which the possession of that object conveys. Based on the two definitions, he established 'value-in-use' and 'value-in-exchange' (Vargo, 2008, p. 147).

Grönroos (1979) makes a clear distinction between value-in-use and exchange-value by stating that a service has use value, while a good has exchange value (as cited by Grönroos, 2011, p. 299). Value-in-use refers to qualities, and can mean different things to different people. Grönroos believes value-in-use "means that the customer as the user is the party in a business engagement that creates value," (Cova *et al.*, 2011, p. 237). Value-in-use occurs as settings

provide tourists with resources for their use, therefore creating a value foundation. When tourists use these resources and add other resources (such as their own information or services) and skills, the value potential of the resources is developed into value-in-use (Grönroos, 2011, p. 303). An example in the tourism industry would be a travel company giving the tourist different options and from those options the tourist is able to pick and choose in order to create their vacation package. During this process the tourist will also think about what they want to do, the time frame they have in which to do it, and how certain experiences will benefit their trip and life. Ballantyne and Varey (2006) add that interaction between the customer and supplier is critical in this process as it is a “generator of service experience and value-in-use,” (as cited by Grönroos, 2011, p. 304).

On the other hand, exchange-value is more difficult to understand and measure because it relates to quantities (Vargo, 2008, p. 146). Service-dominant logic also considers exchange-value and views it as, "when goods are involved, they are tools for the delivery and application of resources," (as cited in Vargo *et al*, 2006, by Vargo, 2008, p. 147). Smith's concept of productive activities (1776) focused on the output of tangible resources, within the good being embedded with utilities (creating an exchange-value). This was accepted by most scholars, and became the groundwork for economics as we know it today (Vargo, 2008, p. 147).

Sheth and Mittal (2004) attribute the tourists to holding three roles and classify each role as either value-in-use or exchange value. When tourists are the users they are taking part in value-in-use. When tourists act as the buyers they are taking part in value-in-exchange. Lastly, when tourists serve as payers they are participating in both value-in-use and value-in-exchange (Shaw *et al.*, 2011, p. 210).

Service-Dominant Logic

With the concept of co-creation and a greater focus on the tourist than on the product/service, service has moved from a goods-dominant approach to a service-dominant approach. The new dominant logic for marketing is service-based dominant logic, which can be shortened to service logic (Grönroos, 2011, p. 284). It is tied to the value-in-use concept, where the setting and tourists have no defined roles, but interact together to co-create value (Vargo, 2008, p. 146). Under this new service concept, “marketing is moved from a ‘market to’ philosophy where tourists are promoted to, targeted, and captured, to a ‘market with’ philosophy where the tourist and setting are collaborators in the entire marketing process,” (as cited in Lusch & Vargo, 2006, by Cova *et al.*, 2008, p. 271).

Service-dominant logic views "the customers as an operant resource...capable of acting on other resources, a collaborative partner who co-creates value with the firm," (as cited in Lusch *et al.*, 2007, by Shaw *et al.*, 2011, p. 208); where an operant is a resource that produces effects, or is a co-producer of a service (Shaw *et al.*, 2011, p. 208). For tourists service means that all resources and processes obtained from the setting are used in a self-service process, which assists them in creating value from the product or service they obtain from the setting. A tourist would view service as the ability to use a hotel room to their own discretion, and be able to come and go as they please. They might also make use of the front desk in order to obtain information about the local area or to ask for directions, which would make their trip easier and therefore more valuable by using such services. For the setting, service means supporting the tourist as they use their resources in order to create value for themselves (such as offering directions at the front desk). Therefore settings should adapt an integrative product/service, encouraging interaction and participation from both parties (Grönroos, 2011, p. 286-87). Settings must

collaborate and learn together with tourists so that they can support tourists and provided them with the resources they need to participate in the value creation process (Desai, 2010, p. 388).

The use of service-dominant logic by Vargo and Lusch (2008) has never been questioned. However, it implies that all types of resources are used by tourists as service, and additionally that they are considered to transmit service to tourists (as cited in Vargo and Lusch, 2004, by Grönroos, 2011, p. 283). This indicates a logic of service, and not one dominated by service (Grönroos, 2011, p. 284). What a “service perspective offers as a logic for value creation is not that tourists become co-creators of value, but rather that settings when performing as service providers get opportunities to become co-creators of value with their guests, but only if direct interactions between the service provider and tourists exists," (Grönroos, 2011, p. 291).

Grönroos (2011) analyzed seven statements of the six foundational premises of service-dominant logic to see if they were relevant for value creation. The statements observed were: service is the fundamental basis of business, goods are a distribution mechanism for service provisions, the customer is always a co-creator of value, the firm cannot deliver value, the firm can only offer value propositions, all social and economic actions are resource integrators, and value is always uniquely and phenomenologically determined by the beneficiary. In his findings, all statements were considered relevant for value creation. However, the article found many misleading and therefore most were reworded, creating nine statements. One of the most misleading statements was "the customer is always a co-creator of value," as it has been proven that "value is created by the user for the user," (as cited in Lusch & Vargo, 2006, by Grönroos, 2011, p. 292). Under the new service-dominant logic, the common phrase could lead others to making incorrect conclusions or theories, as they could read the phrase and believe that both parties are equally involved in the creation process (Grönroos, 2011). Therefore, in order to

explain service as a logic for value creation completely, at least 13 premises must be used (Grönroos, 2011, p. 292).

Despite the benefits that come from the service-dominant logic and customer-supplier interactions, three marketing consequences arise. The first is that the market offering is expanded from a goods-based offering to include setting-tourist interactions, as this becomes an integral part of service. Therefore settings must not only focus on offering tangible products, but services that focus on the tourist and their engagement. Secondly, marketers are no longer restricted to making just value propositions, but can also influence how value is fulfilled by the tourists during their value creation process. Lastly, interaction is a key marketing concept because the setting can extend its value facilitation efforts to value co-creation with its guests and directly influence their value fulfillment (Grönroos, 2008, p. 309).

The Role of the Setting in Co-creation

In co-creation, there is both value for the tourist and value for the setting. The setting's goal is to create financial value from interactions with tourists. However, the two values are interrelated (Grönroos, 2011, p. 281). As tourists are the creators and users of value, settings take the position of developing the resources used by tourists to create value, and also are responsible for the distribution and delivery of those resources. Settings "facilitate tourists' value creation," (Grönroos, 2011, p. 288). The setting's role in co-creation can be viewed as a joint venture with the tourist, as they supply the resources that the tourists need in order to create value (Grönroos, 2011, p. 290).

Adopting a service logic allows settings to become more involved with tourists' value generating processes and actively take part in the value fulfillment for tourists (Grönroos, 2008, p. 302). Grönroos (2008) discussed the different types of service and how both settings and

tourists get involved (co-create). Based on service logic, Grönroos suggested that in order for service providers to maintain a customer-centric approach toward value creation they must understand the needs of the tourists and their everyday practices (Grönroos, 2008).

In his article, Grönroos (2008) used the value creation and value fulfillment model, as well, as the value facilitation model, in order to explain the roles of both the setting and tourist. In the value fulfillment and facilitation model, the setting serves as a value facilitator by providing tourists with a foundation for their value creation in the form of resources. In the value fulfillment model, the setting also becomes a co-creator of value as they directly interact with tourists during their value generating process (Grönroos, 2008, p. 308). From his findings, Grönroos developed 10 service logic propositions focusing on value creation, market offerings, and related to marketing. Five propositions were linked with value creation, two of which deal with the firm's role in the value creation process. The first proposition is that the firm cannot create value for tourists, but must serve as a value facilitator by providing tourists with the inputs needed to assist them in their value creation processes. The other proposition is that a setting has opportunities to develop interactions with tourists during their value generating processes, thereby “engaging itself in value fulfillment for the tourists and thus becoming a co-creator of value,” (Grönroos, 2008, p. 310).

In order for a hospitality company to partake in the co-creation process they must clearly understand their role and be able to use the co-creation process efficiently in order to create financial value in the end. The first step hospitality firms can take toward this goal is to develop and initiate a customer information system (CIS). This system will gather data about guests and it will allow the hotel to learn about what type of visitor a guest is, what amenities they enjoy, and what services they desire. By knowing what the guest desires, the firm can offer specific

services which will cater to the needs and wants of the guest. If the company does not have certain desired services in place, and they are seen to be common desires among many guests, then the firm should consider implementing such services.

Simply listening to tourist input will allow the setting to take part in the value creation process, as the guests will suggest services and products which should be offered in addition to what the property already has. Also, by catering to the specific needs and desires of each guest, the setting participates in the co-creation process as they provide specific services which will meet the wishes of the guest; therefore the company provides a value foundation as the guest can choose how to use certain services which match with what they need and enjoy.

If a hospitality company is able to successfully gather specific information on guests and use it in order to improve services and offer more personalized products, then they will be able to build a loyal customer base. The loyal customer base will form as guests realize that the company is able to continuously meet their needs and provides the desired services, as well as, continues to add more services. In the long-run this will benefit the company more as loyal customers will provide more value than one-time guests. Loyal customers will return simply because they know what they are getting and are satisfied with the services offered. After some time they will become less sensitive to price; as a result, profits will greatly increase for the company as they will have a certain group of guests who continue to come back and are able to increase prices without affecting how often the guests return. As the company adds value for guests in the form of personalized services, the guests will add value for the firm as they continue to come back, thus generating greater profits for the company.

DART

In their book, *The Future of Competition: Co-Creating Unique Value with Customers*, Prahalad and Ramaswamy (2004) state that dialogue between the setting and the tourist depends on the specific tourist needs, their expertise, desire for involvement, and usually evolves over time (p. 21). The authors constructed building blocks of co-creation, which they refer to as DART (Prahalad & Ramaswamy, 2004, p. 23). DART stands for dialogue, access, risk assessment, and transparency. Dialogue focuses on issues that interest both the setting and the tourist and encourages not just knowledge sharing, but qualitatively new levels of understanding between settings and tourists. Dialogue occurs anytime a setting and tourist discuss how products/services could be improved. An example with electronics includes when customers suggest ways devices can be more user friendly and companies as a result develop improved products, and this exchange goes back and forth until a state of the art technology has been created. Access refers to the tourists' goals to obtain desirable experiences, and not mere ownership of a product/service. In a hotel, guests view the entire stay as an experience that is interrelated; they do not only care about the bedroom they lease for a night, but how they are treated and how helpful staff is. Risk assessment assumes that if tourists become co-creators of value with settings, then they will demand more information about potential risks of goods and services; but they may have to bear more responsibility for dealing with those risks. Risk assessment can be seen as tourists make the choice over which service provider to choose. While booking an airline ticket, tourists have the option of choosing from budget airlines with minimum service to high class airlines. Tourists will inquire information about what is offered with each airline, however as they are the ones who make the ultimate decision and choose where to go to gather information, they must live with the choice they finally make. The last

building block, transparency, relates to the fact that in the co-creation process information asymmetry between the tourist and the setting is deteriorating. This in turn, facilitates collaborative dialogues with tourists (Prahalad & Ramaswamy, 2004, p. 23-32). With social media and the internet, tourists have a wide variety of information available at their finger tips. They also must understand the basics of a certain organization before being able to co-create effectively with them. Therefore in order to co-create and provide value for the setting and themselves, new knowledge must be generated filling the tourist in with missing links, which helps eliminate asymmetry of information. Combining the building blocks of transparency, risk assessment, access, and dialogue enables settings to better engage tourists as collaborators.

Value Networks

Recently, there has been a noticeable shift of supply chains moving to value networks. In this shift, tourists are no longer left out of the creation process; settings no longer remain internal when searching for new information or ways to adapt to the changing market, but they reach out to tourist communities. With this change, the tourist-setting interact becomes the locus of value co-creation (as cited in Prahalad and Ramaswamy, 2004, by Desai, 2010, p.390). As a value network becomes more complex, settings and tourists have a better the opportunity for the co-creation of learning and creativity.

In value networks, in the context of tourism, settings can be leaders or aggregators, and can serve as a “value creation architect” (as cited in Lusch *et al.*, 2008, by Desai, 2010, p. 394). In doing so, they have the ability to reconfigure value networks to bring diverse people, resources, and knowledge together in a new, and creative way (as cited in Michael *et al*, 2008, by Desai, 2010, p. 394). This reconfiguration not only benefits settings but can also be applied to tourist networks to benefit tourists as well. When a greater group of diverse tourists are brought

in, each individual brings their own ideas, expertise, and talent into the mix. Together tourists increase the depth of the network as a whole, enabling a better selection of ideas as more opinions are brought in. As a result, greater value can be created with the wider set of knowledge and experience.

Involvement in the Co-creation Process

Many types of experience environments may exist as the level of co-creation varies from individual to individual. Caru and Cova (2007) give two ways in which tourists can become involved in the co-creation process: passively, or actively (as cited in Baron & Warnaby, 2011, p. 204). The passive way refers to interactions which are generally controlled by the setting, but the tourist has some input in the overall experience, such as visiting a theme park. On the other hand, active participation allows the tourist to immerse themselves in an experience, taking on responsibility for each step in the process. Similarly, in research conducted by both Lee (2012) and Grisseman and Stokurger-Sauer (2012), the degree of involvement has been shown to influence the effects of organizational support on the tourist's satisfaction with the service company, customer loyalty, and service expenditures. As a result, the studies found that the level of involvement in co-creation has a direct effect on both the willingness to participate as well as the outcome of the co-creation process.

Control over the Market

Co-creation can serve as a means for redistributing power among actors within the market process. Pongsakornrungrungsilp and Schroeder (2009) brought consumer agency into co-creation by suggesting that as tourists work together they are able to get back, "some degree of control over the market processes through both the communities they belong to and their active meaning management, as tourists emerge as the true sources for the symbolic and cultural values

of goods, services, and brands,” (as cited by Cova *et al.*, 2011, p. 237). In this sense, tourists are not only providers but are also beneficiaries of their own efforts.

As tourists gain awareness of, and additional resources to, information, it reduces the degree of control that organizations have on the market. In response, Dan Fisher and Scott Smith (2011) considered the need to relook at some classical marketing elements; in particular product innovation, branding, and diffusion innovation. These elements contribute to the value generation process and must be reexamined to match the changing market as it moves from one based on, “the experience of the individual to one based on a collective experience of cultural co-production”, where the main focus is on the tourist and not the product or service (Cova *et al.*, 2011, p. 238).

Under service logic and value adding through co-creation, tourists are increasingly gaining control, while settings are losing the ability to control outcomes. Since tourists have more input into the final product or service, they are gaining control over the market in which these products and services are offered since their inputs are vital for the success of any company. Fisher and Smith suggest that if settings wish to maintain some control over the market they must switch to a “more semiotic approach to marketing management” so that they can “appropriate the creative energies and cultural meanings generated by the community of co-creating consumers,” (as cited by Cova *et al.*, 2011, p. 238).

Participation in Service Recovery

As the focus of many settings has moved toward the tourist, service recovery plans have gained greater importance as they will greatly determine the tourist’s satisfaction level. Since nothing is ever perfect, and mistakes do happen, it is essential for settings to learn how to encourage tourists to continue to participate in value creation when a service failure occurs

(Dong, Evans, & Zou, 2008). In their article, Dong, Evans, and Zou, define tourist participation in service recovery as "the degree to which the tourist is involved in taking actions to respond to a service failure," (Dong *et al.*, 2008, p. 126).

Meuter and Bitner (1998) classified three types of service recovery; firm recovery, joint recovery, and customer recovery. Firm recovery occurs when recovery efforts are completed by the firm and its employees; the tourists turn to the employees for help. Joint recovery takes place when both the tourists and the setting participate in the process of service recovery. Customer recovery is when the recovery actions are taken entirely by the tourist; it could involve a third party, however, the setting is not involved (Dong *et al.*, 2008, p.124).

The product experience theory states that, "as customers increase their level of participation in recovery, the firm has an opportunity to shape their perceptions about service delivery and influence their total service experiences through value co-creation," (as cited by Smith and Seinyard, 1982, by Dong *et al.*, 2008, p. 127). In this method settings have the ability to gain a competitive advantage as they form a greater perception in the minds of the tourist so long as they are able to fix the situation and provide a service recovery that makes the experience better than it would have been had a service failure never occurred. Similarly, the customer socialization theory by Claycomb *et al.* (2001) states that when a tourist is involved in service recovery, it becomes a form of organizational socialization, and therefore the tourist can more easily understand their role as a "partial employee". However, if the firm handles the issue on their own, the tourists could see the process as more efficient (Dong *et al.*, 2008, p. 124).

Therefore the setting must be very careful when providing a service recovery; they must let the tourist know that their input and participation is desired to make the situation better and to fit

their personal needs, however, the setting must also show the customer that they (the setting) are working and not leaving the whole recovery up to them (the tourist).

In their article, Dong, Evans, and Zou, used scenario-based role playing experiments on students to test their hypotheses on how customer involvement in service recovery affects satisfaction and how customer involvement helps clarify the customers role in the co-creation process when dealing with service recovery. The first finding was that as customers become more involved in service recovery, they gain a greater understanding of their role and involvement. With a greater knowledge of what they are to do, the customers become more productive and beneficial to the service recovery process. Therefore, value co-creation positively influences the customers' ability to co-create in the future. It was also found that customer participation in service recovery had a significant and positive effect on customer role clarity, perceived value, and satisfaction with service recovery. However, while customer participation in service recovery on customer ability in future co-creation was positive, it was not statistically significant. Role clarity was seen to influence the customers' ability in future co-creation, and customer participation in service recovery had a positive and significant effect on intention. Ability, role clarity, perceived value in future co-creation, and satisfaction with service recovery were all also found to have significant and positive effects on customer intention toward future co-creation (Dong *et al.*, 2008, p. 127-132).

With these findings, Dong *et al.* state that, "customer participation in service recovery is not a significant predictor of customer ability in future co-creation," (Dong *et al.*, 2008, p. 132). However, role clarity mediates the relationship between customer participation in recovery and customer ability. Customer ability in future co-creation is defined as, "the customer's knowledge and skills that can enable them to perform effectively in future value co-creation," (Dong *et al.*,

2008, p. 126). It is what the customer can do, not what they want to do. Customer role clarity in future co-creation is defined as, "the extent to which the procedures, goals, criteria, and knowledge of consequences are clear to a customer and influence his/her likelihood of future co-creation," (Dong *et al.*, 2008, p. 126). Although service recovery is essential to the success of any company, it does not have a significant impact on a customer's likelihood or ability to participate in co-creation in the future. However, by understanding their role in the process and by bringing in personal resources, such as knowledge, customers can more effectively contribute to the service recovery process, the same way they assist in any co-creation procedure when interacting with a firm.

The Contribution of Knowledge Management to Value Creation and How it can be Used in Co-creation

The previous section pointed out the tourists' knowledge and skills which can enable them to perform effectively in future value co-creation; therefore it is important for settings to understand how this knowledge can be managed so that it may contribute to value co-creation. Edvardsson and Oskarsson (2011) describe two methods for managing knowledge: codification and personalization. Codification involves expressing an object with words and knowledge, while personalization refers to personal development, based on insights, intuition and personal problem solving skills (Edvardsson & Oskarsson, 2011, p. 9).

Many past studies have been conducted showing that an employee-focused organization, can transfer knowledge successfully through trust, discussion, creating a common education, and by providing a location for knowledge transfer (as cited by Davenport and Prusak, 1998, Daft, 2007, Nonaka *et al.*, 2002, in Edvardsson & Oskarsson, 2011, p.10). Although these studies focused on employee-focused organizations, the same concepts can be applied when dealing with the co-creation process and knowledge transfer to tourists. Tourists must have a certain

relationship with the setting in order to work with them cooperatively. The setting must be able to bring in their own personal resources and be able to trust the setting with any suggestions that they might have. Only in this atmosphere can co-creation take place so that additional value can truly be created.

The article by Edvardsson and Oskarsson used a 44 question survey on knowledge management. The survey was sent out via e-mail to various chief executive officers, an outcome program was used for collection, and SPSS was used for analysis. Firms were chosen with a stratified random sampling approach (Edvardsson & Oskarsson, 2011). The firms that had a knowledge management program in place were asked to complete additional questions, and further analysis was conducted. To evaluate the affects of knowledge management, the respondents measured realized benefits in association with knowledge management (Edvardsson & Oskarsson, 2011).

The results from the surveys showed that 48 percent of firms with no knowledge management program in place were generally very small, meaning there was little need for a true, established program to manage knowledge. However, from the firms with a knowledge management program in place, the greatest benefits were said to be better customer handling, improved employee skills, staff retention, and better decision making. Firms with a knowledge management program were also observed to perform better than those with no program, in many areas. Lastly, knowledge management was seen to enhance human capital, innovation, and competitive advantages (Edvardsson & Oskarsson, 2011).

Since knowledge management significantly contributes to value creation it is important for settings to be able to attract and use tourist knowledge in the co-creation process. In the past there have been two ways to deal with value creation: knowledge management and intellectual

capital. As previously mentioned, knowledge management is focused on knowledge transfer, culture and learning, and methods of storing knowledge. Intellectual capital is focused on classifying and managing intangible assets. The rise of knowledge management, according to Scarborough and Swam (2001) is due to increased worker knowledge, as well as technological advances. Similarly, McKinaly (2006) gives credit to innovative organizations, while many others link it with changes in the economy and market environment (as cited by Edvardsoon and Oskarsson, 2011).

Although knowledge management programs have many benefits for the setting and its employees, knowledge management programs could have many benefits for tourists as well. As a result of better guest handling, tourists will automatically be more satisfied with the level of service they receive. Additionally, if they are handled better that could imply that their ideas and participation in the co-creation process is being more welcomed and their inputs are being highly valued in the creation process. This could lead to better interaction between the setting and the tourist, which will enhance the overall co-creation process. Under this environment tourists will also gain more knowledge (clarity) about their role in the co-creation process and what they can do and bring to the table in order to enhance products and services for themselves.

Knowledge management is ever growing. It is predicted that eventually it will be linked with value creation by a means of human networking, social capital, and more advances in technology (as cited in Vorakulpipat and Rezgui, 2008, by Edvardsoon and Oskarsson, 2011, p. 8).

Co-creation and Revisit Intention

Grissemann and Stokurger-Sauer (2012) hypothesized that “when tourists have the opportunity to co-create a travel package, they are more likely to re-purchase from the same

company again and to recommend the company to others”, (p. 1485). This hypothesis indicates that companies have the ability to develop loyal customers if they present tourists with the opportunity to participate and become involved in the creation process with them. As a result of this opportunity, tourists will appreciate the chance to provide their own ideas and feedback. If implemented successfully, tourists will keep returning to the same company as they know their desired levels of satisfaction will be met with the opportunity to co-create with the company.

Grissemann and Stokurger-Sauer (2012) found that customer loyalty, as a result of satisfaction, could play a role in the intent to co-create. In their study customer loyalty is defined as, “customers’ re-visit and recommendation intentions,” (Grissemann & Stokurger-Sauer, 2012, p. 1485). Grissemann and Stokurger-Sauer (2012) identify that customer satisfaction is an important link between the company’s activities and ensuing customer behavior (p. 1485). In supporting this fact, Grissemann and Stokurger-Sauer (2012) used the social identity theory which “posits that being a member of a social group contributes to how people defined themselves as individuals and determines future behavior,” (p. 1485). This postulates that certain individuals may develop customer loyalty before co-creation has an influence on their subjective well-being. For these individuals, customer loyalty will be the key indicator of the effect co-creation has on subjective well-being, because some people define themselves based on how they fit into society and will correspond their future actions to fit societal norms. In doing so, their satisfaction with life will not be effected by co-creation attempts unless they better fit in with society and develop a stronger relationship with a particular company as a result.

Level of Involvement in Co-creation

Co-creation is entirely about personalized experiences as tourists get to have a say in the final products or services created by organizations. Prahalad and Ramaswamy (2004) use this

concept later in their book, *The Future of Competition: Co-creating Unique Value with Customers* by focusing on how designing and implementing such personalized products and services are complex tasks. Any decision a setting makes on how to handle and co-create with tourists is event-driven and context-specific, demanding personalized interaction (Prahalad & Ramaswamy, 2004, p.77). Without this personalized interaction, there would be no added value, and co-creation would be seen as a waste of time and effort. While interaction is essential to personalization, people are not yet in favor of co-creation and generally fight against it (Prahalad & Ramaswamy, 2004, p. 88). In order to get tourists willing to participate so that more value added services and products may be provided, the authors stress that any organizational focus must be on connecting the tourists to the setting's offerings (Prahalad & Ramaswamy, 2004, p. 89).

In testing their hypothesis, Grisseman and Stokurger-Sauer (2012) used different degrees of co-creation and the effects they had on tourists' satisfaction and loyalty towards a service company. The authors also assessed "whether the effects of co-creation on satisfaction, customer loyalty, and expenditures were moderated by the tourist's satisfaction with their co-creation performance," (p. 1489). Through their experiment, the authors successfully proved that the degree of co-creation influences the effects of organizational support on the tourist's satisfaction with the service company, customer loyalty, and service expenditures.

Similarly, Lee (2012) used high and low levels of intensity as well as radical and incremental scales for determining the affects each antecedent had on the intention to co-create. Although each antecedent was proven to be an indicator of the intention to co-create, not all antecedents were affected by the level of intensity. In the radical condition with both high and low intensities, ability to co-create and subjective norm were significantly impacted. In the

incremental condition with high intensity, ability to co-create and subjective norm were again the only antecedents with a significant relationship with the level of intensity. In the incremental condition with low intensity however, perceived benefits, perceived costs, and ability to co-create were all found to be impacted with the degree to which participants were likely to co-create (Lee, 2012, p. 88 – 93).

Both studies showed that antecedents of co-creation are influenced by the degree of involvement.

Subjective Well-Being

Subjective well-being is focused on the general well-being of people and societies. It is not only concerned with monetary issues, such as income and standards of living, but incorporates the environment, physical and mental health, education, recreation and leisure time, and social belonging all of which affect an individual's daily life. Indicators of subjective well-being can be classified as either processes or outcomes. Processes are states that are continuous and over the course of time influence an individual's subjective well-being. On the other hand, outcomes are a result of a particular behavior or action which have an immediate impact on an individual's subjective well-being. As this paper is concerned with the subjective well-being as a result of the co-creation process, the outcome indicators will be of interest to this paper (Uysal, Perdue, Sirgy, 2012).

Uysal, Perdue, and Sirgy (2012) define outcome indicators as those which directly relate to a tourist's subjective well-being and list them as, economic, social, health, and environmental effects. Economic effects are concerned with income, employment, cost of living, prices of goods and services, and taxes. These are predicted to affect a tourist's subjective well-being as a result of co-creation as some tourists may be limited as to which companies they may participate

with in the co-creation process, or they may have fewer personal resources to contribute to the exchange experience, and therefore their subjective well-being will be lowered as a result of their restrictions to co-create. However, for other tourists with more disposable income or resources, their subjective well-being could be positively influenced as they can ensure they are receiving the best service and best results from their collaboration with a travel company.

Social effects include the quality of interactions between people and the resulting relationships. Social effects are expected to be directly linked with co-creation as co-creation requires much interaction between the tourist and company they are working with. As the tourist works with the tourism service provider over time, a relationship will form. Similarly to enhanced loyalty, if a tourist is able to effectively work alongside a tourism company, then their relationship will grow stronger having a positive effect on the tourist's subjective well-being. If the relationship is unsuccessful and the tourist feels that they are not being given what they desire, or have a chance to equally participate in the co-creation process, then the resulting subjective well-being will most likely be lowered.

Health effects are concerned with life expectancy, likelihood of contracting disease and available healthcare facilities at the destination. Health effects are not expected to have a significant role on subjective well-being as a result of co-creation as they would only be of concern if a tourist had gotten ill on vacation and required emergency health care while away. Although this care could be influenced by co-creation, it will not be a common case for most travelers and even so, if a tourist becomes so ill that they must visit the hospital during their vacation, their subjective well-being will already be negatively impacted.

The last indicator, environmental effects focus on pollution, crowdedness, and traffic conditions. While this does not play a large role in the co-creation process, if a tourist worked

hard at developing a dream vacation with a travel company only to encounter heavy traffic and polluted areas, this would result in a negative travel experience and therefore a poor subjective well-being. This effect could even go so far as to discourage the tourist from participating in co-creation in the future as they would be unhappy with the resulting consequences. However, in terms of environmental effects, the opposite could also occur and the tourist could encounter spotless beaches with few people, which would lead to a more positive subjective well-being.

It is important to remember when dealing with co-creation and subjective well-being, as long as the indicators are applicable to the co-creation process and subjective well-being, the resulting situations or actions could be influenced either positively or negatively. From the above indicators of subjective well-being it can be seen that the majority of impacts on subjective well-being as a result of co-creation will involve the social effects. This is because co-creation takes place between two or more parties and the interaction and exchange between each party ultimately affects how well the co-creation process turns out and how much value is created as a result. Therefore, in order to enhance subjective well-being, interactions and collaboration at the co-creation stage must also be positive.

Exploitation of the Tourist

Many researchers feel that there is a negative aspect to co-creation as tourists are being exploited. The issue arises because tourists do not get paid for their input in the value-creation process, but organizations generate greater revenues as a result (Cova *et al.*, 2011, p. 235). Arvidsson (2008) believes the growth of co-creation is moving the economy to one known as an "ethical economy," or a "co-creative capitalism." Under this economy there is a rise in unpaid labor, new forms of control and exploitation, and a shift in scarcity (as cited by Cova *et al.*, 2011, p. 235). The article by Cova, Dalli, and Zwick makes the issue stronger by providing many

details on how the economy is shifting; ranging from corporate social responsibility to open source-production to brand valuation (Cova *et al.*, 2011, p. 237).

According to the definition of co-creation by Prahalad and Ramaswamy, organizations could be exploiting tourists, as they are engaging them and using them in the co-production process. Therefore, the organizations receive work and support from customers, but tourists do not get paid in return (Cova *et al.*, 2011, p. 233). Some critics believe co-creation causes exploitation of the tourist in two ways; they are not paid for their knowledge, enthusiasm, and cooperation provided in the designing and development process, and secondly, once their inputs are received, product/service prices generally increase (since the product/service is enhanced). As a result, tourists have to pay more for products/services that they helped improve (Cova *et al.*, 2011, p. 234).

Critics might say that the tourists are paid with the value-added to their acquired products and services; however, it is the organizations that benefit more as a result of the co-creation process. No matter what, tourists will receive a certain product or service, despite the value-additions obtained through the value-creation process. Even so, when tourists participate in the co-creation process they not only add value for themselves, but for the party with whom they are interacting, in terms of increased profits and sales. The setting also receives a competitive advantage if they are able to work cooperatively with tourists and help provide better products and services, since tourists will continue to come back and do business with that particular organization. As a result, the setting will also gain a greater market share and loyal customer base.

Implications

In his paper, Grönroos (2008) mentioned that although frequently used, the terms 'value creation' and 'create value' are subject to many interpretations and do not mean the same thing. Since the two are often used interchangeably in co-creation works to date, Grönroos set his own definitions to show the difference between the two phrases in order to avoid various interpretations. Grönroos considers value creation as the tourist's creation in value-in-use, meaning that "the customer as the user is the party in a business engagement that creates value," and therefore decided to focus on 'value creation' as it deals with value-in-use (as cited by Cova *et al.*, 2011, p. 237). Although 'create value' is still often mentioned in co-creation works, more researchers continue to adapt the common phrase set by Grönroos.

Although often used, the expressions 'value creation' and to 'create value', can be interpreted to imply that the process is thought of and preplanned ahead of time. However, value creation often results unconsciously as a result of the setting and the tourist working together in order to create something better. This occurs unconsciously because seldom are the setting and the tourist aware that they are collaborating together in order to create a better end product/service. Therefore, some believe that it should be said that value emerges and is not created (Grönroos, 2011, p. 282).

Another concern is that most commonly it is stated that tourists have the opportunity to add value from the value foundation offered by the setting. However, what if the reverse case occurred and the tourists gave the setting the opportunity to add value? Such an instance could occur in a hotel for example. If a guest is dissatisfied with a service, they can bring it to the attention of the hotel staff, giving them the opportunity to correct the problem and add value. However, if the staff simply says "I am sorry," then they are not correcting the problem or

adding value. The hotel should take the opportunity to improve the guest's experience and attempt to add value for the guest by fixing the problem and perhaps adding something additional for the inconvenience. If the hotel does not try to help at all, then not only will the guest be dissatisfied, but the hotel will have lost an opportunity to participate in the value creation process. As a result, no additional value will be created, and the guest will be very upset as no effort was made to better or enhance their experience.

However, if the hotel in the example above did do something to correct the situation, they would not only add value for the guest's experience, but they would add value for themselves as well. The hotel would receive added value as they received feedback regarding their services. If the feedback was negative the hotel can learn from this, so long as they take it to heart. By doing so, the hotel would have to make a permanent change to solve the problem so it is not just temporarily fixed for the one customer who complained. If the hotel is able to accomplish such a task, then they will add value for themselves as future customers will enjoy the enhanced service. If the customers do not have to complain, then the customers too will experience added value as they can use the service to their own personal benefit.

With this example it can be seen that tourists are not the only ones who have the opportunity to add value, but the settings as well. However, in order to use it to their advantage, settings must be responsive and be able to help the customer before they will receive any added value on their end.

Research Gap

Since co-creation is a relatively new research topic there are many ways it can be expanded and enhanced. Most articles to date have conducted very limited studies and the authors always suggest that their research be expanded to incorporate more groups, consider a

different view, or focus more on details. Many articles consider the need for development when dealing with service-dominant logic and relating it to co-creation, as service-dominant logic is a key antecedent to co-creation. Other articles are considered with looking into how advances in technology will change the relationship and interactions between tourists and settings.

Grönroos (2008) believes that for further development of service-dominant logic for tourists and settings a new framework should be created in order to see how the two parties interact and how having a service oriented strategy has changed this interaction. Grönroos also believes that a further analysis of marketing consequences of adapting service logic should be performed; he specifically wishes to look at, "in what ways are different forms of producer-consumer selective in terms of the guests who are engaged in this process, and are there significant differences in their effectiveness?" (Grönroos, 2008, p. 308).

In the article by Shaw, Bailey, and Williams (2010) the authors list three immediate areas where future research could be conducted. The first is to answer, "how do scale, ownership, corporate structures and business strategies influence the approached of firms to co-creation and the S-D Logic?" The second question is, "what are the key aspects not only of adoptive capacity but also absorptive capacity in respect to the ability of firms to both recognize and maximize the competitive advantages that can be derived from co-creation?" The last question looks into how information technology changes the power of the roles in the setting-tourist relationship (Shaw *et al.*, 2010, p. 296).

The last suggestion for future research comes from Dong, Evans, and Zou (2008). The authors are interested in potential antecedents that influence a tourist's willingness to participate in service recovery (p. 133). They believe by identifying antecedents, it will be easier for

settings to provide better service recovery, as they will know how to better target tourists and interact with them throughout the service recovery process.

These research questions and many more will greatly contribute to the area of co-creation. If the topic can be expanded upon, then both settings and tourists will benefit. Tourists will better understand their role and learn how they can enhance their products and services, while settings will receive tourist input and be able to develop better products and services and therefore receive higher profits in the end.

Conclusion

In order for co-creation to take place, both the tourist and the setting must be involved and cooperatively work together in order to create a better service or product offering, which in turn will enhance the value for the tourist. Co-creation can only exist if there is an interaction between the tourist and the setting. The concept of co-creation is gaining popularity as both settings and tourists see how it can benefit and enhance the offerings of products and services. In order to better host an environment for co-creation to take place, organizations are shifting their logic from a goods-oriented view to one that is service-dominant.

Researchers are mainly focused on the relationship between the tourist and the setting and how they can help clarify and distinguish the two roles. As the roles develop, tourist and settings will increase their participation as they learn more about the benefits associated with co-creation. Tourists are interested in adding value to their products, while organizations appreciate the feedback received from tourists as it allows them to enhance their future products and increase prices. Knowledge management is viewed by many scholars as the key for engaging tourists in the co-creation process, as organizations can learn how to target the skills and

knowledge already held by tourists, and use it to the advantage of both parties in the value adding process.

When the market was focused on a goods-dominant logic, often the tourists were left out of the entire process. However, with a shift to service-dominant logic, tourists do not only have the opportunity to participate, but can gain back control over the market. They can do so by working together and collaborating ideas and experiences in order to enhance the products and services settings have to offer. Tourist input will become invaluable and organizations will be forced to listen and adapt to tourist ideas and preferences.

Tourist input becomes critical when it comes to service recovery after a service failure. The survival of the organization ultimately depends on how they can handle and recover from the service failure. The best way possible would be to engage the tourist in the service recovery process and see what they desire so that the setting can redeem the situation and hopefully make it better than it would have been originally had the service failure never occurred. Although some believe co-creation results in the exploitation of the tourist, many others feel that this is a favorable process for both parties. Even though they do not get paid for their input and resources brought into the value creation process, tourists receive payback in the form of additional value in the products and services that they have already purchased.

The notion of co-creation remains relatively new and therefore there are many directions in which future research can turn. Many scholars suggest expanding on previous studies as many studies have had a very narrow focus and only included a small sample size. Others suggest developing stronger models to support the concept of service-dominant logic and the co-creation process as a whole. Clarification of roles and steps in the co-creation process will also encourage more participation as people gain a greater understanding of co-creation and how it

can benefit their lives. These ideas are only a few suggestions of where future research can go; co-creation is a growing topic, so if any area was researched it would contribute to the overall concept and provide valuable information that can be used to both clarify the process and help move additional research further into the future.

Chapter 3

Methodology

This chapter provides research questions, the theoretical framework and hypotheses for this study. Also, the research design, instrumentation, and methods of data analysis are discussed.

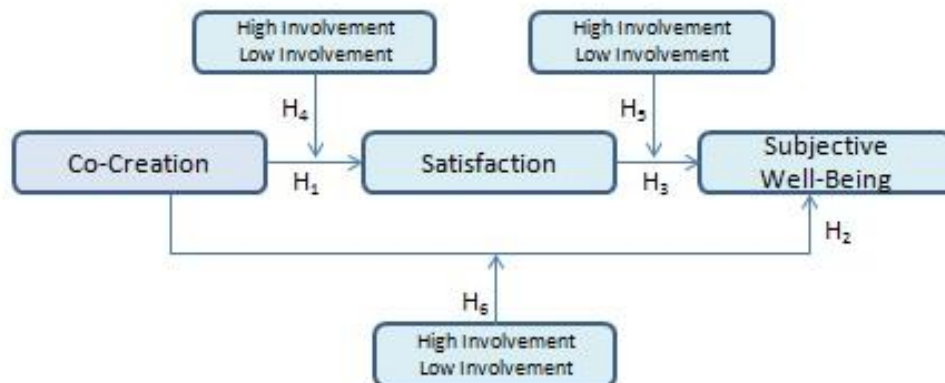
Research Questions

1. What are the underlying dimensions of co-creation in the context of the tourism experience?
2. In what ways does the level of participation in co-creation affect how satisfied a tourist becomes with his/her vacation experience?
3. How does the level of participation in co-creation affect the impact satisfaction has on a tourist's subjective well-being?
4. In what ways does the level of participation in co-creation affect a tourist's subjective well-being?

Theoretical Framework

Figure 3.1 illustrates the theoretical framework for this study.

Figure 3.1: Theoretical Framework



Application of the Model

This study not only seeks to better understand tourists' intentions to co-create and what causes them to co-create, but desires to discover resulting implications co-creation has on tourists' subjective well-being. Multiple studies were used to propose a model of co-creation intention through developing multiple constructs and then were applied to influence subjective well-being. In developing the model linking co-creation with subjective well-being, another study was brought in to use satisfaction as a mediating variable and to control for different levels of tourist involvement. While parts of this model have been tested independently from one another, never before has each part been integrated as this model depicts. The proposed model will be used in order to create a survey to test the relationship between co-creation and subjective well-being. For each construct and its dimensions, indicators will be developed and a scale created so that each component may be tested and measured for its influence over the entire model.

Description of the Model Formation

Attributes of Co-creation

Based on the literature review, it has been hypothesized that co-creation can be extended to include both physical ability and competency. As mentioned by Lee (2102) ability to co-create can be expressed as consumer knowledge, experience and time availability; however in his study Lee does not consider these components individually. It is perceived that physical ability will impact intention to co-create, as if an activity, such as a vacation experience, requires much physical effort, not all individuals will be able to participate. Additionally, some individuals' might not possess the knowledge required to make an informed decision, or even have the knowledge regarding their possibilities to engage in co-creation. It has been established that the

more a consumer knows about factors influencing a decision to perform or not perform a given behavior, the more likely their ability to develop effective messages or other types of intentions to influence these decisions are (Fishbein & Manfredo, 1990, as cited in Manfredo, 1992, p.29). Therefore it is important to consider each factor and its effect on ability individually when attempting to predict behavioral intentions to participate in co-creation.

Two other constructs are predicted to affect co-creation, which are the willingness to work with others and the opportunity to participate. It has been established by Vargo and Lusch (2007), as well as Cova, Dalli, and Zwick (2011), that co-creation is the coming together of the consumer and supplier in order to work together to create a value-added product or service. Without this interaction co-creation is not possible. Accordingly, an individual must be willing to work with the service provider in order to have the ability to participate in the co-creation experience. Without this willingness, no interaction will occur, thus prohibiting the co-creation process from taking place. However, before consumers even have the option to choose whether or not they are willing to participate in the co-creation process, they first must be presented with an opportunity to do so. If organizations do not foster the joint collaboration between themselves and customers and do not inform tourists how they can help in developing more value added services, then tourists will not even be presented with this opportunity. In order to have the ability to participate in the co-creation process, firms must be willing to support the tourist's role in the process, therefore providing them with the opportunity to participate.

As previously mentioned, co-creation is based on the coming together of two parties, in the case of this study, the tourist and travel professional, in order to create value. As such, in this study co-creation is measured based on a tourist's willingness to work alongside of a travel professional and their desire to share personal ideas and beliefs. In order for this exchange to be

successful, tourists must also be comfortable expressing their opinions and sharing them with the travel professionals. Not only must service providers be open to listen to and incorporate the ideas of each tourist, but settings must also be able to facilitate co-creation and provide an environment that encourages the coming together of both parties so that tourists understand that their opinions are valued and are able to be heard. The setting then also becomes vital for the creation of value because the two parties involved not only interact with each other but with the setting as well. Only under such circumstances can co-creation effectively take place, and therefore these are the conditions by which co-creation is measured in this study.

Satisfaction

As Shaw *et al.* (2011) point out, participation in co-creation has been shown to increase tourist satisfaction. Similarly, just as how participation in service recovery can improve a tourist's satisfaction with the recovery, tourist satisfaction has also been linked with greater participation in co-creation (Lee, 2012; Grisseemann & Stokurger-Sauer, 2012). In contribution to the model, tourist satisfaction then becomes a mediating variable for some tourists, which might serve as an indirect effect by which subjective well-being is enhanced. Additionally the act of participation and its influence over satisfaction plays a key role in developing the moderating factor for the model, level of involvement, which is discussed in the following section.

Level of Involvement

In testing their hypothesis, Grisseemann and Stokurger-Sauer (2012) used different degrees of co-creation to observe the effects they had on customers' satisfaction and loyalty towards a service company. Through their experiment, the authors successfully proved that the degree of co-creation influences the effects of company support on the customer's satisfaction

with the service company, customer loyalty, and service expenditures. Similarly, Lee (2012) used high and low levels of intensity as well as radical and incremental scales for determining the effects each antecedent had on the intention to co-create.

Both studies showed that antecedents of co-creation are influenced by the degree of involvement. In this model, degree of involvement will not be taken at the antecedent level, but rather after co-creation has taken place as a moderating variable. In doing so, the findings of Grisseemann and Stokurger-Sauer (2012) will be confirmed with regard to the level of involvement and enhanced customer satisfaction and loyalty. A contribution will also be made on whether or not level of satisfaction will impact subjective well-being, or if the degree of involvement in the co-creation process will have an impact on subjective well-being.

Subjective Well-Being

Subjective well-being is focused on the general well-being of people and societies. It is not only concerned with monetary issues, such as income and standards of living, but incorporates the environment, physical and mental health, education, recreation and leisure time, and social belonging all of which affect an individual's daily life (Uysal, Perdue, Sirgy, 2012; Sirgy, 2013). Outcome indicators are used to measure a tourist's subjective well-being and include economic, social, health, and environmental effects.

As subjective well-being is being tested as an end result, the dependent variable, it is predicted that the influence co-creation and satisfaction have on it will be a positive one, leading to an increase in subjective well-being. As co-creation is in large part a social indicator, all interactions and collaboration at the co-creation stage must be positive to influence the rest of the model so that the end variable, subjective well-being, may be positively impacted.

Dependent Variable

The dependent variable of this study arises from the literature review and past studies utilizing subjective well-being as an end result. The dependent variable is:

- Subjective well-being

Independent Variables

The independent variables are listed below:

- Co-creation
- Satisfaction

Hypotheses

The hypotheses from this study come from the literature review and the resulting model. Three hypotheses relate to the relationship between co-creation and subjective well-being, both directly and indirectly (mediated through satisfaction). Three other hypotheses arise as the level of involvement in co-creation is considered as a moderating variable within the model.

H₁: There is a (direct) relationship between co-creation and satisfaction.

H₂: There is a (direct) relationship between co-creation and subjective well-being.

H₃: There is a (direct) relationship between satisfaction and subjective well-being.

H₄: The relationship between co-creation and satisfaction is moderated by involvement.

H₅: The relationship between satisfaction and subjective well-being is moderated by involvement.

H₆: The relationship between co-creation and subjective well-being is moderated by involvement.

Instrumentation

Screening questions were formed in order to ensure that all respondents had participated in an act of co-creation within the last year, whether they were aware of it or not. These questions targeted respondents over the age of 18, who had taken a leisure vacation consisting of three or more nights away from home within the past year. In order to measure co-creation and level of involvement, respondents were asked whether or not they participated in any organized activity during their most recent leisure trip. Finally, respondents had to indicate whether or not they had a travel professional assist them with some aspect of this selected activity. Following the screening questions was a “warm-up” section to get respondents used to the survey procedure, specifically asking respondents what type of trip they participated in and who they traveled with.

When testing the attributes of collaborating with a travel professional, a few statements referring to the characteristics of co-creation and interacting with others were identified. The items were expected to represent and fit the act of co-creation as close as possible using a multi-item inventory development. The variable was measured with five items using a five-point Likert scale ranging from “strongly agree” at the high end to “strongly disagree” at the low end.

Satisfaction was measured using a summated scale identifying the degree to which the respondent expected certain outcomes of actions involved in the co-creation experience during the specified vacation activity. Satisfaction of the vacation experience as a whole was also measured using the same summated scale. These scale items were adapted from Woo and Uysal (2012) and Sirgy (2012, 2013) and were measured using a five-point Likert scale ranging from “much worse than I expected” (1) to “much better than I expected” (5). Following the scale, five

independent questions were asked in order to measure satisfaction with the vacation experience in general.

The level of involvement was originally measured using a summated scale consisting of seven items, reflecting the enjoyment and ease of purchasing a vacation and planning a vacation with others. This involvement scale was adapted and modified to better fit co-creation by applying items from Laurent and Kapferer (1985), Kyle, Absher, Hammitt, and Cavin (2006), Kyle and Chick (2004) and Prebensen, Woo, Chen, and Uysal (2012). However, after the pilot study, these questions proved unreliable and multi-dimensional and were therefore rewritten into five attributes. The questions were then retested and found reliable. These attributes measured involvement generically in order to gauge how much a tourist participated in his or her vacation. Respondents were asked to indicate their level of agreement with statements related to their involvement, using a five-point Likert Scale ranging from “strongly disagree” (1) to “strongly agree” (5).

Subjective well-being was measured in two different areas: during the travel/tourism experience and the respondent’s life overall after the vacation experience. Subjective well-being of the travel/tourism experience was measured using a summated scale consisting of three items. The respondent’s life overall was measured using a summated scale consisting of three items indicating how the vacation experience enhanced the respondent’s life upon return from the trip. Each item was measured using a five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5). These items were adapted from Neal, Uysal and Sirgy (2007) and Neal, Sirgy, and Uysal (2004).

Lastly, demographic information was gathered in order to learn more about each respondent.

Survey Procedure

As the attributes of co-creation had not previously been established, and their summated scales were a combination of existing scales, which had never been applied to co-creation before, a pilot study was conducted to observe grouping of items for co-creation attributes and finalizing the scale. The questions regarding the attributes of co-creation, satisfaction, involvement, and subjective well-being were sent out to an online class and students were offered extra credit in exchange for their participation. In this manner, it was seen how the items of each scale grouped together to ensure that only one characteristic of each dimension was being measured. This method also helped eliminate any items which did not appear applicable to co-creation, therefore shortening the length of the final survey.

After the pilot study was finished and the survey had been finalized, the survey was sent out through a marketing firm (SurveyMonkey), who guaranteed a certain number of usable, completed surveys from the desired pool of candidates. Respondents were screened based on being 18 years of age or older, having taken a leisure trip in the past year consisting of three or more nights away from home, and having participated in some type of organized activity during which they received help from a travel professional for some aspect of that activity. As the panel data collected from the commercial firm was used, the sample itself was not as important as proving validity of the model. Therefore, as long as the sample met the screening questions, the notion of internal validity was established. The desired amount of completed surveys to be collected before conducting an analysis was 350 – 400 completed surveys (561 was the final amount collected).

The final survey consisted of eight sections. The first section was the screening section which ensured that all respondents had participated in an act of co-creation during a recent

vacation experience; if respondents did not pass the screening questions they ended the survey at this point. The second part of the survey consisted of “warm-up” questions which asked respondents to identify what type of trip they participated in and who they traveled with. The third section measured the attributes of collaborating with a travel professional, rated with a five-point Likert scale to establish the degree to which respondents agreed or disagreed with the different items. The fourth section measured satisfaction with the vacation activity and measured how the selected activity appealed to the respondent. The fifth section measured satisfaction with the vacation experience in general. The sixth part of the survey measured the level of involvement with co-creation and the vacation experience. The seventh section measured subjective well-being subcategorized into two groups: during the travel/tourism experience and the respondent’s life overall after the vacation experience. The survey was completed with respondents providing their personal information.

Data Analysis

Once the desired number of surveys (561) had been collected, the survey was closed and analysis began. The analysis consisted of several steps including a profile of respondents based on descriptive statistics, a simple correlation analysis of all the summated variables (constructs), and simple correlational analyses (Pearson product moment correlation coefficients – r) which looked at the relationships between co-creation and satisfaction, co-creation and subjective well-being, and satisfaction and subjective well-being. Then the entire model was tested using several regression models and regression models with interaction effects to assess moderation effects (e.g. satisfaction as a function of co-creation; subjective well-being as a function of satisfaction; subjective well-being as a function of co-creation; and involvement).

Chapter 4

Analysis and Results

The results of the data analysis and hypotheses are presented in this chapter. The first section discusses the results of the pilot study which was used in order to check the reliability of item dimensions for this study. The second section provides a description of the survey methods employed in this study, as well as the demographic profile of the survey respondents. The last section explains the path analyses which were used to test the hypotheses.

Pilot Study

A pilot study was created using 20 of the original questions from the survey. The pilot study was sent out to an online undergraduate class as well as colleagues and friends. A total of 198 completed questionnaires were collected over a four day time period. However, only 79 (40%) were usable, having met all of the screening questions. As 400 completed surveys was the desired amount for the final survey, 79 useable responses were thought to be sufficient in order to condense and provide more structure for the existing survey questions.

The first question to be tested dealt with the attributes of collaborating with a travel professional. After a reliability test was conducted, it was found that all seven attributes yielded an alpha of .832. Then two of the attributes were removed, resulting in an alpha of .85. The two items which were removed were “sharing my opinions and ideas freely got me more emotionally engaged in the activity,” and “I collaborated with the travel professional in creating and shaping the activity throughout the duration of the experience.” The alpha of .85 showed that these measurements were reliable and could be used for the final survey.

The answers to the list of ten questions regarding satisfaction with vacation activity and satisfaction with the vacation experience, had reliability alphas of .817 and .813 respectively. Therefore, these ten questions were left as they were originally formed.

The attributes measuring involvement were very unreliable with an alpha of .3. Upon further investigation it was discovered that these attributes were measuring two different dimensions of involvement and that most of the attributes did not relate to the concept of co-creation and merely reflected the level a tourist can become involved with the purchasing of a vacation. Therefore all of these attributes were gotten rid of and an entirely new set of attributes were created and put out in their own small study to observe the reliability of these new attributes.

The new list of attributes measuring involvement consisted of six items: (1) I enjoy having a hands on approach during my vacation experience, (2) I take my time to invest in my vacation experience, (3) I conduct thorough research before going on a vacation, (4) I like to be informed of what goes into my travel experience, (5) I like to be informed of what goes into my travel arrangements, and (6) I am comfortable sharing ideas regarding my vacation expectations. Once a reliability test was conducted, the new instrumentation revealed an alpha of .822. Then the last attribute, "I am comfortable sharing ideas regarding my vacation expectations," was removed, resulting in an alpha of .866.

A final question was also added into the involvement section of the survey asking respondents to rate their level of involvement with their vacation experiences from 1 (not involved) to 7 (fully involved) on a Likert scale. The initial test of the question showed that many respondents were confused because they did not understand which aspect of the vacation experience this question was targeting, as most people are generally involved in their vacation

experience as a whole. Therefore, this question was further broken down to measure involvement at different phases of the vacation experience consisting of the pre-trip, travel-to site, on-site, travel-back, post-trip, and overall vacation in the final survey. These questions were added for cross validation of the involvement scale.

Reliability for both aspects of subjective well-being was strong. Subjective well-being of the travel/tourism experience yielded an alpha of .85, while subjective well-being of my life overall had an alpha of .837. As each of these questions only contained three attributes, these were left unchanged.

After the necessary changes were made as identified from the pilot study, the survey was finalized and sent out with a marketing firm (SurveyMonkey) in order to gather 400 usable, completed, questionnaires.

Data Collection and Sample

Survey Method and Sample

Data was collected using a marketing research company (SurveyMonkey.com). An online panel survey was conducted through the company's website. The company e-mailed around 2,000 letters to members of their panel inviting them to participate in the study in April of 2013. After the invitations had been out for about five days, 1,348 people responded to the survey, however only 263 questionnaires were usable having met all the screening questions. Therefore, the company sent out around 1,500 additional invitations to more members of their panel. This last set of invitations resulted with 907 additional people responding, yielding 298 usable questionnaires that met all of the screening questions. Combined, this study achieved a final count of 561 questionnaires.

Profile of the Respondents

The general demographic information of the total sample is explained in order to provide an overview of the description of respondents (Table 4.1). Of the 561 respondents, 56.1% (315) were male and 43.9% (246) were female. The majority of respondents were Caucasian (89.3%) and were between the ages of 45 and 60 (36.9%). Most of the respondents, 39.4% (221), had a graduate degree and earned an annual salary of \$80,001-\$100,000 (22.5%). Approximately eighteen percent of respondents (103) lived in the Pacific region of the United States.

Table 4.1: Demographic Characteristics of the Respondents (n=561)

Variables	Frequency	Percentage (%)
Gender		
Male	315	56.1
Female	246	43.9
Age		
Under 18	0	0
18-29	90	16
30-44	114	20.3
45-60	207	36.9
61 and Over	149	26.6
Ethnic Group		
Caucasian	471	89.3
African-American	16	2.9
Hispanic	19	3.4
Native American	6	1.1
Other	27	4.8
Prefer not to answer	20	3.6
Education		
Less than High School	1	0.2
High School	19	3.4
Some College/Associates Degree	118	21.0
College Degree	202	36.0
Graduate (Master's or Doctoral Degree)	221	39.4
Household Income		
Less than \$80,000	62	11.1
\$80,001-\$100,000	126	22.5
\$100,001-\$120,000	96	17.1
\$120,001-\$140,000	76	13.5
\$140,001-\$160,000	52	9.3
\$160,001-\$180,000	37	6.6
\$180,001-\$200,000	19	3.4
\$200,001-\$220,000	24	4.3
\$220,001+	64	11.4
Geographic Location		
New England	39	6.9
Middle Atlantic	83	14.8
East North Central	101	18.0
West North Central	49	8.7
South Atlantic	96	17.1
East South Central	25	4.5
West South Central	41	7.3
Mountain	24	4.3
Pacific	103	18.4

The questionnaire also included a number of questions regarding travel behavior of respondents, therefore, respondents can be further described based on which type of travel professional they worked with, the type of trip they went on, and who they traveled with. Approximately ten percent (54) of respondents worked with a travel agent, 34.6% (194) with a tour guide, 15.7% (88) with a concierge, 11.1% (62) with hotel staff, 13% (73) with an activity director and 16% (90) worked with some other type of hospitality professional. From an open response question, it was seen that the majority of respondents who stated “other” worked with employees of a cruise line during their activity. The majority of respondents also went on a city trip (25.1%), closely followed by tourists who went on a resort vacation (21.9%). Approximately forty-eight percent of the respondents (309) traveled with their family during their selected vacation. Table 4.2 provides a summary of the travel behavior for each respondent.

Table 4.2: Travel Behavior of Respondents (n=561)

Variables	Frequency	Percentage (%)
Type of Travel Professional Worked With		
Travel Agent	54	9.6
Tour Guide	194	34.6
Concierge	88	15.7
Hotel Staff	62	11.1
Activity Director	73	13.0
Other	90	16.0
Type of Trip		
City Trip	141	25.1
Touring Vacation	51	9.1
Cruise	94	16.8
Resort Vacation	123	21.9
Theme Park	15	2.7
Outdoors Vacation	45	8.0
Eco-Tourism	17	3.0
Visiting Friends and Relatives	34	6.1
Other	41	7.3
Travel Party (multiple responses were possible, 654)		
Alone	31	4.8
Family	309	47.9
Friends	109	16.9
Significant Other	163	25.3
Organized group	26	4.0
Other	16	2.5

Data Analysis

This section of the chapter discusses the results of the statistical analysis of the data collected. First, reliability of each construct (co-creation, satisfaction with vacation activity, satisfaction with the vacation experience, subjective well-being of the travel/tourism experience, subjective well-being of life, and involvement) are calculated along with the skewness of each variable. Then the variables are all correlated with one another to gain insight into the relationships among them. Third, the results of the path analyses are presented for the first three hypotheses. Following, are the results of the path analyses for the remaining three hypotheses, taking into consideration involvement as a moderator.

Reliability and Skewness

Tables 4.3 and 4.4 show the mean, standard deviation, alpha, and skewness for each construct. The tables reveal that each construct is highly reliable as they all have an alpha level of .79 or greater. The constructs are uni-dimensional indicating that the refinements from the pilot study were successful in measuring one dimension for each construct. In testing the skewness of each variable, the skewness statistic values all fell outside of the acceptable range for each construct distribution, indicating that the data is normally distributed (See Tables 4.3 and 4.4).

Table 4.3: Descriptive Statistics and Alphas for the Constructs of this Study

	Mean	Std. Deviation	Alpha	Skewness Stat	Skewness Std. Error
Co-creation	3.8966	0.73271	0.886	-1.071	0.0013
1. Working alongside of a travel professional allowed me to have a greater social interaction, which I enjoyed.	3.54	0.886			
2. I felt comfortable working with a travel professional during this activity.	3.95	0.853			
3. The setting of the vacation environment allowed me to effectively collaborate with the travel professional.	3.83	0.855			
4. My vacation experience was enhanced because of my participation in the activity.	4.18	0.938			
5. I felt confident in my ability to collaborate with the travel professional.	3.98	0.893			
Satisfaction with Vacation Activity	4.5465	0.69232	0.883	-2.253	0.0012
1. Was this activity worth your time?	4.63	0.777			
2. Was this activity worth your effort?	4.61	0.783			
3. Overall, how satisfied were you with your choice of activity amongst the alternatives offered?	4.61	0.731			
4. How likely would you recommend this activity to others?	4.63	0.774			
5. How likely would you participate in this activity again in the future?	4.25	1.084			
Satisfaction with Vacation Experience	4.6848	0.53672	0.794	-2.678	0.0009
1. Was this vacation worth your time?	4.82	0.533			
2. Was this vacation worth your effort?	4.80	0.53			
3. Overall, how satisfied were you with your vacation destination?	4.77	0.566			
4. How likely would you recommend this vacation destination to others?	4.71	0.667			
5. How likely would you visit your this vacation destination again in the future?	4.32	1.052			

Table 4.4: Descriptive Statistics and Alphas for the Constructs of this Study - Continued

	Mean	Std. Deviation	Alpha	Skewness Stat	Skewness Std. Error
Subjective Well-Being of the Travel Experience	4.4076	0.61482	0.869	-0.77	0.0011
1. Overall, my experience with this vacation was memorable having enriched my quality of life.	4.52	0.635			
2. My satisfaction with life in general was increased shortly after this vacation.	4.46	0.645			
3. Overall, I felt happy upon my return from this vacation.	4.25	0.781			
Subjective Well-Being of Life	4.2704	0.63652	0.809	-0.453	0.0011
1. All in all, I feel that this vacation has enriched my life. I'm really glad I went on this trip.	4.36	0.716			
2. On this trip, I accomplished the purpose of the vacation. This experience has enriched me in some ways.	4.07	0.852			
3. This vacation was rewarding to me in many ways, I feel much better about things and myself after this trip.	4.34	0.664			
Involvement	4.2777	0.62102	0.866	-1.093	0.0011
1. I enjoy having a hands on approach during my vacation experience.	4.28	0.768			
2. I take my time to invest in my vacation experience.	4.30	0.714			
3. I conduct thorough research before going on a vacation.	4.18	0.854			
4. I like to be informed of what goes into my travel experience.	4.32	0.738			
5. I like to be informed of what goes into my travel arrangements.	4.32	0.766			

Correlation Analysis

The correlation analysis is used to gain insight into the relationships among the constructs. From the analysis it can be seen that all of the constructs are correlated and significant at the .01 probability level. These correlations are shown in Table 4.5.

Subjective well-being of life and subjective well-being of the travel/tourism experience are the most strongly correlated (.792) as they measure almost the identical items, and just differ in the fact that one measures life during the vacation and the other measures life overall after the vacation. The relationship between subjective well-being of life and satisfaction with the vacation experience has the second highest correlation (.485) with regard to satisfaction and subjective well-being. While correlations between subjective well-being of life and satisfaction with the vacation activity (.358), involvement (.330), and co-creation (.238), are not as strong as other relationships, they are all still significant, meaning that the variables are closely related and positively affect one another.

Subjective well-being of the travel/tourism experience is strongly correlated with satisfaction with the vacation experience (.522). Subjective well-being of the travel/tourism experience also has a relatively high correlation with the satisfaction with the vacation activity (.390). The correlation between subjective well-being of the travel/tourism experience and co-creation and subjective well-being of the travel/tourism experience and involvement were .253 and .306, respectively.

The relationships with co-creation all around are the lowest (with the exception of a few relationships including involvement). However, the correlations are all statistically significant and remain significant at the .01 probability level. Therefore, while co-creation is not as strongly

related to each variable as the other variables are related to each other, co-creation still has a significant relationship with each variable.

Table 4.5: Correlation Analysis of the Study Constructs

		Co-creation	Sat. Vacation Activity	Sat. Vacation Experience	Involvement	SWB with the Travel Experience	SWB with Life
Co-creation	Pearson Correlation Sig. (2-tailed) N	1.000 561.000					
Sat. Vacation Activity	Pearson Correlation Sig. (2-tailed) N	0.295 0.000 561.000	1.000 561.000				
Sat. Vacation Experience	Pearson Correlation Sig. (2-tailed) N	0.195 0.000 561.000	0.545 0.000 561.000	1.000 561.000			
Involvement	Pearson Correlation Sig. (2-tailed) N	0.280 0.000 561.000	0.131 0.002 561.000	0.188 0.000 561.000	1.000 561.000		
SWB of the Travel Experience	Pearson Correlation Sig. (2-tailed) N	0.253 0.000 561.000	0.390 0.000 561.000	0.522 0.000 561.000	0.306 0.000 561.000	1.000 561.000	
SWB of Life	Pearson Correlation Sig. (2-tailed) N	0.238 0.000 561.000	0.358 0.000 561.000	0.485 0.000 561.000	0.330 0.000 561.000	0.792 0.000 561.000	1.000 561.000

Testing the Proposed Model and Hypotheses

The primary objective of this study was to determine the influence participation in co-creation has on a tourist's subjective well-being and to see if the proposed model was appropriate in predicting such an influence. More specifically, the study aimed to investigate the relationships between: (1) participation in co-creation and satisfaction with the vacation

experience, (2) participation in co-creation and a tourist's subjective well-being, and (3) satisfaction with the vacation experience and a tourist's subjective well-being. In doing so, the study also sought to explore how the levels of participation in co-creation affect: (1) how participation in co-creation influences satisfaction with the vacation experience, (2) how satisfaction with the vacation experience influences subjective well-being, and (3) how participation in co-creation influences subjective well-being.

Analysis of Hypotheses

The results of the model and corresponding hypotheses (1 – 3) were analyzed using path analyses with SPSS. The hypotheses were evaluated on the basis of the significance of the model using F values and the associated P values. The individual significance of the independent variables was evaluated using t-test values and the associated P values. The relationships between the constructs were examined based on a decision rule of a .05 significance level. If the significance level was $P < .05$, then the hypothesized relationship was supported. In addition, standardized Beta coefficients were also reported. These indicated the relative importance of independent variables/constructs in explaining the dependent variables/constructs.

The survey questions were formed in such a manner that satisfaction and subjective well-being had two levels of measurement; satisfaction with the vacation activity, satisfaction with the vacation experience, subjective well-being of life, and subjective well-being of the travel/tourism experience. This method allowed for better understanding of the tourist experience, as tourists were asked to reflect both on the organized activity they indicated at the beginning of the survey as well as the vacation as a whole. Therefore each of the originally proposed hypotheses was broken down to consider both the vacation activity and the vacation experience.

The following section focuses on the hypotheses testing.

Hypothesis 1: There is a (direct) relationship between co-creation and satisfaction.

H_{1a}: There is a (direct) relationship between co-creation and satisfaction with the vacation activity.

The results from the regression analysis show that the path from the construct of co-creation to satisfaction with the vacation activity is significant and positive ($F = 53.156$; $P = .000$). Therefore, H_{1a} is supported. This analysis shows that participation in co-creation is a significant predictor (leads to increased satisfaction) of satisfaction with the vacation activity ($t = 7.29$; $P = .000$). The standardized Beta coefficient of co-creation is .295.

H_{1b}: There is a (direct) relationship between co-creation and satisfaction with the vacation experience.

The results from the regression analysis indicated that the path from the construct of co-creation to satisfaction with the vacation experience is significant and positive ($F = 22.157$; $P = .000$). Therefore, H_{1b} is supported. This relationship shows that participation in co-creation is a significant predictor (leads to increased satisfaction) of satisfaction with the overall vacation experience ($t = 4.707$; $P = .000$). The standardized Beta coefficient of co-creation is .195.

Hypothesis 2: There is a (direct) relationship between co-creation and subjective well-being.

H_{2a}: There is a (direct) relationship between co-creation and subjective well-being of life.

The results from the regression analysis indicated that the path from the construct of co-creation to subjective well-being life is significant and positive ($F = 33.475$; $P = .000$).

Therefore, H_{2a} is supported. This relationship shows that participation in co-creation is a significant predictor of an increase in one's subjective well-being of life after a vacation ($t = 5.786$; $P = .000$). The standardized Beta coefficient of co-creation is .238.

H_{2b}: There is a (direct) relationship between co-creation and subjective well-being of the travel/tourism experience.

The results from the regression analysis indicated that the path from the construct of co-creation to subjective well-being of the travel/tourism experience is significant and positive ($F = 38.078$; $P = .000$). Therefore, H_{2b} is supported. This relationship shows that participation in co-creation is a significant predictor of an increase in one's subjective well-being during the vacation ($t = 6.171$; $P = .000$). The standardized Beta coefficient of co-creation is .253.

Hypothesis 3: There is a (direct) relationship between satisfaction and subjective well-being.

H_{3a}: There is a (direct) relationship between satisfaction with the vacation activity and subjective well-being of life.

The regression analysis revealed that the path from the construct of satisfaction with the vacation activity to subjective well-being of life is significant and positive ($F = 82.422$; $P = .000$). Therefore, H_{3a} is supported. This relationship shows that the more content a tourist is with their selected vacation activity, the greater the subjective well-being of their life will be ($t = 9.079$; $P = .000$). This can be seen because the more pleased someone is with a part of their vacation, the more it will contribute to the enhancement of their overall life upon their return home. As indicated by the standardized Beta coefficient, the contribution of satisfaction with the vacation activity to subjective well-being of life is .358.

H_{3b}: There is a (direct) relationship between satisfaction with the vacation experience and subjective well-being of life.

The regression analysis revealed that the path from the construct of satisfaction with the vacation experience to subjective well-being of life is significant and positive ($F = 171.983$; $P = .000$). Therefore, H_{3b} is supported. This relationship shows that the more pleased a tourist is

with their vacation, the greater the subjective well-being of their life will be ($t = 13.114$; $P = .000$). This can be seen because the more satisfied a tourist is with their vacation, the more it will contribute to the enrichment of their overall life upon their return home. The standardized Beta coefficient of satisfaction with the vacation experience is .485.

H_{3c}: There is a (direct) relationship between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience.

The results from the regression analysis indicated that the path from the construct of satisfaction with the vacation activity to subjective well-being of the travel/tourism experience is significant and positive ($F = 100.472$; $P = .000$). Therefore, H_{3c} is supported. This relationship shows that the more satisfied a tourist is with their vacation activity, the greater the subjective well-being of the travel/tourism experience will be ($t = 10.024$; $P = .000$). This can be seen because the more pleased someone is with a part of their vacation, the more it will contribute to the enhancement of their life during that vacation. The standardized Beta coefficient of satisfaction with the vacation activity is .390.

H_{3d}: There is a (direct) relationship between satisfaction with the vacation experience and subjective well-being of the travel/tourism experience.

The results from the regression analysis demonstrated that the path from the construct of satisfaction with the vacation experience to subjective well-being of the travel/tourism experience is significant and positive ($F = 208.982$; $P = .000$). Therefore, H_{3d} is supported. This relationship shows that the more satisfied a tourist is with their overall vacation experience, the greater the subjective well-being of the travel/tourism experience will be ($t = 14.456$; $P = .000$). This can be seen because the more pleased someone is with their vacation, the more it will

contribute to the enhancement of their overall life during their vacation. The standardized Beta coefficient of satisfaction with the vacation experience is .522.

Table 4.6 provides a summary of the results for the first three hypotheses.

Table 4.6: Summary of the First 3 Hypotheses Testing

Hypothesis	Hypothesized Path	Standardized Coefficients	t - value	Results
H _{1a}	Co-creation → Satisfaction with Vacation Activity	0.295	7.291	Supported
H _{1b}	Co-creation → Satisfaction with Vacation Experience	0.195	4.707	Supported
H _{2a}	Co-creation → Subjective Well-Being of Travel Experience	0.253	5.786	Supported
H _{2b}	Co-creation → Subjective Well-Being of Life	0.238	6.171	Supported
H _{3a}	Satisfaction with Vacation Activity → Subjective Well-Being of Travel Experience	0.39	9.079	Supported
H _{3b}	Satisfaction with Vacation Experience → Subjective Well-Being of Travel Experience	0.522	13.114	Supported
H _{3c}	Satisfaction with Vacation Activity → Subjective Well-Being of Life	0.358	10.024	Supported
H _{3d}	Satisfaction with Vacation Experience → Subjective Well-Being of Life	0.485	14.456	Supported

Testing of the Moderating Effects (Hypotheses 4-6)

This stage of the data analysis focuses on the level of involvement as a moderator between the different relationships as created in the model. It was hypothesized that the level of involvement would intensify (increase or decrease) the relationship between the constructs; co-creation and satisfaction, satisfaction and subjective well-being, and co-creation and subjective well-being. Level of involvement was categorized into two groups: low and high involvement. Low involvement tourists were respondents who overall rated their level of involvement with the various vacation attributes to be 1 – 4 (237 respondents). High involvement tourists were those who rated their level of involvement as 4.1 – 5 (324 respondents). The moderator was examined

again with regression analyses, however two sets of independent variables were considered at a time against a dependent variable. The first set of independent variables was the independent construct that held a relationship with the dependent variable and the dummy variable (the variable coded to reflect the two different levels of involvement). The second independent variable was the interaction effect, which was created by multiplying the independent variable by the dummy variable.

The following procedure used in the analysis of the moderator variable was suggested by Cohen and Cohen (1975). Each dependent variable was regressed on an independent variable and a moderator, with the level of involvement recoded as a dummy variable. Tourists with low involvement were coded as “0” and tourists with high involvement were coded as “1” in the model. The specific procedure is explained below.

1. Center the independent variable by creating a new variable in which the mean of this variable is subtracted from the each person’s score on the variable.
2. Multiply the centered independent variable by the dummy variable (level of involvement) to create cross-product terms.
3. Regress the dependent variable on the independent variable, using simultaneous regression. The centered version of the relevant variables should be used, and interaction terms should be excluded.
4. Add, in a sequential fashion, the interaction term.
5. The moderating effect was tested by observing the statistical significance of ΔR^2 . If ΔR^2 was significant, this indicated that the dummy variable affects the dependent variable and the moderating variable has an effect on the relationship in question (Woo, 2013).

Hypothesis 4: The relationship between co-creation and satisfaction is moderated by involvement.

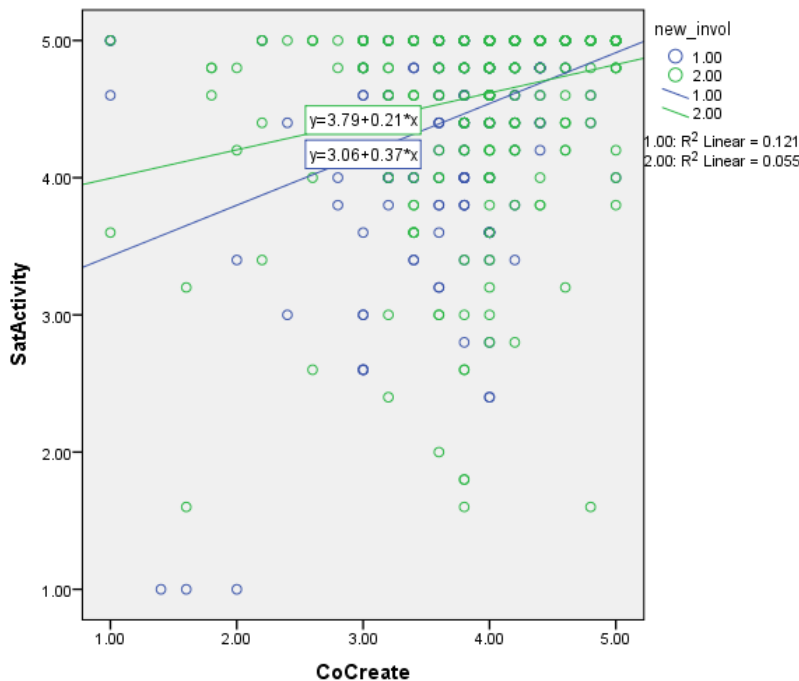
H_{4a}: The relationship between co-creation and satisfaction with the vacation activity is moderated by involvement.

Following the procedure described above in order to test the moderating effect, the independent variable (co-creation) and the dummy variable (level of involvement) were added in the first model to examine whether the two variables have main effects. The interaction effect (centered co-creation multiplied by the dummy variable) was then added. This interaction was significant with an adjusted $R^2 = .094$ and a significance level of .042 therefore hypothesis H_{4a} is supported.

Figure 4.1 shows the plot of the interaction effect between co-creation and satisfaction with the vacation activity.

Figure 4.1: Interaction Effect between Co-creation and Satisfaction with the Vacation

Activity



H_{4b}: The relationship between co-creation and satisfaction with the vacation experience is moderated by involvement.

As with H_{4a}, the variables were placed into two models so that the moderation effect could be easily observed. The independent variable (co-creation) and the dummy variable (level of involvement) were added in the first model to examine whether the two variables have main effects. Next, the interaction effect (centered co-creation multiplied by the dummy variable) was added. This interaction was insignificant with an adjusted $R^2 = .052$ and a significance level of .149 therefore hypothesis H_{4b} is unsupported.

Hypothesis 5: The relationship between satisfaction and subjective well-being is moderated by involvement.

The same procedure described previously was also used for the fifth hypothesis and its various sections.

H_{5a}: The relationship between satisfaction with the vacation activity and subjective well-being of life is moderated by involvement.

The independent variable (satisfaction with the vacation activity) and the dummy variable (level of involvement) were added in the first model to examine whether the two variables have main effects. The interaction effect (centered satisfaction with the vacation activity multiplied by the dummy variable) was added. This interaction was insignificant with an adjusted $R^2 = .196$ and a significance level of .217 leaving hypothesis H_{5a} unsupported.

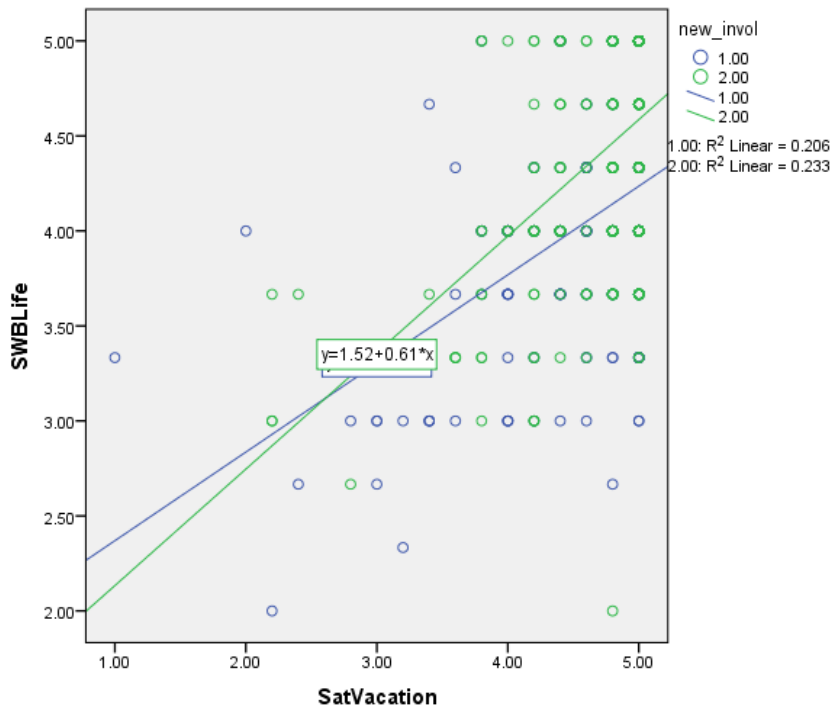
H_{5b}: The relationship between satisfaction with the vacation experience and subjective well-being of life is moderated by involvement.

The independent variable (satisfaction with the vacation experience) and the dummy variable (level of involvement) were added in the first model to examine whether the two

variables have main effects. The interaction effect (centered satisfaction with the vacation experience multiplied by the dummy variable) was added. This interaction was somewhat significant with an adjusted $R^2 = .289$ and a significance level of .089 therefore hypothesis H_{5b} is partially supported (partial support when $P < .10$).

Figure 4.2 shows the plot of the interaction effect between satisfaction with the vacation experience and subjective well-being of life.

Figure 4.2: Interaction Effect between Satisfaction with the Vacation Experience and Subjective Well-Being of Life



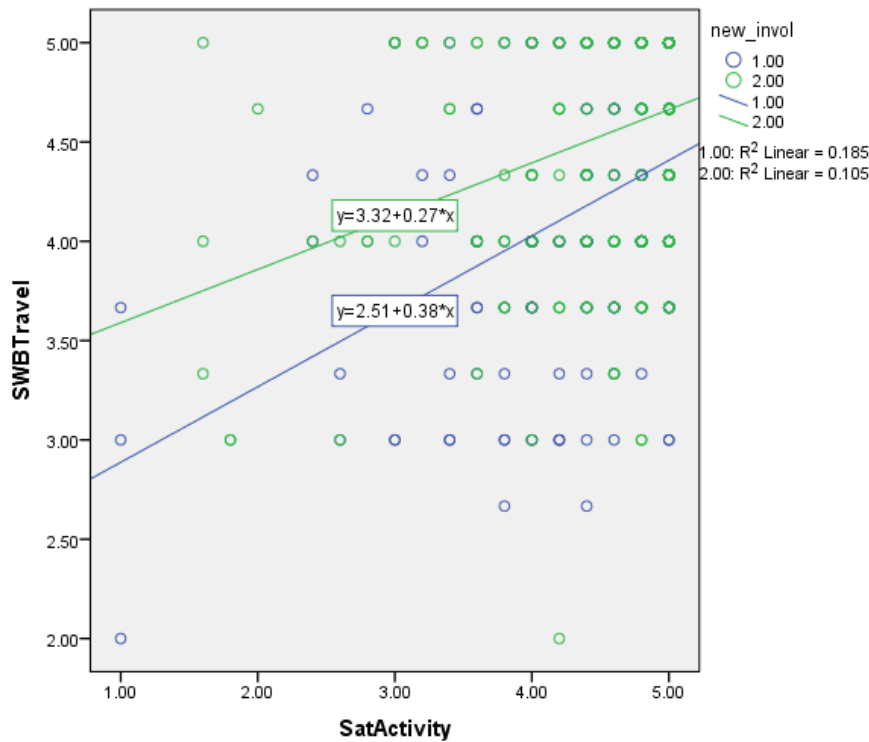
H_{5c}: The relationship between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience is moderated by involvement.

The independent variable (satisfaction with the vacation activity) and the dummy variable (level of involvement) were added in the first model to examine whether the two variables have main effects. Next, the interaction effect (centered satisfaction with the vacation activity

multiplied by the dummy variable) was added. This interaction was somewhat significant with an adjusted $R^2 = .213$ and a significance level of .097 therefore hypothesis H_{5c} is also partially supported.

Figure 4.3 shows the plot of the interaction effect between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience.

Figure 4.3: Interaction Effect between Satisfaction with the Vacation Activity and Subjective Well-Being of the Travel/Tourism Experience



H_{5d} : The relationship between satisfaction with the vacation experience and subjective well-being of the travel/tourism experience is moderated by involvement.

The independent variable (satisfaction with the vacation experience) and the dummy variable (level of involvement) were added in the first model to examine whether the two variables have main effects. The interaction effect (centered satisfaction with the vacation experience multiplied by the dummy variable) was added. This interaction was insignificant

with an adjusted $R^2 = .315$ and a significance level of .381 therefore hypothesis H_{5d} is unsupported.

Hypothesis 6: The relationship between co-creation and subjective well-being is moderated by involvement.

H_{6a}: The relationship between co-creation and subjective well-being of life is moderated by involvement.

Following the identical procedure as with hypotheses four and five in order to test the moderating effect, the independent variable (co-creation) and the dummy variable (level of involvement) were added in the first model to examine whether the two variables have main effects. The interaction effect (centered co-creation multiplied by the dummy variable) was added. This interaction was insignificant with an adjusted $R^2 = .124$ and a significance level of .742 therefore hypothesis H_{6a} is unsupported.

H_{6b}: The relationship between co-creation and subjective well-being of the travel/tourism experience is moderated by involvement.

Again, the same procedure as above was used to test the moderating effect; the independent variable (co-creation) and the dummy variable (level of involvement) were added in the first model to examine whether the two variables have main effects. The interaction effect (centered co-creation multiplied by the dummy variable) was added. This interaction was also insignificant with an adjusted $R^2 = .125$ and a significance level of .246 therefore hypothesis H_{6b} is also unsupported.

Table 4.7 provides a summary of the results for hypotheses four through six.

Table 4.7: Summary of the Hypotheses Testing considering the Moderator Variable

	Hypothesis	R Square Change	Significance Level	Results
H _{4a}	The relationship between co-creation and satisfaction with the vacation activity will be moderated by involvement.	0.094	0.042	Supported
H _{4b}	The relationship between co-creation and satisfaction with the vacation experience will be moderated by involvement.	0.052	0.149	Unsupported
H _{5a}	The relationship between satisfaction with the vacation activity and subjective well-being of life will be moderated by involvement.	0.196	0.217	Unsupported
H _{5b}	The relationship between satisfaction with the vacation experience and subjective well-being of life will be moderated by involvement.	0.289	0.089	Partially Supported
H _{5c}	The relationship between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience will be moderated by involvement.	0.213	0.097	Partially Supported
H _{5d}	The relationship between satisfaction with the vacation experience and subjective well-being of the travel/tourism experience will be moderated by involvement.	0.315	0.381	Unsupported
H _{6a}	The relationship between co-creation and subjective well-being of life will be moderated by involvement.	0.124	0.742	Unsupported
H _{6b}	The relationship between co-creation and subjective well-being of the travel/tourism experience will be moderated by involvement.	0.125	0.246	Unsupported

Chapter Summary

Chapter four presented the data analysis from the pilot test of the construct attributes and the final study. The first section explained the results of the pilot study, the reliability of the attributes measuring each variable and the modifications which were made to the questionnaire as a result. In the following section, a demographic profile of the study respondents was presented. The third section discussed the path analyses used to test the first three hypotheses. Lastly, the moderating effects were tested. Table 4.8 presents a summary of the hypothesis testing results.

Table 4.8: Summary of the Hypotheses Testing

	Hypothesis	Results
H _{1a}	There is a (direct) relationship between co-creation and satisfaction with the vacation activity.	Supported
H _{1b}	There is a (direct) relationship between co-creation and satisfaction with the vacation experience.	Supported
H _{2a}	There is a (direct) relationship between co-creation and subjective well-being of life.	Supported
H _{2b}	There is a (direct) relationship between co-creation and subjective well-being of the travel/tourism experience.	Supported
H _{3a}	There is a (direct) relationship between satisfaction with the vacation activity and subjective well-being of life.	Supported
H _{3b}	There is a (direct) relationship between satisfaction with the vacation experience and subjective well-being of life.	Supported
H _{3c}	There is a (direct) relationship between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience.	Supported
H _{3d}	There is a (direct) relationship between satisfaction with the vacation experience and subjective well-being of the travel/tourism experience.	Supported
H _{4a}	The relationship between co-creation and satisfaction with the vacation activity is moderated by involvement.	Supported
H _{4b}	The relationship between co-creation and satisfaction with the vacation experience is moderated by involvement.	Unsupported
H _{5a}	The relationship between satisfaction with the vacation activity and subjective well-being of life is moderated by involvement.	Unsupported
H _{5b}	The relationship between satisfaction with the vacation experience and subjective well-being of life is moderated by involvement.	Partially Supported
H _{5c}	The relationship between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience is moderated by involvement.	Partially Supported
H _{5d}	The relationship between satisfaction with the vacation experience and subjective well-being of the travel/tourism experience is moderated by involvement.	Unsupported
H _{6a}	The relationship between co-creation and subjective well-being of life is moderated by involvement.	Unsupported
H _{6b}	The relationship between co-creation and subjective well-being of the travel/tourism experience is moderated by involvement.	Unsupported

Chapter 5

Discussion and Conclusion

This chapter summarizes the findings and their implications. The first section provides a summary of the hypotheses testing and their findings. Next practical and theoretical implications of the findings are discussed in order to demonstrate what knowledge has been gathered from this study and how it may be applied. The chapter concludes with a discussion of limitations of the study as well as suggestions for future research.

Summary of the Findings

This study developed a model that proposed the relationships among three constructs: participation in co-creation, satisfaction, and subjective well-being. The proposed model in Figure 1.2 was empirically tested with path analyses. Specifically this model analyzed: (1) the relationship between co-creation and satisfaction (both satisfaction with the vacation activity and with the vacation experience), (2) the relationship between satisfaction (both satisfaction with the vacation activity and with the vacation experience) and subjective well-being (both subjective well-being of life and of the travel/tourism experience), (3) the relationship between co-creation and subjective well-being (both subjective well-being of life and of the travel/tourism experience), and (4) the moderating effect that the level of involvement had on each of these relationships.

Before the study was conducted, a questionnaire was created adapting some measurement scales from previous works as discussed in the literature review, and also by creating lists of attributes which reflected the constructs in question, namely co-creation and level of involvement. After the questionnaire was completed, a pilot study was given to a group of undergraduate students so that the reliability of each attribute could be assessed and to determine

whether or not the attributes were uni-dimensional. After the survey was refined, it was given to a marketing firm (SurveyMonkey) who sent the survey out to a panel of respondents.

Respondents were asked to complete the online questionnaire based on their most recent leisure vacation in which they participated in an organized activity. Respondents were screened on four criteria: (1) they must be 18 years of age or older, (2) they had to have taken a leisure trip that was three or more nights away from home in the past year, (3) they had to have participated in some type of organized activity, and (4) during the organized activity they had to work with a travel professional with some aspect of the selected activity. These screening questions ensured that respondents somehow co-created with a travel professional during their most recent trip, whether or not they realized they were actually participating in co-creation.

Path analyses were used to analyze the first three hypotheses and then hierarchical regression analyses were used to observe level of involvement as a moderating variable (hypotheses four through six). The analyses found that there were relationships between participation in co-creation and satisfaction, satisfaction and subjective well-being, and participation in co-creation and subjective well-being. It was also seen that the level of involvement a tourist has in their vacation experience does not significantly affect the relationship in question between variables. The level of involvement only had a moderating effect on the relationship between co-creation and satisfaction with the vacation activity. However, the level of involvement was also partially significant between satisfaction with the vacation experience and subjective well-being of life as well as between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience. These findings are discussed in detail in the following section.

Discussion of the Findings

This section describes the development and testing of the constructs used to create a model to observe how participation in co-creation and satisfaction influence subjective well-being. The literature discussed in chapter two provided details on each construct used in the model and chapter three provided insight as to why the variables were grouped together as they were in the proposed model.

In chapter four, a pilot test was conducted in order to confirm the reliability of each attribute as well as to ensure the uni-dimensionality of each construct (co-creation, satisfaction, and subjective well-being). The preliminary data analysis revealed statistically significant reliabilities for each construct with Cronbach's alpha scores of .81 or greater, with the exception of involvement. The attributes of involvement were not significant, only having a Cronbach's alpha of .3. Therefore new attributes were created in order to better reflect how tourists can become involved in the co-creation process, and the new attributes were tested, resulting in a significant alpha of .831. The pilot test also helped identify some items which were not uni-dimensional, and as a result some attributes of the proposed questionnaire were eliminated in order to ensure that each construct was measured on only one dimension.

After testing the uni-dimensionality and confirming the reliability of the attributes measuring each construct, the model was deemed statistically significant and was sent out with a marketing firm (SurveyMonkey) for final data collection.

Research Questions and Hypotheses

The findings supported nine of the sixteen hypotheses and two were partially supported. The remainder of this section revisits the research questions and their corresponding hypotheses which were empirically tested.

Research Question 1

What are the underlying dimensions of co-creation in the context of the tourism experience?

While this research question is not immediately answered through a hypothesis, this study did provide more insight into the co-creation experience. Namely, that even though co-creation is an up and coming topic and an unfamiliar term, many people are already participating in one way or another. This can be said because out of 561 respondents, more than half (324) said that they were highly involved with their vacation experience. However, it can also be deduced that co-creation is very difficult to measure. This largely comes from the fact that many people do not work with a travel professional when planning a vacation or any related aspects during a trip (this can be said because out of 2,255 people who took the survey, only 561 matched all of the screening questions). A contributing factor to this statistic could be the increasing use of the internet for researching and planning trips, and therefore in the future it should be observed what role the internet can have in co-creation, as currently co-creation must take place between a customer and a service provider.

Based on the attributes of co-creation as outlined in section two of the questionnaire, some insights into co-creation can be provided as different aspects of co-creation were measured and were all uni-dimensional. Section two asked respondents to rate their level of agreement with the following five statements on a scale of 1 to 5 (1= strongly disagree and 5 =strongly agree): (1) Working alongside of a travel professional allowed me to have a greater social interaction, which I enjoyed, (2) I felt comfortable working with a travel professional during this activity, (3) The setting of the vacation environment allowed me to effectively collaborate with the travel professional, (4) My vacation experience was enhanced because of my participation in the activity, and (5) I felt confident in my ability to collaborate with the travel professional. The

mean scores for most attributes were within the 3 range, signifying a neutral agreement with each statement (1 = 3.54, 2 = 3.95, 3 = 3.83, and 5 = 3.98). However, the fourth attribute, “my vacation experience was enhanced because of my participation in the activity,” had a mean score of 4.18 showing that most respondents agreed that working with a travel professional for a certain activity increased their experience. Many respondents also had a sense of confidence when collaborating with a travel professional (mean score 3.98) showing that they were not afraid to express themselves and were willing to work alongside of someone else. While these scores are not as strong as they could be, most respondents did not disagree with any of the statements, indicating that these attributes could be used to further observe co-creation and how tourists feel about working with a travel professional.

While the mean scores on their own are only somewhat significant it is important to look at the reliability of the attributes as a whole, which provided an alpha of .885. Therefore, while not strong on their own, together these attributes create a method in which to measure the act of co-creation.

Research Question 2

In what ways does the level of participation in co-creation affect how satisfied a tourist becomes with his/her vacation experience?

Research question two is addressed by H_{1a}, there is a (direct) relationship between co-creation and satisfaction with the vacation activity, and H_{1b}, there is a (direct) relationship between co-creation and satisfaction with the vacation experience. As previously mentioned hypothesis one was split up in order to observe satisfaction with the particular activity in which co-creation took place, as well as satisfaction with the overall vacation experience.

The relationship between participation in co-creation and satisfaction with the vacation activity was examined by hypothesis 1a. The results indicated a statistically positive relationship

between the two constructs (significance level = .00). Based on these results, participation in co-creation leads to increased satisfaction with the vacation activity. This could likely be because the more involved someone is with the choice of their vacation activity and how they participate in their selected activity, the more reward they will get out of the experience having been truly hands on with their wants and desires considered in the process.

The relationship between participation in co-creation and satisfaction with the vacation experience was examined by hypothesis 1b. This relationship was also significant at the .00 probability level. Similarly to the relationship between co-creation and satisfaction with the vacation activity, this result can be explained by a tourist being more involved in their vacation experience, having a say and deciding what they would like to do and how to do it, and as a result they are more happy with the end experience because they were able to customize it to their wants and needs and not just stick with a standardized product.

The relationship between co-creation and satisfaction with the vacation activity is stronger than that between co-creation and satisfaction with the vacation experience, with a correlation coefficient of .295 vs. .195. The stronger relationship could result from a tourist having more opportunities to co-create with a particular activity rather than the entire vacation experience.

Research Question 3

How does the level of participation in co-creation affect the impact satisfaction has on a tourist's subjective well-being?

Research question three is addressed with hypotheses H_{3a}, H_{3b}, H_{3c}, and H_{3d}. Similarly to hypothesis one, the constructs of satisfaction and subjective well-being were split up in order to observe satisfaction with the vacation activity, satisfaction with the vacation experience, subjective well-being of life, and subjective well-being of the travel/tourism experience.

Hypothesis 3a, there is a (direct) relationship between satisfaction with the vacation activity and subjective well-being of life, was statistically significant at the .00 probability level. Therefore, satisfaction with the vacation activity can be seen to lead to an increase in a tourist's subjective well-being of life. This finding reflects past studies in which satisfaction leads to a better subjective well-being (Lee, 2012; Grissemann and Stokurger-Sauer, 2012; Shaw *et al.*, 2011; Dong *et al.*, 2008). While significant, when compared to the other hypotheses relating to research question three, this relationship is the weakest with a correlation coefficient of .358.

The relationship between satisfaction with the vacation experience and subjective well-being of life, is shown with hypothesis 3b, there is a (direct) relationship between satisfaction with the vacation experience and subjective well-being of life. This relationship was also statistically significant at the .00 probability level. As with previous studies, the strong relationship between the two constructs shows that satisfaction with the vacation experience leads to a better sense of well-being with life in general upon return from the vacation. This relationship is the second strongest of those between satisfaction and subjective well-being, with a correlation coefficient of .485.

Hypothesis 3c tested the relationship between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience (there is a [direct] relationship between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience). This relationship was significant, again at the .00 probability level. So while this is on a smaller scale than hypothesis 3b as it deals with the vacation activity and not the overall vacation experience, and subjective well-being as a result of the trip and not overall life, the relationship between satisfaction and subjective well-being still remains positive, and is the third strongest of the four hypotheses with a correlation coefficient of .390.

The last hypothesis, 3d, there is a (direct) relationship between satisfaction with the vacation experience and subjective well-being of the travel/tourism experience was significant just like all the other relationships involving satisfaction and subjective well-being at the .00 probability level. This relationship was also the strongest of all, having a correlation coefficient of .522.

Research Question 4

In what ways does the level of participation in co-creation affect a tourist's subjective well-being?

Research question four is addressed by hypotheses H_{2a}, there is a (direct) relationship between co-creation and subjective well-being of life, and H_{2b}, there is a (direct) relationship between co-creation and subjective well-being of the travel/tourism experience. Again, subjective well-being was divided into of life and of the travel/tourism experience to discover the relationship between one's subjective well-being during the trip and after the trip.

Hypothesis 2a examined the relationship between co-creation and subjective well-being of life. This relationship was found to be significant at the .00 probability level. As can be seen in the relationships between co-creation and satisfaction, the more a tourist is able to contribute to and participate in their own vacation experience, the greater will be the resulting subjective well-being once they return home as they will have accomplished most everything they desired to during their trip.

Hypothesis 2b studied the relationship between co-creation and subjective well-being of the travel/tourism experience. Again, this relationship was found to be statistically significant at the .00 probability level. With more opportunities to collaborate with a travel professional and have an influence during the trip, the tourist is likely to experience a greater subjective well-

being during the trip as they are constantly involved and catering activities to their personal preferences.

These two relationships are very similar in strength, with H_{2b} being only slightly stronger than H_{2a} (correlation coefficients .253 vs. .238). Compared to the other relationships between the other constructs of the model, these relationships are much weaker, with the exception of the relationship between co-creation and satisfaction with the vacation experience. These weaker relationships could indicate that for co-creation to really have a positive effect on the subjective well-being of a tourist, then satisfaction must be present as a mediating variable. This is probable because the relationship between satisfaction and subjective well-being has already been established multiple times in countless studies (Lee, 2012; Grisseemann and Stokurger-Sauer, 2012; Shaw *et al.*, 2011; Dong *et al.*, 2008), and co-creation remains relatively new. So until co-creation is more clearly defined, and tourists gain a better understanding of the topic, it appears that the best way for co-creation to influence subjective well-being is through satisfaction.

Involvement as a Moderating Variable

While not directly tied to a research question, involvement was considered as a moderating variable within the model as it had been previously used similarly in relation to co-creation in two studies (Grisseemann and Stokurger-Sauer, 2012; Lee, 2012). The level of involvement was thought to impact the model in three different places and was considered in hypotheses four through six. Involvement was predicted to affect the following relationships: (1) co-creation and satisfaction with the vacation activity is moderated by involvement, (2) co-creation and satisfaction with the vacation experience is moderated by involvement, (3) satisfaction with the vacation activity and subjective well-being of life is moderated by

involvement, (4) satisfaction with the vacation experience and subjective well-being of life is moderated by involvement, (5) satisfaction with the vacation activity and subjective well-being of the travel/tourism experience is moderated by involvement, (6) satisfaction with the vacation experience and subjective well-being of the travel/tourism experience is moderated by involvement, (7) co-creation and subjective well-being of life is moderated by involvement, and (8) co-creation and subjective well-being of the travel/tourism experience is moderated by involvement.

Out of all the hypotheses considering involvement, only one was significant and two were partially significant. The significant hypothesis was H_{4a}, the relationship between co-creation and satisfaction with the vacation activity is moderated by involvement ($R^2 = .094$; $P = .042$). The two that were partially supported were H_{5b}, the relationship between satisfaction with the vacation experience and subjective well-being of life is moderated by involvement ($R^2 = .289$; $P = .089$) and H_{5c}, the relationship between satisfaction with the vacation activity and subjective well-being of the travel/tourism experience is moderated by involvement ($R^2 = .213$; $P = .097$). It can easily be seen how these relationships are affected by level of involvement because the more involved someone becomes in the activities they participate in during a vacation, and the more satisfied they become, the more they will get out of it physically, mentally and emotionally; therefore their resulting subjective well-being will increase both during the vacation and once they return home as their involvement helps them reach a higher order of needs.

The other five hypotheses using involvement as a moderating variable were all unsupported (H_{4b}, H_{5a}, H_{5d}, H_{6a}, and H_{6d}). The significance levels ranged from .142 to .742. Therefore these findings are not congruent with those of Grisseman and Stokurger-Sauer (2012)

or Lee (2012). This could be because the situations were somewhat different as Grisseemann and Stokurger-Sauer (2012) focused on the degrees of co-creation in terms of satisfaction and loyalty, and Lee (2012) was more focused on the antecedents which caused an individual to desire to participate in co-creation. Therefore, this model does not confirm the findings of Grisseemann and Stokurger-Sauer (2012) or Lee (2012) as originally desired, and this could very well be a result of the levels of involvement not being taken at the antecedent level, but rather after co-creation has taken place.

Another possible explanation for the lack of support for most of the hypotheses involving involvement could result from how skewed the data was as most responses were on the high end of the rating scale. Involvement was grouped into a low and high category. Low involvement were respondents who rated their involvement to be from 1 – 4 (strongly disagree to agree, 237 respondents), and high involvement were respondents who rated their involvement to be 4.1 – 5 (agree to strongly agree, 324 respondents). In a last attempt, the levels of involvement were categorized into three groups, low (1 – 3.5; 50 respondents), medium (3.6 – 4; 187 respondents), and high (4.1 – 5; 324 respondents), but the results still did not significantly change and the conclusions of each hypothesis remained the same.

Summary of the Discussion

The findings of this study indicate that co-creation does have a positive relationship with both satisfaction and subjective well-being. The study also confirms many past studies which demonstrate the link between satisfaction and subjective well-being (Lee, 2012; Grisseemann and Stokurger-Sauer, 2012; Shaw *et al.*, 2011; Dong *et al.*, 2008). This means that participation in co-creation can lead to a tourist being more satisfied with particular activities they participate in during their vacation, and also being more satisfied with their vacation experience as a whole.

Co-creation also helps improve a tourist's subjective well-being during a trip and once they return home as they were able to collaborate with a travel professional, provide their own ideas, and express their desires so the trip was more personalized to them as an individual. However, this study did not provide much evidence for the level of involvement to further enhance the relationships found in this study. It is possible that for the generic construct of involvement to serve as a moderating variable, co-creation may need to be contextualized to reflect the nature of the vacation activity or experience. This suggests that it could be that co-creation and involvement may overlap at times with each other throughout the duration of the vacation activity or experience (they are not always mutually exclusive).

Implications

Theoretical Contributions

Participation in co-creation should enhance a tourist's vacation experience as it gets them more engaged and allows them to be more greatly heard. However, co-creation remains a rather complicated topic as it is just being introduced and there is not a concrete definition for co-creation to date. With so many unknown factors dealing with co-creation, it becomes hard for tourists to co-create and for travel professionals to create strategies and tactics with which to include tourists and their ideas in the value creation process.

This study helped develop a deeper understanding of co-creation and creating value in experiences. Attributes of co-creation can now be labeled based on the responses from the questionnaire and co-creation can be said to include enhanced tourist participation in the experience, the confidence of being able to open up to a travel professional and comfortably work alongside of them, an environment which facilitates the coming together of two or more parties to create a unique, personalized, value-added experience, and the opportunity for greater

social interaction. With these attributes, co-creation is no longer simply about a tourist becoming a co-creator of value with increased personalized attention which results in different interactions. Co-creation should be expanded to include the co-production of new and improved services, with added value for both tourists and travel professionals, as a result of their trust in one another through cooperation and collaboration in a setting which allows both parties to participate equally alongside of each other. In this manner co-creation is always ongoing, adaptable, personalized, and unique.

This study also contributed to the growing body of knowledge in understanding the perceived value of tourism experiences by establishing a theory based empirical link between co-creation and subjective well-being via satisfaction. This aspect of tourism experiences had not been empirically demonstrated, as until this study, no study had focused on the aftereffects of participation in co-creation. From the data analysis it can be concluded that participation in co-creation leads to greater satisfaction, and then also contributes to a higher subjective well-being of one's life, further attesting to the importance of subjective well-being as a possible outcome measure of travel behavior.

Practical Implications

As this study revealed support for the model, service providers now have a foundation to reexamine how they can facilitate tourism experiences and the setting. As a result, they can change strategies and implement a platform for creating unique experiences, allowing tourists to become more physically and emotionally engaged, thus encouraging co-creation.

Service providers must communicate with tourists from the beginning in order to show them that their ideas are desired in the development and welcome them into the co-creation process. From that point, service providers and tourists should co-create together in order to

provide tourists with benefits from their own co-creation experiences (Edvardsson & Oskarsson, 2011).

While this study did not specifically focus on the setting, it can be seen as an essential element to facilitate the co-creation process. As service providers must create a platform in which co-creation may occur, they must also consider the setting in which co-creation is expected to take place. The interaction between the service provider and tourist is not the only one which must be considered as each party will also interact with the setting which will contribute to the overall co-creation experience.

These techniques will get both tourists and service providers more engaged in the co-creation process as they are more deeply included in the overall process and will desire to contribute more once they know their concepts are valued and are being considered to help assist in the value creation process.

While level of involvement was overall not significant in the proposed model because co-creation varies from individual to individual it is still important for service providers to consider the extremes to which tourists will or will not want to participate. As outlined by Caru and Cova (2007) there are two ways in which customers can become involved in the co-creation process: passively or actively (as cited in Baron & Warnaby, 2011, p. 204). Therefore when developing a platform for co-creation, service providers should be aware of the individual comfort level of each tourist, and adjust the environment accordingly.

Results of co-creating for the tourists are increased satisfaction and enhanced subjective well-being. The more satisfied a tourist is with his or her experience, the more likely it is that they will return to the same service provider and recommend the service provider to others. So while not addressed by this study, the resulting implications could lead to increased profits for

the service provider and a more loyal client base, which will be discussed further in the following section discussing future research (Grissemann and Stokurger-Sauer, 2012). Also companies who implement internal co-creation can gain a competitive advantage by inventing new methods of business which will generate more value, and these strategies will be harder to imitate as outside companies will not understand how the new practices came to be (Cova *et al.*, 2011).

As in today's society everyone is about more value and more personalized products and services, collaboration is expected to gain momentum and receive more attention from both tourists and service providers in the years to come. As this study shows, participation is likely to result in a life-enriching and memorable vacation experience, contributing to one's sense of well-being.

Limitations

A limitation to this study is that most people are unfamiliar with the concept of co-creation or do not have a good understanding of the topic. Therefore the wording of co-creation was always changed to collaboration in the questionnaire and many people view collaboration differently.

Although this study recognizes the setting in which experiences are created, this study did not control for the possible influence of the setting. However, the setting was somewhat controlled as respondents had to select a certain activity during their most recent leisure vacation in which they worked with a travel professional, which therefore served as a further limitation to this study but also a possible future research area. As mentioned earlier, co-creation is ongoing and adaptable, so while it is present during a particular activity, it can also continue throughout one's entire vacation experience. While opening up co-creation to be throughout an entire

vacation would increase the risk of different interpretations as no two people view co-creation the same, it is believed that co-creation would have an even stronger effect than it did through data analysis as it would cover a larger scale item (i.e. the vacation vs. a selected activity). In this manner perhaps involvement would become more significant because people are involved differently in different aspects of their vacation.

Another limitation was that all acts of co-creation had to take place between a tourist and a travel professional. This made the results more congruent as co-creation was taking place between the same two parties, however it also restricted the amount of respondents who could participate in the study. In today's technological age many people are no longer working with travel professionals, but with friends and the internet for all of their travel needs. Therefore it was hard to obtain the necessary number of respondents for a valid data analysis. Also, with the changing society, co-creation should be expanded to be more than acts between a consumer and a service provider. Rather, it should consider working with friends and family, the setting, or perhaps even the internet if the right restrictions are placed on it and there is a solid definition of what co-creation does and does not consist of.

The involvement questions proved to provide a few limitations for this study. Before the study went out, through the pilot study it was found that the questions regarding involvement were not reliable or significant. While the questions were changed and found to be reliable and significant, level of involvement still did not have the desired moderating effect on most of the model. From investigating the questions after the completion of the study, most of the questions appear to relate to the level of involvement before the vacation experience, and not during. Therefore the involvement scale used is more of a generic scale, instead of one measuring levels of co-creation. A generic scale such as this may not be needed in this particular study as the

research created an environment where involvement automatically takes place because everyone in one way or another becomes involved in their vacation experiences.

The last limitation is the possibility of a common method bias within the study. Method biases are a problem because they can cause measurement errors which then may threaten the validity of the conclusions about the relationships between variables (Bagozzi & Yi, 1991; Nunnally, 1978; Spector, 1987 as cited in Podsakoff, MacKenzie, Lee, and Podsakoff, 2003). Common method bias is a possibility in this study because the screening questions were so focused that it forced respondents to select an activity in which they co-created and also limited how they could respond to each question. The use of a survey as a data collection tool then becomes a further issue as co-creation is supposed to be unique and individualized to each tourist. Therefore, by having a structured survey all respondents may have answered in a similar manner.

Consequently, most of these limitations should be considered as suggestions for future research. Future research should consider these limitations so that they may improve upon the current findings of this study and contribute further to the body of knowledge in the scholarly literature of tourism.

Future Research

As co-creation remains a new and somewhat undeveloped topic future research is essential so that more can be understood about it and it can become an everyday practice between consumers and service providers.

Future research should be focused on exploring co-creation on a grander scale than simply taking place between a travel professional and tourist for one activity during a leisure vacation. The grander the experience, the more chances there are for co-creation to occur. With

a bigger experience, it could be seen how often two parties come together to co-create, what aspects they co-create for, or the results of co-creating in different situations/circumstances.

Also, co-creation should be expanded to include more than just the coming together of a consumer and a service provider as co-creation can also take place between friends, between a service provider and supplier, or between the service provider and other stakeholders.

Expanding who can co-create will provide more understanding of how co-creation can occur and how it affects other parties besides consumers. In this manner, the influences other participants have on the co-creation process may be observed and there is a possibility of studying co-participants, instead of merely co-creation. As a result, organizations can see the benefits co-creation has for them and will possibly be more interested in participating if research can prove that the act of co-creation holds significant benefits for them as well.

Existing research can also be expanded upon through studies that contextualize the setting in which acts of co-creation occur. In this method it could be observed how the setting influences the co-creation experience and if different settings have different effects on the co-creation process or its outcomes. Similarly, it could be seen how individuals, whether it be tourists or travel professionals, interact with the setting and utilize it to enhance their experiences.

While co-creation can take place along any stage of the experience spectrum, it should be ongoing and continuous, from start to finish; therefore co-creation should be examined at different stages of the vacation experience (i.e. pre-trip, travel-to site, on-site, travel-back, and post-trip). In doing so, participants could be asked to respond to a set of questions along each stage of their vacation experience, instead of reflecting on the different phases once the trip has been completed.

Future studies and analyses may also consider the profile of who is likely to co-create by using both demographic and behavioral variables. Such variables may include age, gender, race, and different experiences such as the type of vacation.

Involvement questions could be geared toward how much a tourist works with a travel professional at various stages of their experience and the resulting levels of involvement could be matched to the different phases of the vacation experience. Involvement questions may also be tied more to satisfaction with the vacation and one's general well-being so that these questions could relate better to the constructs of satisfaction and subjective well-being.

In an attempt to expand upon the existing model co-creation can also serve as a better antecedent (predictor) to explain variance in loyalty. Loyalty could be added to the co-creation model as one of the possible outcomes. Many studies have already linked satisfaction to increased consumer loyalty, so it would be interesting to see how co-creation and loyalty relate to one another and also how loyalty influences subjective well-being when co-creation is considered (Grissmann and Stokurger-Sauer, 2012; Shaw *et al.*, 2010).

Further analysis should include a SEM analysis with path coefficients so that the entire model may be tested as a whole. Additionally, path analyses instead of regression analyses may reveal direct, indirect, and total effect for the existing relationships.

Conclusion

This study not only sought to better understand co-creation but desired to discover resulting implications co-creation has on tourists' subjective well-being. Multiple studies were used to propose a model of co-creation intention through developing multiple constructs and then were applied to influence subjective well-being. In developing the model relating co-creation with subjective well-being, another study was brought in to use satisfaction as a mediating

variable and to control for different levels of tourist involvement. While parts of this model have been tested independently from one another, never before has each part been integrated as this model depicts. The proposed model was then used in order to create a survey to test the relationship between co-creation, satisfaction, and subjective well-being.

This study proposed and tested a theoretical model that investigated the influences participation in co-creation has on satisfaction and one's subjective well-being. The findings revealed that participation in co-creation is a significant predictor of increased satisfaction and an enhancement of one's subjective well-being. The study also found that satisfaction and subjective well-being are positively related, so co-creation can either directly enhance one's subjective well-being, or satisfaction can serve as a mediating variable between the other two constructs. While level of involvement remained rather insignificant in this study, it still strengthened the relationship somewhat between co-creation and satisfaction with the vacation activity.

The important implications of this study are the creation of a theoretical foundation for the assessment of the aftereffects for participation in co-creation; the importance of the relationship between co-creation and satisfaction and between co-creation and subjective well-being; and a deeper understanding and more concrete definition of co-creation.

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Appendix A

Final Survey Sent to Respondents

Screening Questions:

1. I am 18 years of age or older:

Yes

No

2. In the past year I have taken a leisure trip that was 3 or more nights away from home:

Yes

No

3. During your most recent leisure trip, think of whether you participated in any organized activities (eg, fishing, taking a guided tour, seeing a show, sightseeing, etc.). Think of one of those activities in particular. Fill in the blank with the type of activity in which you participated:

_____.

4. Considering the above mentioned activity, please tell us whether you had a travel professional (travel agent, tour guide, concierge, hotel staff, activity director, etc.) who somehow helped you with some aspect of this activity:

Yes (specify the nature of this person's occupation: _____)

No (Skip Section 2 of the questionnaire)

Section 1: Warm-Up

1. Please specify the travel professional with whom you most closely worked during the above mentioned activity (please select one):

- Travel Agent
- Tour Guide
- Concierge
- Hotel Staff
- Activity Director
- Other (please specify) _____

Thinking about your most recent leisure trip indicated above, please select the single choice that best reflects your vacation experience:

2. Type of Trip Selected (Please read the definition of each trip type following this question):

- City Trip
- Touring Vacation
- Cruise
- Resort Vacation
- Theme Park
- Outdoors Vacation
- Eco-Tourism
- Visiting Friends and Relatives
- Other (please specify) _____

Trip Definitions:

City Trip – A trip to a city where you may shop, enjoy entertainment, dine, visit museums, attend theater, and/or just enjoy the city.

Touring Vacation – A vacation by car, us, or train through scenic areas.

Cruise – A trip on a cruise ship where you enjoy all on-board activities and the planned stops at points of interest.

Resort Vacation – A trip to a resort or resort area where a wired variety of activities such as beaches, skiing, tennis, golfing, etc. are available either on the premises or close by.

Theme Park – A vacation taken primarily for the purpose of visiting a major theme park.

Outdoors Vacation – A vacation in a natural area where you may engage in activities such as camping, hunting, hiking, rafting, and fishing, etc.

Eco-tourism – A vacation which involves participation in the environment, as well as cultural/heritage tourism.

Visiting Friends and Relatives – A vacation which involves visiting family members and friends in another city.

3. Who did you travel with during this most recent leisure trip?

- a. Alone
- b. Family
- c. Friends
- d. Significant Other
- e. Organized group (tour, church, school, etc.)
- f. Other (please specify) _____

Section 2: Attributes of Collaborating with a Travel Professional

Respond to the items in this section only if you had a travel professional assisting you with the specified activity.

Based on **the organized activity you selected above**, please indicate the extent to which you agree or disagree with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Working alongside of a travel professional allowed me to have a greater social interaction, which I enjoyed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I felt comfortable working with a travel professional during this activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The setting of the vacation environment allowed me to effectively collaborate with the travel professional.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. My vacation experience was enhanced because of my participation in the activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I felt confident in my ability to collaborate with the travel professional.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 3: Satisfaction with Vacation Activity

Thinking about the activity you indicated at the beginning of the survey, please answer the following questions:

1. Was this activity worth your time?

- Definitely not worth
- Not quite worth
- Neutral
- Worth somewhat more
- Definitely well worth

2. Was this activity worth your effort?

- Definitely not worth
- Not quite worth
- Neutral
- Worth somewhat more
- Definitely well worth

3. Overall, how satisfied were you with your choice of activity amongst the alternatives offered?

Would you say you were:

- Not satisfied at all
- Somewhat unsatisfied
- Neutral
- Somewhat satisfied
- Very satisfied

4. How likely would you recommend this activity to others?

- Not likely at all
- Somewhat unlikely
- Neutral
- Somewhat likely
- Very likely

5. How likely would you participate in this activity again in the future?

- Not likely at all
- Somewhat unlikely
- Neutral
- Somewhat likely
- Very likely

Section 4: Satisfaction with the Vacation Experience

Thinking about your most recent vacation experience, please answer the following questions:

1. Was this vacation worth your time?

- Definitely not worth
- Not quite worth
- Neutral
- Worth somewhat more
- Definitely well worth

2. Was this vacation worth your effort?

- Definitely not worth
- Not quite worth
- Neutral
- Worth somewhat more
- Definitely well worth

3. Overall, how satisfied were you with your vacation destination? Would you say you were:

- Not satisfied at all
- Somewhat unsatisfied
- Neutral
- Somewhat satisfied
- Very satisfied

4. How likely would you recommend this vacation destination to others?

- Not likely at all
- Somewhat unlikely
- Neutral
- Somewhat likely
- Very likely

5. How likely would you visit your this vacation destination again in the future?

- Not likely at all
- Somewhat unlikely
- Neutral
- Somewhat likely
- Very likely

Section 5: Involvement

Following is a list of attributes, please indicate the extent to which you agree or disagree with each statement by marking an X in the most appropriate box.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I enjoy having a hands on approach during my vacation experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I take my time to invest in my vacation experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I conduct thorough research before going on a vacation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I like to be informed of what goes into my travel experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I like to be informed of what goes into my travel arrangements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

From 1 (not involved) to 7 (fully involved), please indicate the extent to which you get involved with the different phases of your vacation experience:

	1	2	3	4	5	6	7
1. Pre-trip Phase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Travel-to site Phase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. On-site Phase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Travel-back Phase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Post-trip/Reflection Phase	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Overall Vacation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 6: Satisfaction with Subjective Well-Being (Quality of Life)

Thinking about the vacation you indicated above, please indicate the extent to which you agree or disagree with each statement by marking an X in the most appropriate box.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Satisfaction with Travel/Tourism Experience					
1. All in all, I feel that this vacation has enriched my life. I'm really glad I went on this trip.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. On this trip, I accomplished the purpose of the vacation. This experience has enriched me in some ways.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. This vacation was rewarding to me in many ways, I feel much better about things and myself after this trip.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thinking about the vacation you indicated above, please indicate the extent to which you agree or disagree with each statement by marking an X in the most appropriate box.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My Life Overall					
1. Overall, my experience with this vacation was memorable having enriched my quality of life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. My satisfaction with life in general was increased shortly after this vacation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Overall, I felt happy upon my return from this vacation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 7: Loyalty

Thinking about the vacation you indicated above, please indicate the extent to which you agree or disagree with each statement by marking an X in the most appropriate box.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. If I like a destination, I rarely switch just to try some place new.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I have a preference for a particular service provider.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I consider myself to be loyal to one service provider.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I am satisfied with my service provider, so I do not wish to try a different one.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thinking about the vacation you indicated above, please indicate the level of your expectations by marking an X in the most appropriate box.

	Much worse than I expected	Worse than I expected	Neutral	Better than I expected	Much better than I expected
1. How would you rate your most recent destination as a vacation destination compared to other similar places that you may have visited?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

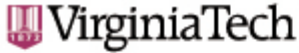
Demographic Information

Now, please tell us more about yourself

1. Your residency _____ or State _____
2. What year were you born? _____
3. What is your gender?
 - a. Male
 - b. Female
4. Ethnic group (Please circle one)
 - a. Caucasian
 - b. African-American
 - c. Hispanic
 - d. Native American
 - e. Other _____
 - f. Prefer not to answer
5. What was the last year of school you completed?
 - a. High school or less
 - b. Some college/Associate degree
 - c. College degree (bachelor)
 - d. Post graduate degree (master)
 - e. Post graduate degree (doctoral)
6. What is your approximate total annual household income (per-year-before taxes)?
 - a. Less than \$80,000
 - b. \$80,001 - \$100,000
 - c. \$100,001 - \$ 120,000
 - d. \$120,001 - \$ 140,000
 - e. \$140,001 - \$160,000
 - f. \$160,001 - \$180,000
 - g. \$180,001 - \$200,000
 - h. \$200,001- \$220,000
 - i. \$220,001+

Appendix B

IRB Approval Letter



Office of Research Compliance
Institutional Review Board
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, VA 24060
540/231-4606 Fax 540/231-0969
email irb@vt.edu
website <http://www.irb.vt.edu>

MEMORANDUM

DATE: April 8, 2013
TO: Muzaffer Uysal, Elaine Frances Mathis
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires May 31, 2014)
PROTOCOL TITLE: The Effects of Co-Creation and Satisfaction on Subjective Well-Being
IRB NUMBER: 13-372

Effective April 4, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

<http://www.irb.vt.edu/pages/responsibilities.htm>

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As: Exempt, under 45 CFR 46.110 category(ies) 2
Protocol Approval Date: April 4, 2013
Protocol Expiration Date: N/A
Continuing Review Due Date*: N/A

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

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