



Article

# Antecedents and Consequences of Ecotourism Behavior: Independent and Interdependent Self-Construals, Ecological Belief, Willingness to Pay for Ecotourism Services and Satisfaction with Life

## Kumju Hwang and Jieun Lee \*

Department of Business Administration, Chung-Ang University, 84 HeukSeok-Ro, DongJak-Gu, Seoul 06974, Korea; kumju@cau.ac.kr

\* Correspondence: jlee114@cau.ac.kr; Tel.: +82-10-8830-3884

Received: 8 February 2018; Accepted: 7 March 2018; Published: 13 March 2018

Abstract: The purpose of this study is to investigate the antecedents related to why tourists engage in ecotourism and the consequences of ecotourism behavior. This study examined the concept of self-construal as a social aspect of self that influences different levels of ecological beliefs, which, in turn, affect ecotourism behavior. To address the unsatisfactory predictive power of the belief/attitude-behavior model, this study included the willingness to pay (WTP) for ecotourism between the ecological belief and ecotourism behavior relationships. Finally, this study examined the impact of ecotourism on tourists' satisfaction with life as a result of ecotourism behavior. A structural equation model was constructed to test the proposed model. We found significant impacts of self-construals in explaining ecological beliefs. Significant relationships were found between ecological belief and WTP for ecotourism services which influenced ecotourism behavior, and between ecological belief and ecotourism behavior which affected satisfaction with life. The moderating effect of gender was only found on the path between WTP and ecotourism behavior. The findings of this study offer some implications for industry and policymakers to develop effective ecotourism programs.

**Keywords:** independent and interdependent self-construals; ecological belief; WTP for ecotourism services; ecotourism behavior; satisfaction with life

#### 1. Introduction

With the growth of tourism industry, severe environmental problems caused by tourism have received public attention [1]. Sustainability concerns in the tourism industry have led to the emergence of a new form of tourism, which is referred to as ecotourism; this form promotes the idea of sustainability and conservation of natural resources [2]. According to the International Ecotourism Society [3], ecotourism can be defined as "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people and involves interpretation and education." Kim and Park [4] found that the definitions on ecotourism commonly emphasize the following features of ecotourism: learning, recreation and adventure performed in the natural environment.

An increasing number of studies indicate the interest of a considerable number of tourists in ecotourism (e.g., [5,6]). Additionally, ecotourism has become a trend and one of the fastest growing tourism markets [7,8]. Although ecotourism literature has emphasized that ecotourists' behavior plays a critical role in growing ecotourism [1], their ecotourism behavior has not been sufficiently studied in relation to consumers' ecological beliefs and behaviors [9]. Lee and Jan [1] argued that although previous studies on ecotourism behavior used several theoretical behavioral frameworks, including value—belief—norm theory (VBN), the theory of reasoned action (TRA), theory of planned behavior

Sustainability **2018**, 10, 789 2 of 18

(TPB), technology acceptance model (TAM) and social identity theory (SIT), the role of psychological and social factors influencing ecotourism behavior has not been sufficiently elucidated.

The self includes personality traits and social roles, among multiple aspects of the self; additionally, independent and interdependent selves are social aspects of self that may determine individuals' self-concept or mental self-representations [10]. Independent and interdependent construals, an individual's sense of self related to others, shape social relationships, values and behavioral patterns by constructing mental representations of self. The current study focuses on the effects of independent and interdependent self-construal as psychological and social aspects of self on environmental beliefs that, in turn, drive ecotourism behavior. Studies on the relationship between values and behavior have clarified the question of why people are concerned about environmental issues and engage in environmental behavior [11]. However, ecotourism literature insufficiently elucidates what drives tourists to engage in ecotourism behavior [12]. The current study considers the role of independent and interdependent self-construals as specific value orientations and sources of environmental values/beliefs to examine why people choose to engage in ecotourism.

Additionally, it is essential to examine the impact of ecotourism on tourists' satisfaction with life in terms of the role of value/attitude-behavior congruence (environmental value and ecotourism behavior) in providing tourism experiences that would enhance the quality of tourist's life, which, in turn, would provide them overall life satisfaction [13]. Ecotourism literature (e.g., [4,14]) has addressed customers' satisfaction with ecotourism experiences; however, ecotourism literature has not sufficiently investigated customers' satisfaction with life.

This study focuses on why individuals engage in ecotourism by exploring the relationship between ecological beliefs and ecotourism behavior. This study examined the concept of self-construal as a social aspect of self that influences different levels of environmental values, which, in turn, affect environmental behavior, ecotourism in this case. Many studies have considered the relationship between beliefs/values and behavior; however, few studies have used self-construals (independent and interdependent) as underlying constructs shaping environmental values. As the main purpose of this study is to evaluate the role of independent and interdependent self-construals in explaining why people have ecological beliefs that lead to ecotourism, this study conducted empirical research on the causal relationships among self-construal, ecological belief, ecotourism behavior and satisfaction with life (SWL). Socio-psychological theories refer to the value/attitude-behavior relationships in question; however, relationships between ecological belief and the willingness to pay (WTP) a premium have been supported [15]. To address the unsatisfactory predictive power of environmental value/attitude-behavior model [1] and considering that one of the most influential barriers to environmental actions is price, the current study included WTP for ecotourism between ecological beliefs and ecotourism behavior. Finally, this study examined the impact of ecotourism on SWL.

#### 2. Materials and Methods

## 2.1. Theoretical Framework and Hypotheses

## 2.1.1. Self-Construal, Environmental Orientation and Environmental Belief

Several studies (e.g., [16–18]) suggest the importance of human values in explaining environmental behaviors. Schultz and Zelezny [11] suggested that several research traditions that focused on the relationship of values with environmental attitude and behavior include studies on post-materialist values, utilitarian values, ecocentric and anthropocentric environmental values, social value orientation, cultural values and Schwartz's model of human values [19]. Particularly, Schwartz's [19] model of norm-activation has been widely applied to tackle environmental issues [20]. Guagnano et al. [21] and Stern et al. [22] developed the VBN theory to explain the relationship of values with environmental attitudes and behavior [20,23,24], based on a synthesis of Schwartz's norm-activation model, theory of personal values [25] and the new ecological paradigm (NEP) [26]. The current study also considers the VBN theory as a theoretical framework to elucidate the relationship between self-construal, ecological

Sustainability **2018**, *10*, 789 3 of 18

belief and environmental behavior, considering other mediating variables. A three factor-structure of environmental attitudes [20] in Stern et al.'s [22] VBN theory presents egoistic, social-altruistic and biospheric environmental concerns based on different sources of values including self, others and all living beings.

The above three sources of value in the VBN theory can be incorporated in the concept of self-construal [27]. Schultz [28,29] suggested that the degree to which individual's cognitive representation of self includes specific objects, such as other people or living things, determines how much the individual values those objects. Arnocky et al. [27] (p. 255) argued that self-construal can be conceptualized in terms of the following three notions: "an inclusion of others in self, cultural influences and values." These notions affect individuals' environmental concerns and behavior. Hardin et al. [30] concisely explained the concept of self-construal as an individual's sense of self related to others. The independent and interdependent self-construals have been identified as the two primary types determined by cross-cultural aspects, individualism and collectivism [31]. Originally, the two types of self-construals were formulated to explain cultural differences [31]; however, the two types can also exist within a cultural boundary [27]. In this sense, the concept of self-construal should not be limited to cross-cultural explanation but can also be used as a predictor of ecological beliefs and behavior within a culture. This study considers independent and interdependent self-construal as an antecedent affecting individuals' ecological beliefs without focusing on the cross-cultural context. However, the results of this study can be used for drawing indirect cross-cultural comparisons with other similar studies.

Individuals with independent self-construal perceive themselves as unique and they value self-promotion, autonomy and distinctiveness [31,32]. The interdependent self-construal refers to perceiving the self as being tied to others and individuals with interdependent self-construal attempt to maintain close associations and group harmony. Additionally, people with interdependent self-construal value social relationships, statuses, roles, others' assessments, group affiliation and freedom of expressions [33,34].

Significant research in social cognition, emotion and motivation within the field of psychology has indicated the value of the self-construal theory [27]. Particularly, social cognition research related to self-construal has shed light on the intricate relationship between self and behavior [32]. Previous studies have investigated various topics related to independent and interdependent self-construals and conducted various cross-cultural comparisons. The present study focuses on the relationships between the two types of self-construals and their effect on environmental behavior. This study aims to provide empirical evidence for a theoretical framework that establishes a link between the self and environmental behavior, particularly ecotourism.

It may be useful to clarify the core concepts of this study, considering Schultz et al.'s [20] definitions. Environmental concern refers to "the affect associated with environmental problems and environmental attitude refers to the collection of beliefs, affects and behavioral intentions a person holds about environmental activities or issues, environmental concern is one aspect of an environmental attitude" [20] (p. 458). Additionally, Schultz et al. [20] (p. 458) defined environmental worldview as "a person's belief about humanity's relationship with nature." The new environmental paradigm scale [35] and its revised scale, the NEP scale [26], have been widely used as measures of ecological beliefs. The NEP scale measures the endorsement of an ecological worldview, which consists of fundamental environmental belief that influence a wide range of attitudes [16]. Dunlap et al. [26] suggested that the NEP scale can be regarded as a fundamental component of individuals' belief system related to the environment, based on the scale's role in tapping fundamental beliefs about the relationship between nature and human beings. In this sense, the current study adopted the NEP scale as a measure for fundamental belief about the interconnection between individuals and the environment. Considering the definitions of the core concepts as stated above, the current study organized the core concepts in the research model as follows: self-construal, which reflects value orientations and sources of environmental concerns and ecological beliefs (environmental worldview) Sustainability **2018**, *10*, 789 4 of 18

shaped by these values and concerns that leads to environmental behavior (ecotourism behavior in this study).

Arnocky et al. [27] (p. 261) concluded that "self-construal was directly related to environmental concern, cooperation and behavior and self-construal predicts a person's reason in caring for the environment." This study supports the predictive value of self-construal in individuals' environmental concerns. Self-construal may affect environmental behavior through ecological beliefs. Independent self-construal leads to egoistic environmental concerns (i.e., individuals with independent self-construal do not care about their behavioral influence on environmental degradation, while individuals with an interdependent self-construal generate ecological beliefs and environmental behavior [27]. Thus, the current study focuses on the role of self-construal as a value orientation variable in predicting ecotourism and proposes that ecological beliefs connect self-construal with ecotourism.

Hypothesis 1 (H1). Independent self-construal will negatively influence ecological belief.

**Hypothesis 2 (H2).** *Interdependent self-construal will positively influence ecological beliefs.* 

## 2.1.2. WTP for Ecotourism, Ecotourism Behavior and SWL

Though the link between environmental values/attitude and high-cost behavior is not conclusive, barriers, including effort, convenience, money, or time, may abate the link between environmental values/attitude and high-cost behavior (e.g., [36–38]). Among high-cost behaviors, monetary forms or price is considered the most significant barrier in establishing the link between environmental values/attitude and environmental behavior [39]. Considering the value-behavior gap and high-cost behaviors, WTP for eco-friendly products or services might be considered one of the highest-cost behaviors. Thus, WTP for ecotourism should be included as an intermediate variable between environmental beliefs and environmental behavior (ecotourism behavior in this case) in the model linking value/belief with environmental behavior; this is because WTP for ecotourism can be a good indicator of the explanatory power of values/beliefs that influence ecotourism behavior. Moser [40] found WTP to be a powerful predictor of the environmental purchasing behavior. Hultman et al. [12] found that ecological beliefs positively influence environmental attitudes, which affect the WTP for ecotourism. Kazeminia et al. [41] also found that ecological beliefs positively influence WTP for ecotourism.

As tourism inevitably has a negative impact on the environment [42], researchers have paid significant attention to ecotourism, which has become an important topic in this field of tourism [43]. From Fennell's [44] study on 85 definitions of ecotourism, the most frequent words that were used in these definitions include natural areas, conservation, culture, benefits to locals, education and sustainability. When analyzing Lindberg and McKercher's [45] distinction between "hard" and "soft" ecotourism or Li and Lian's' [46] distinction between "strict eco-traveler" and "normal eco-traveler," we find that the behavior of hard ecotourists, who use limited intermediary services, actively contributes toward the enhancement of conservation and sustainability, while soft ecotourists support gradual and balanced sustainability by using a range of services from an intermediary to provide comfort and convenient travels. Although soft ecotourists seek experiences from the natural environment at the cost of inconveniences and try to minimize environmental degradation caused by their tourism activities, they tend to passively participate in environmental conservation as they utilize intermediary tourism services and facilities [47]. The current study focused on soft ecotourists, who account for a majority of ecotourists [46] and how their values influence their choice of ecotourism. Ecological beliefs, attitudes and interests were studied as influential factors on ecotourism intention, WTP and ecotourism behavior (e.g., [48-51]). Studies [52,53] measuring ecotourists' (not general tourists) ecotourism behavior examine future behavioral intentions including revisit and word-of-mouth intentions. Pouta and Rekola [54] regarded WTP as a behavioral intention in their

Sustainability **2018**, *10*, 789 5 of 18

TPB model; and Meleddu and Pulina [55] also conceptualized WTP as an intention. WTP may not be appropriate for a model including future behavioral intentions which designed to measure ecotourists' future ecotourism behavior, due to the nature of WTP as an intention.

Subjective well-being researched in various disciplines is employed with a slightly different meaning and referred to as happiness, SWL, or quality of life [56]. SWL indicates an individual's feelings or perceptions of what she/he achieves in life [57] and appraisal of satisfaction with her/his life as a whole [58]. Pavot and Diener [58] (p. 164) defined SWL, regarded as a cognitive element of subjective well-being as "a judgment process, in which individuals assess the quality of their lives on the basis of their own unique set of criteria." Individuals in congruence of their ideas and behaviors tend to feel subjective-wellbeing based on the experience of life fulfillment [59]. Binder and Blankenberg [60] argued that as environmental behaviors and lifestyles lead individuals to fulfill meaning in their lives, environmental behavior may not be regarded as sacrifice but as benefit though they found that life satisfaction is achieved based on self-image of individuals' self-assessment of their environmental behavior, not based on actual environmental behaviors. DeYoung [61] argued that intrinsic satisfaction which fortifies personal well-being is positively related to environmental behavior. Materialism and money tend to have a weak relationship with subjective well-being and altruistic behaviors lead happiness and subjective well-being [62]. Prosocial behaviors lead individuals' subjective well-being by elevating individuals' self-esteem and fulfilling meaning in their lives [63]. Likewise, environmentalism as values and meaning in individuals' lives can be closely related to their life satisfaction. The positive relationships between environmental purchase or behaviors and life satisfaction have been evidenced [60]. For example, Jacob et al. [59] found from their 829 respondents who were the Buddhist Peace Fellowship followers that sustainable food practice influenced life satisfaction, while respondents' recycling and sustainable household choices did not lead their life satisfaction. Xiao and Li [64] found that environmental purchase intentions and behaviors positively affected the satisfaction with life. Brown and Kasser [65] reported that individuals with subjective well-being practiced more ecologically responsible behavior. Tourism experiences improve tourists' subjective well-being [66], positive feelings and happiness [56,67]. Personal values positively affect SWL and the achievement of desired personal values leads to subjective well-being [57]. As ecotourism behavior shaped by ecological beliefs and reinforced by WTP reflects the pursuit and achievement of personal values, it can affect ecotourists' SWL.

**Hypothesis 3 (H3).** *Ecological belief is associated with WTP for ecotourism.* 

**Hypothesis 4 (H4).** *Ecological belief is associated with ecotourism behavior.* 

**Hypothesis 5 (H5).** *WTP for ecotourism is associated with ecotourism behavior.* 

**Hypothesis 6 (H6).** *Ecotourism behavior is associated with SWL.* 

## 2.1.3. Gender as a Moderating Variable

Considering the literature review from 1988 to 1998, Zelezny et al. [68] provided convincing evidence supporting the assumption that females show greater environmental attitude and behavior than males. Zelezny et al.'s [68] study also supported gender differences in environmental attitude and behavior across ages and countries. Gender differences in ecological beliefs were also presented (e.g., [68,69]). Zelezny et al. [68] verified gender differences in both environmental attitude and behavior by measuring ecological belief through the NEP scale. Additionally, Laroche et al. [70] empirically showed that females have higher WTP for environmentally-friendly products. Studies exploring gender differences in ecotourism behavior are very limited. Although Straughan and Roberts [71] argued that the results of gender differences in green consumers have been inconclusive,

Sustainability **2018**, 10, 789 6 of 18

Han et al. [72] found that females tend to stay in green hotels, whilst Sidali et al. [73] found no gender differences in the decision to book a green hotel.

Due to the progress of psychological theory and methodology, the self has been increasingly recognized as a powerful director regulating intentional behavior and social relations [74]. Cross and Madson [74] reviewed empirical evidence for gender differences in self-construal based on their assumption that females are inclined to develop an interdependent self-construal, while males are inclined to develop an independent self-construal in the United States of America. Considering the literature review on the empirical evidence, Cross and Madson [74] found that self-construals explained many observed gender differences in cognitive processes, esteem-related motivation, expression of emotion and social interactions and relations. Their study suggested that individual differences in self-construal could explain individuals' behavior based on gender differences. Considering that self-construals may be a source of gender differences, prevalent gender differences in environmentalism may be explained by self-construals.

Zelezny et al.'s [68] study found that females' higher social responsibility than males is the reason behind gender differences in environmentalism, consistent with Eagly's [75] theory. Studies support that females have a stronger sense of environmentalism when compared to males based on Eagly's [75] emphasis on females' disposition toward considering the effects of their behavior on others' welfare based on social roles in socialization [71]. Females' strong environmentalism can be explained by associating the thesis on gender differences in self-construal elaborated in Cross and Madson's [74] model, which was developed from Eagly's [75] study. Cross and Madson [74] (p. 8) argued that "many of the observed differences in women's and men's behavior may be explained by individual differences in self-construal," and males have stereotypes of independent self-construals, while females show interdependent stereotypes. Brewer and Gardner [76] suggested three distinct aspects of self-construal related to the notion that all humans have the fundamental need for belongingness (in this case, males also seek to fulfill their need, belongingness); these aspects are personal aspect (similar to Cross and Madson's independent self-construal), relational aspect (similar to Cross and Madson's interdependent self-construal) and collective aspect (similar to SIT and self-categorization theory) [77]. Focusing on group memberships and affiliations [77], the collective aspect may more closely correspond to interdependent self-construal in the collective culture. Cross et al. [78] (p. 792) argued, "In collectivism-based interdependence, the individual's position in the group or situation dictates behavior; therefore, knowing one's place, behaving according to one's role and putting the needs of the group before one's own needs are central dictums that shape the self-construal." Cross et al.'s [78] description of interdependence in collectivism (i.e., the collective aspect of self-construal) tends to delineate male stereotypes in Asian cultures when compared to the Western cultures. Furthermore, self-construal in gender differences can be found in a collective culture, such as Korea. Recent studies (e.g., [77-81] have tended to use relational interdependence for females. In this sense, it should be clarified that the present study focuses on independent and relational interdependent self-construal based on gender differences in the collective culture of Korea. Accordingly, the current study explores how different self-construals related to gender differences affect ecological beliefs and ecotourism behavior.

One of the purposes of this study in investigating the gender effect is mainly to examine the impact of self-construal and gender differences. In other words, if self-construal is influential but gender effects are not considered, then one should focus more on internalized self-construal through gender differences than gender differences, *per se*. On the other hand, when both self-construals and gender effects are considered, gender differences may have additional characteristics to track. Thus, this study established gender as a moderating variable, which affects the paths between self-construals and NEP, NEP and WTP, NEP and ecotourism behavior, WTP and ecotourism behavior and SWL.

Sustainability **2018**, *10*, 789 7 of 18

**Hypothesis 7 (H7).** *Gender has moderating effects on the paths between self-construals and NEP, NEP and WTP, NEP and ecotourism behavior, WTP and ecotourism behavior and ecotourism behavior and SWL.* 

## 2.2. Methodology

## 2.2.1. Data Collection and Sample

As this study focuses on "soft" ecotourists, our respondents were people with at least one ecotourism experience. We employed a judgmental sampling procedure, a type of convenience sampling, to obtain purposeful samples [82] from the respondents who have had ecotourism experiences. Accordingly, we contacted Korea Ecotourism Association, Ecotourism Travel Society, Environmental Cooperative Societies and Environmental Non-profit Organizations to find respondents with ecotourism experiences and a questionnaire link was posted on their homepage. We asked people who have at least one ecotourism experience to answer the questionnaire. On the first page of the online questionnaire, a brief description of ecotourism is provided. For those who completed the survey (those who provided cell phone numbers), approximately \$1 gifticon (mobile gift voucher, 1000 won value for Korean money) was offered as an incentive.

We used 555 questionnaire responses for analysis, after excluding 10 incomplete responses. Males comprised 49.5% of the respondents and 33.5% of the participants were between 40 and 49 years, followed by 30~49 years (23.1%), 50~59 years (21.8%) and 20~29 years (18.4%), respectively. Approximately, 65% of the respondents had college degree or higher qualifications; additionally, their occupations included office workers (37.6%), self-employed (16.6%) and professionals (15.4%).

## 2.2.2. Measures

This study includes six constructs. Each construct was measured with multiple items, all of which had been adopted or adapted from previous studies. In order to measure the determinants of the consumer's ecotourism behavior and SWL, self-construal, ecological belief and the willingness to pay a premium for ecotourism services were constructed. The framework for empirical analysis is shown in Figure 1.

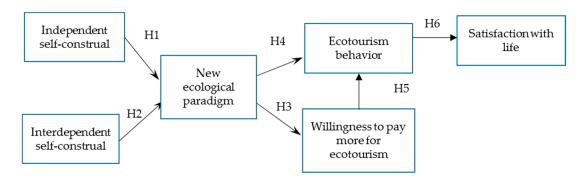


Figure 1. Conceptual model.

Self-construal means the basis of self-justification and the degree to which one is defined independently of others or interdependently with others [34]. The scale to measure independent and interdependent self-construal was adopted from [34]. NEP denotes the fundamental belief about the interconnection between people and the environment and the scale was adopted from [26]. The willingness to pay a premium for ecotourism services is the extent to which individuals express a willingness to pay more for eco-friendly ecotourism services, the items used to measure WTP are based on [70]. Ecotourism behavior refers to the extent to which individuals try to choose ecotourism

services in their trips and the scale was adapted based on [71]. SWL indicates the degree of satisfaction with life as a whole and the scale was adopted from [58].

A seven-point Likert scale consisting of "strongly disagree" (1) to "strongly agree" (7) was used to measure the items. Table 1 lists the survey items used to measure the constructs and their operational definitions. Gender was included for the moderating variable and respondent was coded as 1 if male and 2 if not.

**Table 1.** Measures of the research model.

Measure	Definition	Measure Items	Sources
Independent self-construal	The extent to which the self is seen as a unique individual, fundamentally separate from others.	<ul> <li>My personal identity, independent of others, is very important to me.</li> <li>Being able to take care of myself is a primary concern for me.</li> <li>I enjoy being unique and different from others in many respects.</li> </ul>	[34]
Interdependent self-construal	The extent to which the self is seen as fundamentally embedded in the larger social world.	<ul> <li>My happiness depends on the happiness of those around me.</li> <li>It is important for me to maintain harmony within my group.</li> <li>I often have the feeling that my relationships with others are more important than my own accomplishments.</li> </ul>	[34]
New ecological paradigm	Fundamental belief about the interconnection between people and the environment.	<ul> <li>Despite our special abilities, humans are still subject to the laws of nature.</li> <li>When humans interfere with nature, it often produces disastrous consequences.</li> <li>Humans are severely abusing the environment.</li> <li>Plants and animals have as much right as humans to exist.</li> <li>If things continue on their present course, we will soon experience a major ecological catastrophe.</li> </ul>	[26]
Willingness to pay a premium	The degree to which people are willing to pay a premium for ecotourism services.	<ul> <li>I am willing to pay a higher price for ecotourism services.</li> <li>It is acceptable to pay 10% more for eco-friendly travel services.</li> <li>I would be willing to spend extra money for an eco-friendly trip.</li> <li>I will encourage people around me to conduct eco-friendly travel.</li> </ul>	[70]
Ecotourism behavior	The extent to which people are trying to choose ecotourism services in their trip.	<ul> <li>I try to buy ecotourism services.</li> <li>Whenever possible, I buy ecotourism services.</li> <li>I make every effort to buy ecotourism services.</li> </ul>	[71]
Satisfaction with life	The degree of satisfaction with life as a whole.	<ul> <li>In most ways, my life is close to my ideals.</li> <li>The conditions of my life are excellent.</li> <li>I am satisfied with my life.</li> <li>Until now, I have achieved the important things that I wanted in life.</li> <li>If I could live my life over, I would change almost nothing.</li> </ul>	[58]

Sustainability **2018**, 10, 789 9 of 18

#### 3. Results

#### 3.1. Measurement Model

To test the adequacy of the measurement model, confirmatory factor analysis using SPSS AMOS 21.0 was conducted. The goodness of fit test showed that the measurement fit the data adequately ( $\chi^2/df = 2.892$ ; GFI = 0.909; AGFI = 0.885; NFI = 0.923; CFI = 0.948; TLI = 0.940; RMSEA = 0.059). The overall fit for the measurement model met the conventional cutoff criteria [83]. The reliability and validity of the measurement model was examined. First, we used Cronbach's alpha and composite reliability (CR) to assess the reliability of each construct. Table 2 reports the Cronbach's alphas for the constructs, ranging from 0.701 and 0.926 and the CR coefficients were above 0.70, ranging from 0.748 to 0.927. Second, the average variance extracted (AVE) values for all the constructs were larger than 0.50 for all the constructs, ranging from 0.501 to 0.809. Overall, the constructs employed in this study were found to have acceptable reliability.

Table 2. Statistics of construct items.

	Factor Loadings	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted (AVE)
Independent		0.701	0.748	0.501
self-construal		0.701	0.740	0.501
INSC1	0.729			
INSC2	0.784			
INSC3	0.597			
Interdependent		0.760	0.773	0.537
self-construal		0.700	0.773	0.557
ITSC1	0.806			
ITSC2	0.786			
ITSC3	0.586			
New ecological		0.909	0.911	0.672
paradigm		0.909	0.911	0.672
NEP1	0.798			
NEP2	0.881			
NEP3	0.842			
NEP4	0.818			
NEP5	0.755			
Willingness to pay		0.002	0.007	0.712
premium for ecotourism		0.903	0.907	0.712
WTP1	0.810			
WTP2	0.912			
WTP3	0.928			
WTP4	0.705			
Ecotourism behavior		0.926	0.927	0.809
ETB1	0.896			
ETB2	0.928			
ETB3	0.874			
Satisfaction with life		0.883	0.892	0.625
SWL1	0.803			
SWL2	0.859			
SWL3	0.847			
SWL4	0.746			
SWL5	0.683			

 $<sup>\</sup>chi^2$  = 627.607 (p = 0.000, df = 217), GFI = 0.909; AGFI = 0.885; NFI = 0.923; TLI = 0.940; CFI = 0.948; RMSEA = 0.059.

Sustainability **2018**, 10, 789 10 of 18

Next, validity tests were conducted. Factor loadings of all items were significant and values were larger than recommended 0.50 threshold, ranging from 0.597 to 0.928 [83]. This indicated adequate convergent validity (see Table 2). Moreover, all the square roots of the AVE for each construct were larger than the correlations between the construct and the rest of other constructs (see Table 3), confirming discriminant validity [84]. Therefore, the constructs for our measurement model had adequate validity as well as reliability.

		Mean	S.D.	1	2	3	4	5	6
1	INSC	4.95	0.95	0.708 *					
2	ITSC	5.35	0.89	0.400	0.733 *				
3	NEP	5.92	0.96	0.263	0.393	0.820 *			
4	WTP	4.85	1.08	0.236	0.341	0.409	0.844 *		
5	ETB	4.47	1.20	0.191	0.250	0.320	0.655	0.899 *	
6	SWI	4 54	1 10	0.392	0.274	0.125	0.278	0.395	0.791 3

**Table 3.** Correlations between the constructs.

INSC-Independent self-construal; ITSC-Interdependent self-construal; NEP-New ecological paradigm; WTP-Willingness to pay a premium for ecotourism; ETB-Ecotourism behavior; SWL-Satisfaction with life.

There is concern for common method bias because self-reported data from a single source were used for this study. Thus, Harman's single-factor test [85] was performed to test the possible effect of a common method bias. Factor analysis indicated that the biggest covariance explained by single factor was 40.40%, which was less than the 50% recommended threshold. In other words, the common method bias proved to be not a big problem in this study [86].

Last, we conducted a multi-collinearity test. We can use variation inflation factor (VIF) to examine whether there is an overlap between two variables. VIF analysis showed that the VIF values were between 1.188 (the minimum) and 1.968 (the maximum), which are below the recommended threshold of 10. This suggests that our data is free from multi-collinearity issue.

#### 3.2. Structural Paths and Hypotheses Tests

We employed the structural equation model to test our proposed framework shown in Figure 1 using SPSS AMOS 21.0 and the results are presented in Table 4. All the indices indicated adequate model fit ( $\chi^2/df = 2.629$ ; GFI = 0.919; AGFI = 0.896; NFI = 0.931; CFI = 0.956; TLI = 0.948; RMSEA = 0.054) when judged based on the recommended criteria in the previous studies [87].

Н	Path	β	S.E.	C.R.	Result
H1	$INSC \to NEP$	0.148 **	0.049	2.581	Rejected
H2	$ITSC \to NEP$	0.401 **	0.063	6.704	Accepted
H3	$NEP \to WTP$	0.369 **	0.052	7.676	Accepted
H4	$NEP \to ETB$	0.099 *	0.047	2.822	Accepted
H5	$WTP \to ETB$	0.630 **	0.059	13.340	Accepted
H6	$ETB \to SWL$	0.641 **	0.067	8.677	Accepted

**Table 4.** Results of the hypotheses testing.

Table 4 displays the standardized path coefficient and path significance for each path. Independent self-construal ( $\beta$  = 0.148; t = 2.581) had a positive and significant effect on the NEP. We hypothesized that independent self-construal is negatively related with NEP and hence H1 was not supported. Meanwhile, interdependent self-construal ( $\beta$  = 0.401; t = 6.704) was positively associated with the NEP. Consequently, H2 was supported. The results also revealed that NEP had a significant positive

<sup>\*</sup> The numbers in the diagonal row are square roots of the average variance extracted.

 $<sup>\</sup>chi^2$  = 565.130 (p = 0.000, df = 215), GFI = 0.919; AGFI = 0.896; NFI = 0.931, TLI = 0.948, CFI = 0.956; RMSEA = 0.054. \*\* p < 0.01, \*\* p < 0.05.

effect on the WTP (willingness to pay a premium for ecotourism behavior) ( $\beta$  = 0.369; t = 7.676) and ecotourism behavior ( $\beta$  = 0.099; t = 2.822). Therefore, H3 and H4 were supported. In addition, WTP was significantly associated with ecotourism behavior ( $\beta$  = 0.630; t = 13.34) and ecotourism behavior significantly affected SWL ( $\beta$  = 0.641; t = 8677). Therefore, H5 and H6 were supported.

We tested for mediation effects of NEP in the relationship between independent self-construal and ecotourism behavior. The bootstrapping test of Preacher and Hayes [88,89] was used to analyze the mediating effect. The amount of mediation can be explained by the reduction of the effect of the independent variable on the result or the difference between total effect and indirect effect.

First, we estimated a model by constraining the direct effect of independent self-construal on ecotourism behavior. Further, we examined whether an indirect effect by including the mediator decreases the impact of the direct effect. The results showed that NEP partially mediates the relationship between independent self-construal and ecotourism behavior, considering the effect of independent self-construal on ecotourism behavior ( $\beta = 0.139$ , p < 0.05) and the significance of the indirect effect (p = 0.04). In addition, we estimated the mediation effect of NEP in the relationship between interdependent self-construal and ecotourism behavior. The results also revealed that NEP partially mediates the relationship between interdependent self-construal and ecotourism behavior, considering the effect of interdependent self-construal on ecotourism behavior ( $\beta = 0.079$ , p < 0.05) and the significance of indirect effect (p = 0.009).

#### 3.3. Moderating Effects of Gender

Consistent with previous studies, our t-test results showed that there are significant differences between male and female in INSC and INTC level. Specifically, male (m = 5.07) had higher level of INSC compared to female (m = 4.84). Meanwhile, the mean score of ITSC was significantly higher for female (m = 5.46) compared to male (m = 5.24). However, the main focus of our study was how different self-construals related to gender differences affect ecological beliefs and ecotourism behavior. General gender differences related to ecotourism have been well-documented in previous studies but the moderating effects of gender differences and the relationships between self-construals and genders in our study can provide new insight.

Multiple group analysis was conducted to estimate the moderating effects of gender in the relationship between self-construal, NEP, willingness to pay a premium for ecotourism, ecotourism behavior and SWL. Among the 555 respondents considered in the analysis, 275 men and 280 women were grouped. The significant differences between the two groups were examined by comparing the  $\chi^2$  statistics of the two groups' equality of the constrained and unconstrained models. The presence of significant differences between men and women would imply the existence of the moderating effects of gender on the relationships between self-construal, NEP, WTP, ETB and SWL.

The path coefficient showing the causal relationship between the independent self-construal and NEP was set to free (free model) and the  $\chi^2$  variation with the constraint model that the path coefficient values between the two constructs were the same was examined. The moderating effect of gender existed in the relationship between WTP and ecotourism behavior (the variation of  $\chi^2 = 8.115 > \chi^2_{0.05}(1) = 3.84$ , df = 1). When separating the moderating effect between men and women, the coefficient of WTP for male was 0.934 in comparison to 0.617 for female, indicating that the influence of WTP on ecotourism behavior was stronger in the male group. However, the moderating effect of gender was not significant on the paths between self-construal and NEP, NEP and WTP, NEP and ecotourism behavior and ecotourism behavior and SWL. Therefore, H 7 was partially supported. Table 5 shows the moderating effects of gender on the hypothesized paths and Table 6 lists the coefficients of male and female in the paths.

Sustainability 2018, 10, 789 12 of 18

Model	$\chi^2$	df	CFI	RMSEA	$\Delta \chi^2$	<i>p</i> -Value
Free model	807.115	430	0.953	0.040		0.000
Constrained model 1 (INSC $\rightarrow$ NEP)	807.434	431	0.953	0.040	0.319	0.000
Constrained model 2 (ITSC $\rightarrow$ NEP)	807.853	431	0.953	0.040	0.738	0.000
Constrained model 3 (NEP $\rightarrow$ WTP)	808.965	431	0.953	0.040	1.85	0.000
Constrained model 4 (NEP $\rightarrow$ ETB)	807.579	431	0.953	0.040	0.464	0.000
Constrained model 5 (WTP $\rightarrow$ ETB)	815.23	431	0.953	0.040	8.115	0.000
Constrained model 6 (ETB $\rightarrow$ SWL)	810.279	431	0.953	0.040	3.164	0.000

**Table 5.** Moderating effects of gender.

**Table 6.** Coefficients between male and female in the paths.

Path -		Male		Female		
	Unstandardized Coefficient	Standardized Coefficient	t-value	Unstandardized Coefficient	Standardized Coefficient	<i>t-</i> Value
$INSC \rightarrow NEP$	0.169	0.213	2.462	0.113	0.120	1.545
$ITSC \to NEP$	0.335	0.375	4.323	0.451	0.344	3.978
$\text{NEP} \to \text{WTP}$	0.326	0.341	4.935	0.469	0.380	5.775
$NEP \to ETB$	0.191	0.131	2.942	0.127	0.100	1.882
$\text{WTP} \to \text{ETB}$	0.964	0.934	9.345	0.631	0.617	9.342
$ETB \to SWL$	0.698	0.780	7.535	0.454	0.487	4.678

#### 4. Discussion and Conclusions

Interest in sustainability has increased in the tourism industry. It is becoming increasingly important to identify the factors that influence ecotourism behavior. This research is an exploration of tourists' ecotourism behavior from the perspective of ecological beliefs and action congruence. More specifically, our research examined the role of self-construal as a predictor of ecological value that influences ecotourism behavior. The purpose of this study is to investigate the antecedents related to why tourists engage in ecotourism and the consequences of ecotourism behavior. Our findings empirically support the proposed model. Several key findings can be derived from this study.

First, the results revealed the role of self-construal as a value orientation variable in predicting ecotourism behavior. Both independent and interdependent self-construal positively influenced ecological beliefs. Our finding that independent self-construal has a positive effect on ecological belief (NEP) is contrary to the hypothesis but this result is in line with the finding of Kareklas et al. [90] that egoistic and environmentally altruistic orientation simultaneously affect consumer's organic attitude and behavior. Although, contrary to our hypothesis, independent self-construal has positive effects on NEP, the results present that interdependent self-construal ( $\beta$  = 0.401) has a stronger effect than independent self-construal ( $\beta$  = 0.148). As environmental awareness and recognition of the negative effects of environmental pollution on health and personal well-being have been increasing, individuals with independent self-construal tend to have increased NEP. On the other hand, Chuang et al. [91] found that individuals with independent self-construal tended to choose self-interest options instead of pro-environmental choices compared with individuals with interdependent self-construal, when they faced a situation of conflicting choices between self-interest and pro-environmental options. The positive effect of independent self-construal seems inconclusive, while that of interdependent

self-construal on ecological belief is evident. Accordingly, motivations and degrees of independent self-construal's influence on NEP need to be studied further.

Second, this study finds congruence between values/beliefs and environmental behavior. The stronger the ecological belief (NEP), the higher is the tendency to pay a premium for ecotourism services, which is consistent with the finding of Hultman et al. and Kazeminia et al. [12,41]. In addition, ecological belief is positively related to ecotourism behavior, which, in turn, affects consumers' SWL. The positive influence of ecotourism behavior on SWL needs to be carefully interpreted in light of the sample, who are actual ecotourists, used in this study. Ecotourists could realize their idea and value through ecotourism activities and may find the meaning of life through it.

Third, this study includes gender as a moderating variable to compare the relative impacts of self-construal and gender. The results reveal that self-construal has significant impacts on ecological belief (NEP), while gender does not have significant impacts. This implies that the difference in ecological belief (NEP) is mainly due to the difference in the tendencies of individuals; it is not derived from gender difference but from self-construal.

The findings of this study point to several implications for academics. First, this study focuses on the effects of self-construal, in the form of psychological and social aspects of self, on different levels of ecological values and environmental behavior. This study has proven that self-construal is a significant predictor of ecological values and its effect is far more influential than the influence of gender, which was previously considered important in explaining environmental attitude and behavior (e.g., [68,70]). Therefore, this study is meaningful to examine the influence of self-interpretation as a leading variable affecting tourists' ecological beliefs and behaviors. In this study, gender was found to be significant only in the relationship between WTP and ecotourism behavior. The impact of WTP on ecotourism behavior was stronger in males, indicating that males had a higher degree of correspondence between intention and behavior related to the ecotourism. It is difficult to explain why gender differences exist only in the path between WTP and ecotourism behavior due to paucity of previous studies. Further studies using psychosocial variables that can explain gender differences in the relationship between beliefs and behavior need to be conducted.

Second, this research includes WTP to address the unsatisfactory predictive power of ecological beliefs in explaining ecotourism behavior in previous studies. Although WTP effectively explains ecotourism behavior, as it links the value-behavior gap in high-cost ecotourism behavior, existing studies have a limitation in that WTP is regarded as the final dependent variable without linking WTP to ecotourism behavior. Most previous [12,41] studies which include WTP do not include ecotourism behavior in their research models. This study measured ecotourism behavior rather than future behavioral intentions, our model including WTP may be appropriate for investigate actual ecotourists, while studies measuring ecotourism behavior with future behavioral intentions have limitation to include WTP as an intention. This study is expected to contribute to the ecotourism literature by enhancing the understanding of the effect of WTP on actual ecotourism behavior and SWL.

Third, this study reveals that ecotourism behavior based on ecological belief (NEP) and WTP increases life satisfaction. In other words, this study revealed that the role of attitude-behavior congruence in providing overall life satisfaction to individuals by finding ecotourism behavior can be regarded as experiences that can enhance their quality of life. While previous studies have focused on the antecedents of ecotourism behavior and were not concerned about the consequences of ecotourism behavior, this study extends previous studies and contributes to literature by showing how belief-based behaviors enhance tourists' satisfaction with life.

Meanwhile, the managerial implications for practitioners can also be drawn from the results of this study. First, the fact that independent self-construal orientation has a positive relationship with the NEP demonstrates that ecotourism-related beliefs and values need to consider egoistic aspects as well as altruistic aspects. These results are in accordance with the findings that independent self-construal individuals are more interested in personal well-being and therefore tend to buy more organic food [90]. Therefore, marketers in the tourism industry need to feature both altruistic (e.g.,

environmental benefits) and egoistic (e.g., personal benefits) claims when they design ecotourism advertising or marketing campaigns.

Second, this research can also provide industry and policymakers insights into the type of marketing strategies that can be useful in educating and informing the tourists while they select ecotourism services. Our study finds that ecotourism behavior is an influential predictor of SWL. Therefore, it is necessary to ensure that ecotourism behavior influences the satisfaction with life even after tourists' eco tour ends in the creation of advertising claims or appeals. Policymakers can also benefit from this finding when designing eco-related policies or social marketing programs; these programs can be designed to persuade individuals about the long-term influence of sustainable environmental action on the happiness of their lives.

Despite several contributions, our work has some limitations, which offer future research opportunities. First, though this research contributes to the literature by identifying factors affecting ecotourism behavior, the predictors used in our model may not be exhaustive. Future research needs to examine other psychological and social factors that may influence ecotourism behavior in order to gain deeper insights into ecotourism behavior. Second, this study finds that ecotourism behavior positively affects SWL but it is not clear how and in what aspects SWL is affected by ecotourism behavior. In future studies, it is necessary to investigate how ecotourism behavior affects life satisfaction in a specific manner. Finally, the measurement scales of ecotourism behavior in this study can be a limitation. Measurement scales for ecotourism behavior have not been developed yet and previous studies use future behavioral intentions [84,85]. The current study uses modified version of the scale of environmental behavior, though the reduction or modification of the scales is a common practice. Thus, developing ecotourism behavior measurement scales may contribute to this area of research.

Finally, future studies could replicate this research by using samples of Western countries. As self-construal can also be influenced by culture, it would be interesting to examine cross-cultural comparisons between individualism and collectivism cultures.

**Author Contributions:** Kumju Hwang and Jieun Lee conceived and designed the research; all authors collected and analyzed the data; all authors wrote and reviewed the paper.

**Conflicts of Interest:** The authors declare no conflict of interest.

#### References

- 1. Lee, T.H.; Jan, F.H. Ecotourism Behavior of Nature-based Tourists: An Integrative Framework. *J. Travel. Res.* **2017**. [CrossRef]
- 2. Mitra, A.; Khan, A. Green Tourism Management in India 'A 3D Study of the Seven Sisters States of North-East with Special Reference to Eco-Tourism'. *Int. J. Innov. Res. Sci. Eng. Technol.* **2017**, *6*. [CrossRef]
- 3. The International Ecotourism Society (TIES). Fact Sheet: Global Ecotourism. Available online: https://ibgeography-lancaster.wikispaces.com/file/view/ties+global+ecotourism+fact+sheet.pdf (accessed on 7 March 2018).
- 4. Kim, K.H.; Park, D.B. Relationships Among Perceived Value, Satisfaction, and Loyalty: Community-Based Ecotourism in Korea. *J. Travel. Tour. Mark.* **2017**, *34*, 171–191. [CrossRef]
- 5. Adlwarth, W. Corporate social responsibility–customer expectations and behaviour in the tourism sector. In *Trends and Issues in Global Tourism 2010;* Springer: Berlin, Germany, 2010; pp. 101–109.
- 6. Deng, J.; Li, J. Self-identification of ecotourists. J. Sustain. Tour. 2015, 23, 255–279. [CrossRef]
- 7. Jaafar, M.; Maideen, S.A. Ecotourism-related products and activities, and the economic sustainability of small and medium island chalets. *Tour. Manag.* **2012**, *33*, 683–691. [CrossRef]
- 8. Jamrozy, U.; Lawonk, K. The multiple dimensions of consumption values in ecotourism. *Int. J. Cult. Tour. Hosp. Res.* **2017**, *11*, 18–34. [CrossRef]
- 9. Wearing, S.; Cynn, S.; Ponting, J.; McDonald, M. Converting environmental concern into ecotourism purchases: A qualitative evaluation of international backpackers in Australia. *J. Ecotour.* **2002**, *1*, 133–148. [CrossRef]

10. Escalas, J.E.; Bettman, J.R. Self-construal, reference groups, and brand meaning. *J. Consum. Res.* **2005**, *32*, 378–389. [CrossRef]

- 11. Schultz, P.W.; Zelezny, L. Reframing environmental messages to be congruent with American values. *Hum. Ecol. Rev.* **2003**, *10*, 126–136.
- 12. Hultman, M.; Kazeminia, A.; Ghasemi, V. Intention to Visit and Willingness to Pay Premium for Ecotourism: The Impact of Attitude, Materialism, and Motivation. *J. Bus. Res.* **2015**, *68*, 1854–1861. [CrossRef]
- 13. Liburd, J.J.; Benckendorff, P.; Carlsen, J. Tourism and quality of life: How does tourism measure up? In *Handbook of Tourism and Quality-of-Life Research: Enhancing the Lives of Tourists and Residents of Host Communities*; Uysal, M., Perdue, R.R., Sirgy, M.J., Eds.; Springer: New York, NY, USA, 2012; pp. 105–132.
- 14. Chen, C.F.; Chen, F.S. Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists. *Tour. Manag.* **2010**, *31*, 29–35. [CrossRef]
- 15. Choi, A.S.; Fielding, K.S. Environmental attitudes as WTP predictors: A case study involving endangered species. *Ecol. Econ.* **2013**, *89*, 24–32. [CrossRef]
- 16. Davis, J.L.; Green, J.D.; Reed, A. Interdependence with the environment: Commitment, interconnectedness, and environmental behavior. *J. Environ. Psychol.* **2009**, *29*, 173–180. [CrossRef]
- 17. Poortinga, W.; Steg, L.; Vlek, C. Values, environmental concern, and environmental behavior. *Environ. Behav.* **2004**, *36*, 70–93. [CrossRef]
- 18. Stern, P.C. New environmental theories: Toward a coherent theory of environmentally significant behavior. *J. Soc. Issue* **2000**, *56*, 407–424. [CrossRef]
- 19. Schwartz, S.H. Normative influences on altruism. Adv. Exp. Soc. Psychol. 1977, 10, 221–279.
- 20. Schultz, P.W.; Gouveia, V.V.; Cameron, L.D.; Tankha, G.; Schmuck, P.; Franěk, M. Values and their relationship to environmental concern and conservation behavior. *J. Cross Cult. Psychol.* **2005**, *36*, 457–475. [CrossRef]
- 21. Guagnano, G.A.; Stern, P.C.; Dietz, T. Influences on attitude-behavior relationships a natural experiment with curbside recycling. *Environ. Behav.* **1995**, 27, 699–718. [CrossRef]
- 22. Stern, P.C.; Dietz, T.; Abel, T.; Guagnano, G.A.; Kalof, L. A value-belief-norm theory of support for social movements: The case of environmentalism. *Hum. Ecol. Rev.* **1999**, *6*, 81–97.
- 23. Andersson, L.; Shivarajan, S.; Blau, G. Enacting ecological sustainability in the MNC: A test of an adapted value-belief-norm framework. *J. Bus. Ethics* **2005**, *59*, 295–305. [CrossRef]
- 24. Slimak, M.W.; Dietz, T. Personal values, beliefs, and ecological risk perception. *Risk Anal.* **2006**, *26*, 1689–1705. [CrossRef] [PubMed]
- 25. Stern, P.C.; Dietz, T. The value basis of environmental concern. J. Soc. Issues 1994, 50, 65–84. [CrossRef]
- 26. Dunlap, R.E.; Van Liere, K.D.; Mertig, A.G.; Jones, R.E. New trends in measuring environmental attitudes: Measuring endorsement of the new ecological paradigm: A revised NEP scale. *J. Soc. Issues* **2000**, *56*, 425–442. [CrossRef]
- 27. Arnocky, S.; Stroink, M.; DeCicco, T. Self-construal predicts environmental concern, cooperation, and conservation. *J. Environ. Psychol.* **2007**, 27, 255–264. [CrossRef]
- 28. Schultz, P.W. New environmental theories: Empathizing with nature: The effects of perspective taking on concern for environmental issues. *J. Soc. Issues* **2000**, *56*, 391–406. [CrossRef]
- 29. Schultz, P.W. The structure of environmental concern: Concern for self, other people, and the biosphere. *J. Environ. Psychol.* **2001**, *21*, 327–339. [CrossRef]
- 30. Hardin, E.E.; Leong, F.T.; Bhagwat, A.A. Factor Structure of the Self-construal Scale Revisited: Implications for the Multidimensionality of Self-construal. *J. Cross Cult. Psychol.* **2004**, *35*, 327–345. [CrossRef]
- 31. Markus, H.R.; Kitayama, S. Culture and the Self: Implications for Cognition, Emotion, and Motivation. *Psychol. Rev.* **1991**, *98*, 224. [CrossRef]
- 32. Agrawal, N.; Maheswaran, D. The effects of self-construal and commitment on persuasion. *J. Consum. Res.* **2005**, *31*, 841–849. [CrossRef]
- 33. Fiske, A.P.; Kitayama, S.; Markus, H.R.; Nisbett, R.E. The cultural matrix of social psychology. In *The Handbook of Social Psychology*; Gilbert, D.T., Fiske, S.T., Lindzey, G., Eds.; McGraw-Hill: New York, NY, USA, 1998; pp. 915–981.
- 34. Singelis, T.M. The measurement of independent and interdependent self-construals. *Pers. Soc. Psychol. Bull.* **1994**, *20*, 580–591. [CrossRef]
- 35. Dunlap, R.E.; Van Liere, K.D. A proposed measuring instrument and preliminary results: The 'New Environmental Paradigm'. *J. Environ. Educ.* **1978**, *9*, 10–19.

Sustainability **2018**, 10, 789 16 of 18

36. Barr, S.; Gilg, A. Sustainable lifestyles: Framing environmental action in and around the home. *Geoforum* **2006**, *37*, 906–920. [CrossRef]

- 37. Lindenberg, S.; Steg, L. Normative, Gain and Hedonic Goal Frames Guiding Environmental Behavior. *J. Soc. Issues* **2007**, *63*, 117–137. [CrossRef]
- 38. Wheale, P.; Hinton, D. Ethical consumers in search of markets. *Bus. Stratege Environ.* **2007**, *16*, 302–315. [CrossRef]
- 39. De Pelsmacker, P.; Driesen, L.; Rayp, G. Are Fair Trade Labels Good Business?: Ethics and Coffee Buying Intentions. *J. Consum. Aff.* **2005**, *39*, 363–385. [CrossRef]
- 40. Moser, A.K. Thinking Green, Buying Green? Drivers of Pro-environmental Purchasing Behavior. *J. Consum. Mark.* **2015**, 32, 167–175. [CrossRef]
- 41. Kazeminia, A.; Hultman, M.; Mostaghel, R. Why Pay More for Sustainable Services? The case of ecotourism. *J. Bus. Res.* **2016**, *69*, 4992–4997. [CrossRef]
- 42. Ying, S.; Hongbin, Y. Negative Impacts of Ecotourism on Biological Environment and Protective Countermeasures. In Proceedings of the 2011 International Symposium on Water Resource and Environmental Protection (ISWREP), Xi'an, China, 20–22 May 2011.
- 43. Weaver, D.B.; Lawton, L.J. Twenty years on: The state of contemporary ecotourism research. *Tour. Manag.* **2007**, *28*, 1168–1179. [CrossRef]
- 44. Fennell, D.A. Ecotourism Programme Planning; Cabi Publishing: Oxfordshire, UK, 2002.
- 45. Lindberg, K.; McKercher, B. Ecotourism: A Critical Overview. Pac. Tour. Rev. 1997, 1, 65–79.
- 46. Li, J.; Lian, Y. Study on the Sustainable Development of Tourism in Nature Reserve—A Case Study on Sichuan Province. In Proceedings of the International Conference on the Remote Sensing, Environment and Transportation Engineering (RSETE), Nanjing, China, 24–26 June 2011.
- 47. Choi, Y.E.; Doh, M.; Park, S.; Chon, J. Transformation planning of ecotourism systems to invigorate responsible tourism. *Sustainability* **2017**, *9*, 2248. [CrossRef]
- 48. Kasim, Z.; Ujang, N. Perception Towards Sustainability Polytechnic Campus in Malaysia. *ALAM CIPTA Int. J. Sustain. Trop. Des. Res. Pract.* **2014**, *7*, 15–26.
- 49. Lai, P.H.; Nepal, S.K. Local Perspectives of Ecotourism Development in Tawushan Nature Reserve, Taiwan. *Tour. Manag.* **2006**, 27, 1117–1129. [CrossRef]
- 50. Lu, A.C.C.; Gursoy, D.; Del Chiappa, G. The Influence of Materialism on Ecotourism Attitudes and Behaviors. *J. Travel. Res.* **2016**, *55*, 176–189. [CrossRef]
- 51. Singh, T.; Slotkin, M.H.; Vamosi, A.R. Attitude towards ecotourism and environmental advocacy: Profiling the dimensions of sustainability. *J. Vacat. Mark.* **2007**, *13*, 119–134. [CrossRef]
- 52. Lee, T.H. A structural model to examine how destination image, attitude, and motivation affect the future behavior of tourists. *Leis. Sci.* **2009**, *31*, 215–236. [CrossRef]
- 53. Perera, P.; Vlosky, R. How previous visits shape trip quality, perceived value, satisfaction, and future behavioral intentions: The case of forest-based ecotourism in sri lanka. *Int. J. Sport Manag. Recreat. Tour.* **2013**, *11*, 1–24. [CrossRef]
- 54. Pouta, E.; Rekola, M. The Theory of Planned Behavior in Predicting Willingness to Pay for Abatement of Forest Regeneration. *Soc. Nat. Resour.* **2001**, *14*, 93–106.
- 55. Meleddu, M.; Pulina, M. Evaluation of individuals' intention to pay a premium price for ecotourism: An exploratory study. *J. Behav. Exp. Econ.* **2016**, *65*, 67–78. [CrossRef]
- 56. Gilbert, D.; Abdullah, J. Holidaytaking and the Sense of Well-being. *Ann. Tour. Res.* **2004**, *31*, 103–121. [CrossRef]
- 57. Kim, H.; Lee, S.; Uysal, M.; Kim, J.; Ahn, K. Nature-based Tourism: Motivation and Subjective Well-being. *J. Travel. Tour. Mark.* **2015**, 32 (Suppl. 1), S76–S96. [CrossRef]
- 58. Pavot, W.; Diener, E. Review of the Satisfaction with Life Scale. *Psychol. Assess.* **1993**, *5*, 164–172. [CrossRef]
- 59. Jacob, J.; Jovic, E.; Brinkerhoff, M.B. Personal and planetary well-being: Mindfulness meditation, pro-environmental behavior and personal quality of life in a survey from the social justice and ecological sustainability movement. *Soc. Indic. Res.* **2009**, *93*, 275–294. [CrossRef]
- 60. Binder, M.; Blankenberg, A.K. Green lifestyles and subjective well-being: More about self-image than actual behavior? *J. Econ. Behav. Organ.* **2017**, *137*, 304–323. [CrossRef]
- 61. De Young, R. Some psychological aspects of reduced consumption behavior the role of intrinsic satisfaction and competence motivation. *Environ. Behav.* **1996**, *28*, 358–409. [CrossRef]

62. Dunn, E.W.; Gilbert, D.T.; Wilson, T.D. If money doesn't make you happy, then you probably aren't spending it right. *J. Consum. Psychol.* **2011**, *21*, 115–125. [CrossRef]

- 63. Binder, M.; Freytag, A. Volunteering, subjective well-being and public policy. *J. Econ. Psychol.* **2013**, *34*, 97–119. [CrossRef]
- 64. Xiao, J.J.; Li, H. Sustainable consumption and life satisfaction. Soc. Indic. Res. 2011, 104, 323–329. [CrossRef]
- 65. Brown, K.W.; Kasser, T. Are psychological and ecological well-being compatible? The role of values, mindfulness, and lifestyle. *Soc. Indic. Res.* **2005**, *74*, 349–368. [CrossRef]
- 66. Sirgy, M.J.; Kruger, P.S.; Lee, D.J.; Yu, G.B. How does a travel trip affect tourists' life satisfaction? *J. Travel. Res.* 2011, 50, 261–275. [CrossRef]
- 67. Svarstad, H. Why hiking? Rationality and reflexivity within three categories of meaning construction. *J. Leis. Res.* **2010**, 42, 91–110. [CrossRef]
- 68. Zelezny, L.C.; Chua, P.P.; Aldrich, C. New ways of thinking about environmentalism: Elaborating on gender differences in environmentalism. *J. Soc. Issues* **2000**, *56*, 443–457. [CrossRef]
- 69. Arcury, T. Environmental attitude and environmental knowledge. Hum. Organ. 1990, 49, 300–304. [CrossRef]
- 70. Laroche, M.; Bergeron, J.; Barbaro-Forleo, G. Targeting Consumers who are Willing to Pay More for Environmentally Friendly Products. *J. Consum. Mark.* **2001**, *18*, 503–520. [CrossRef]
- 71. Straughan, R.D.; Roberts, J.A. Environmental segmentation alternatives: A look at green consumer behavior in the new millennium. *J. Consum. Mark.* **1999**, *16*, 558–575. [CrossRef]
- 72. Han, H.; Hsu, L.T.J.; Lee, J.S. Empirical investigation of the roles of attitudes toward green behaviors, overall image, gender, and age in hotel customers' eco-friendly decision-making process. *Int. J. Hosp. Manag.* **2009**, 28, 519–528. [CrossRef]
- 73. Sidali, K.L.; Huber, D.; Schamel, G. Long-Term Sustainable Development of Tourism in South Tyrol: An Analysis of Tourists' Perception. *Sustainability* **2017**, *9*, 1791. [CrossRef]
- 74. Cross, S.E.; Madson, L. Models of the self: Self-construals and gender. *Psychol. Bull.* **1997**, 122, 5–37. [CrossRef] [PubMed]
- 75. Eagly, A.H. Reporting sex differences. Am. Psychol. 1987, 42, 756–757. [CrossRef]
- 76. Brewer, M.B.; Gardner, W. Who is this "We"? Levels of collective identity and self representations. *J. Personal. Soc. Psychol.* **1996**, 71, 83–93. [CrossRef]
- 77. Gabriel, S.; Gardner, W.L. Are there "his" and "hers" types of interdependence? The implications of gender differences in collective versus relational interdependence for affect, behavior, and cognition. *J. Personal. Soc. Psychol.* 1999, 77, 642–655. [CrossRef]
- 78. Cross, S.E.; Bacon, P.L.; Morris, M.L. The relational-interdependent self-construal and relationships. *J. Personal. Soc. Psychol.* **2000**, *78*, 791–808. [CrossRef]
- 79. Cross, S.E.; Gore, J.S.; Morris, M.L. The relational-interdependent self-construal, self-concept consistency, and well-being. *J. Personal. Soc. Psychol.* **2003**, *85*, 933–944. [CrossRef] [PubMed]
- 80. Gardner, W.L.; Gabriel, S.; Hochschild, L. When you and I are "we", you are not threatening: The role of self-expansion in social comparison. *J. Personal. Soc. Psychol.* **2002**, *82*, 239–251. [CrossRef]
- 81. Guimond, S.; Chatard, A.; Martinot, D.; Crisp, R.J.; Redersdorff, S. Social Comparison, Self-stereotyping, and Gender Differences in Self-construals. *J. Personal. Soc. Psychol.* **2006**, *90*, 221–242. [CrossRef] [PubMed]
- 82. Fricker, R.D., Jr. Sampling Methods for Web and E-mail Surveys, SAGE Internet Research Methods; Hughes, J., Ed.; SAGE Publications: London, UK, 2008; Reprinted from The SAGE Handbook of Online Research Methods; Fielding, N., Lee, R.M., Blank, G.; Eds.; SAGE Publications: London, UK, 2012; Chapter 11, pp. 195–216.
- 83. Hair, J.F.; Black, W.C.; Babin, B.J.; Anderson, R.E.; Tatham, R.L. *Multivariate Data Analysis*, 7th ed.; Prentice Hall: Upper Saddle River, NJ, USA, 2009.
- 84. Fornell, C.; Larcker, D.F. Structural equation models with unobservable variables and measurement error: Algebra and statistics. *J. Mark. Res.* **1981**, 382–388. [CrossRef]
- 85. Podsakoff, P.M.; Organ, D.W. Self-reports in organizational research: Problems and prospects. *J. Manag.* **1986**, *12*, 531–544. [CrossRef]
- 86. Podsakoff, P.M.; MacKenzie, S.B.; Lee, J.Y.; Podsakoff, N.P. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *J. Appl. Psychol.* **2003**, *88*, 879–903. [CrossRef] [PubMed]
- 87. Kline, R. Principles and Practice of Structural Equation Modeling; Guilford Press: New York, NY, USA, 2005.

Sustainability **2018**, 10, 789 18 of 18

88. Preacher, K.J.; Hayes, A.F. SPSS and SAS procedures for estimating indiret effects in simple mediation models. *Behav. Res. Meth. Instrum. Comput.* **2004**, *36*, 717–731. [CrossRef]

- 89. Preacher, K.J.; Hayes, A.F. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behav. Res. Meth.* **2008**, *40*, 879–891. [CrossRef]
- 90. Kareklas, I.; Carlson, J.R.; Muehling, D.D. "I eat organic for My benefit and Yours": Egostic and Altruistic Considersations for Purchasing Organic Food and Their Implications for Advertising Strategists. *J. Advert.* **2014**, 43, 18–32. [CrossRef]
- 91. Cuang, Y.; Xie, X.; Liu, C. Interdependent orientations increase pro-environmental preferences when facing self-interest conflicts: The mediating role of self-control. *J. Environ. Psycol.* **2016**, *46*, 96–105.



© 2018 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).