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Environmental Leadership: Exploring Environmental Dissonance Involving Natural Resource Consumption and Ecosystem Degradation

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Walden University
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Abstract

Environmental Leadership: Exploring Environmental Dissonance Involving Natural

Resource Consumption and Ecosystem Degradation

by

Thomas L Tochterman

MA, Management & Leadership, City University of Seattle, 2000

BA, Business Administration, University of Washington, 1996

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

College of Management and Technology

Walden University

August 2016

Abstract

As the corporate world, communities, and individuals become more globalized and demands on natural resources increase, a new emphasis on environmental leadership including a new pragmatic environmental ethos is needed to meet certain basic human needs of future generations. The research problem addressed in this study was the lack of knowledge concerning how environmental cognitive dissonance influences consumption practices related to inefficient resource utilization and ecosystem degradation. The purpose of this study was to provide an understanding of the breadth and depth of environmental cognitive dissonance among visitors to the Kruger National Park in South Africa. The research questions addressed the development, manifestation, and mitigation of environmental cognitive dissonance. This qualitative case study was designed for a purposeful sample of 12 participants visiting the Kruger National Park, South Africa. Data were collected via structured interviews, field observations, and questionnaires, and then were analyzed using a data spiral and cross case analysis. The dominant findings indicated that (a) awareness of personal values, culture, and perceptions of the environment were responsible for basic attitudes regarding the environment and consumption; (b) wasteful habits, excessive consumption, and market influences were juxtaposed with nostalgic/episodic memories and deep thoughts about personal consumptive habits; and (c) an interactive multisensory experience in a pristine and wild environment changed perceptions and values regarding ecosystems and ecosystem preservation. The results of this study could help stewards of natural resources develop a new understanding of consumptive behavior and a new consumer ethos of stewardship and environmental leadership, one that inspires healthy and sustainable ecosystems.

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Dedication

Thinking about the time, treasure, and talent spent to produce this manuscript, two people in my life deserve eternal credit and gratitude. Both ironically living on opposite sides of the globe; both have nurtured me, inspired me, and most important, kept me humble and driven. This manuscript is dedicated to my wife Julie for her never ending commitment to me and my success and to Craig Spencer for his ever present voice and mentorship. Julie Tochterman for her love, patience, and constant encouragement; you are the most caring and giving person and I credit you for keeping me grounded and passionate about life. Julie, above all during this academic journey you kept me engaged by constantly reminding me that the effort was where I needed to be even when it took me half way around the world. You saw the potential good in the path we chose and never once questioned my ability to succeed or the value of the sacrifices. Julie, for this reason, and many others, you are the love of my life and I am eternally grateful.

I also dedicate this manuscript to Craig Ruben Spencer for his friendship, his humble rants, and spiritual guidance that has simply made me a better person. Craig, your compassion for the environment and personal sacrifices made me realize how precious life is; that flora and fauna are not academic code meant to displace passion for all living and non-living things. You taught me that life is not simply deterministic rather that it is one of mutualism and the most beautiful part of life happens when we are not separated from our humble beginnings and elements. You opened my eyes and enabled me to pursue the research problem in this dissertation. Craig, you are the quintessential "man in the arena" and I will forever be honored to stand beside you. Thank you.

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Chapter 1: Introduction to the Study

My aim in this study was to understand how environmental cognitive dissonance and consumptive behaviors function as social drivers that influence environmental leadership and management. Economic factors were explored as contributing antecedents to consumptive behavior**.** Specifically, I explored the interaction of such influences on stewardship of natural resources through a study of environmental cognitive dissonance. Throughout this study, environmental cognitive dissonance will hereafter be referred to as environmental dissonance.

According to Cerin (2003) there is no theoretical environmental construct that explains how humans should commercialize the natural environment and consume its resources. Such an assertion indicated a gap in environmental-theoretical understandings of the vast political, economic, and philosophical differences between advocates for preserving the environment and advocates for hyper-consumptive economic policy and resource utilization. Wisman (2011) debunked a commonly held construct that consumption is a naturally occurring environmental phenomenon, noting:

> A tendency for humans to accumulate material possessions is often presumed to be universal, a direct result of human nature itself. However, a glance at human evolution suggests otherwise. Prior to the adoption of agriculture 10,000 years ago, almost all humans were nomadic, precluding any accumulation of material wealth beyond a few primitive weapons, tools, clothing, and jewelry. Thus, it is only relatively late in the human story that accumulated material wealth even became possible. (p.888)

As the corporate world, societal networks, and communities become more and more globalized and the flow of natural resources and information about stewardship becomes increasingly available to citizens of the world, a new emphasis on the discipline of environmental leadership--including a new pragmatic environmental ethos--is needed to meet certain basic human needs of future generations. Authors and researchers indicate that ecosystems are in jeopardy because of a general lack of understanding of the relationship between resource consumption and resource sustainability. Since 1970, the species population of over 10,000 species measured (Living Planet Index) has declined by 52% (McLellan, Iyengar, Jeffries, & Oerlemans, 2014). Keitumetse (2011) agreed with Cerin (2002) in suggesting that new fields need to be developed in natural and cultural resource management that are informed by social perspectives in order to achieve environmental resource sustainability. The absence of a social perspective influence on consumptive utilization further indicated a gap and opportunity for social science to observe, analyze, and eventually respond with appropriate social actions. In this study, I used ecological psychology as the theoretical framework for exploring how cognitive dissonance can influence the development of a social perspective and environmental ethos--a perspective that is relevant to environmental resource sustainability and practical for resource managers.

Background

In the realm of environmental management and leadership, there are at least two conventional paradigms related to participation in the stewardship of natural resources. The first holds that humans are not part of the ecosystem, but rather observers with or without subjective influence. The second holds that humans are one of an infinite number

of subsystems within the ecosystem, as are all other species of flora and fauna. In the former, humans have distanced themselves psychologically by developing tendencies toward anthropocentric interpretations of human domination over the environment (Brown, 2007). Goldman and Schurman (2000) have called the former the *human exceptionalism paradigm*. Brown stated that humans dismiss moral feelings about our treatment or perceptions of non humans, further indicating agreement with the previously noted gap perspectives of Keitumetse (2011) and Cerin (2002). The two divergent paradigms have far reaching consequences as to human's ability to effectively manage ecosystems and even more concerning, the dire consequences of their behavior and interaction within it. In this study, I explored the influence of such divergent views on environmental dissonance.

Further complicating environmental management and leadership, with respect to both environmental paradigms, are cultural issues that are formed in part by anthropological, social, economic, and political influences. Regarding perceptions of nature, Brown (2007) noted that moral instincts are directly related to these environmental paradigms, and as the paradigms change so do values for the environment. Holden (2005) stated that only with a substantive shift in human morality will there be a more balanced construct of coexistence between humans and natural resources.

Large scale longitudinal surveys conducted over three generations including Baby Boomers, Generation X'ers, and Millennials have indicated that increasingly the generations are becoming more and more extrinsically oriented and motivated, resulting in more and more young people becoming less and less concerned for others, less concerned about the environment, and less engaged in civic affairs (Twenge, Campbell,

& Freeman, 2012). One exception to the claim is that young Millennials appear to be volunteering more than prior generations, but the authors caution there could be extrinsic pressures causing it such as high school graduation requirements. Twenge et al. (2012) stated, "Saving the environment, an area purported to be of particular concern to young Millennials, instead showed one of the largest declines" (p. 1060). Such a social shift could indicate an imbalance between individually held intrinsic and extrinsic values, favoring extrinsic orientation.

Herein lies a research opportunity to further the notion that better understanding of the cognitive conflict between consumption and sustainability, which I refer to in this study as *environmental dissonance*, will result in a moral shift in social structures toward more effective resource stewardship. Such transformation potential creates an ever-evolving challenge for environmental leadership. Brown (2007) stated that if we humans can ground our values and beliefs in such an evolving paradigm, we can avoid consequences of environmental absolutism and relativism. A more balanced paradigm of coexistence supports the ecological view that humans are simply one of many sub-systems of the environment, and that environmental dissonance is a detriment to environmentally responsible behavior. Further research is necessary to seek an understanding of how consumer decision making with respect to critical aspects of systems thinking such as cognitive competencies, emotional intelligence competencies, and social intelligence competencies, can be modified through social resources and marketing to inspire positive social change and environmentally responsible behavior (Smith & O'Sullivan, 2012; Winkel, Wyland, Shafer, & Clason, 2011; Wyland, Bollmus, Freimark, & Hedrich, 2012).

Problem Statement

What is not known is how environmental dissonance develops nor is it known how such dissonance affects resource consumption. According to Brown and Bishop (2011) the environment of natural resources is changing at a pace that humans cannot adapt to as a result of individual and societal paradoxes. The authors stated community psychology must change, and at a quicker pace, in order for humans to adapt effectively to changing environmental conditions. Within the context of community psychology, the social problem I have identified is environmental dissonance. Environmental dissonance is a mental state of conflict between what people believe to be acceptable consumptive perceptions and behaviors versus what is actually true. Such conflict may contribute to an irresponsible natural resource consumption paradigm. The research problem that I studied is the lack of knowledge concerning how environmental dissonance influences consumption, which relates to inefficient resource utilization and ecosystem degradation. In this qualitative research study I sought a better understanding of the breadth, depth, and reasons why such environmental dissonance exists.

Resource management and environmental policy inadvertently contribute to degradation of ecosystems primarily due to financial modeling that favors higher return on investment over preservation of the environment. According to Arvin and Lew (2011), deforestation accounted for 20% of the total global carbon emissions, which is more than the emissions from all cars, planes, and boats on the planet. Arvin and Lew further explained that commercial deforestation is a leading factor in climate change which is affecting economically poor third world counties the most. The cause of climate change and global warming is wildly debated, but given the rapid pace and degrading influence

the change is having on specific regions around the globe, the protection of intrinsically valuable flora and fauna has become an ecological ethical imperative (Albrecht, Brooke, Bennett, & Garnett, 2013). Fundamentally, all environmental pressures currently being exerted on the planet are attributable to the rise in global population, increasing rates of production with advancing technology, and a growing global affluence resulting in increases in ecosystem degradation on a global scale (Rosa & Dietz, 2012; Thorgersen, 2014).

According to the literature, a paradigmatic conflict exists between social theory that helps to explain consumption of natural resources and economic theory used to support sustainability of the environment (Dermody, Hanmer-Lloyd, Koenig-Lewis, & Zhao, 2015; Gatersleben, Murtagh, & Abrahamse, 2014; Ingenbleek, Meulenberg, & Trijp, 2015; McDonagh & Martin, 2015). The effect of the conflict has resulted in cases of unsustainable life-supporting ecosystems throughout the world. The International Union for Conservation of Nature stated such conflict must be met with ecosystem-based adaptation management practices that sustainably manage, preserve, and restore whole ecosystems in a way that allows humans to also adapt to climate change (Rizvi, Baig, & Verdone, 2015). Though volumes of studies have been conducted on the issue of conservation and sustainability, little is written about the extent of such conflict, why it exists, and how leaders can influence consumptive choices. To that end, I explored motivations for and barriers to natural resource preservation and responsible consumption.

Purpose of the Study

The purpose of this qualitative case study was to understand the breadth and depth environmental dissonance among visitors to the Kruger National Park. In this research, I defined environmental dissonance as a mental conflict framed by perceptually guided behavior involving conspicuous consumption, and resulting from the sometimes contradictory relationship between human needs and wants. Further, the purpose of this study was to explore the environmental dissonance of individuals and how such conflict relates to consumptive behavior of these individuals before and after participating in a multisensory experience in a pristine African sub-Sahara bush environment.

For participant interviews, I designed research questions that probed the perceptions and behaviors of English speaking ecotourists. Data I collected from these interviews informed my creation of a psychological construct regarding how ecological values are established and acted upon in the context of natural resource consumption and environmental leadership. An important part of the data I collected were notes taken during observation sessions with participants which provided supportive data in a complimentary data capture using NVivo 11 data analysis software.

In this study, I intended to add to the body of knowledge regarding the influence of value theory, memory theory, consumption theory, behavior theory, decision theory, and motivation theory on perceptions of natural resource stewardship and consumption. Likewise, by seeking a better understanding of such influences on stewardship and consumption, I also sought to determine more clearly the forces that shape environmental leadership. Figure 1 illustrates the relationship of three tenets of this study to consumption and stewardship of natural resources. I assert that the variables depicted are

involved in triggering a state of environmental dissonance, in turn affecting perceptually guided behavior. On the basis of an ecological perspective, I hold that the findings of this research provide a greater understanding of how to facilitate an effective pro-environmental ethos. This addition to the body of knowledge in the realm of environmental leadership will be useful to a wide range of natural resource managers and consumers.
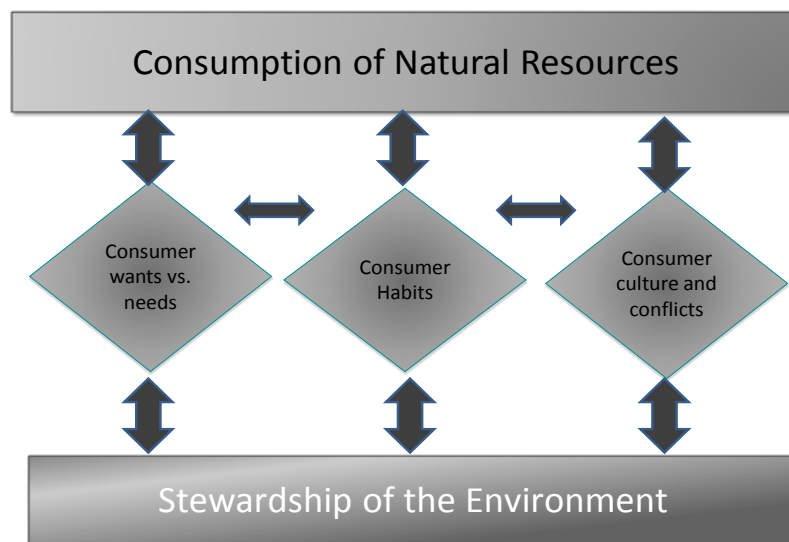
Figure 1. Illustration of influencing factors on environmental leadership.

Conducting this case study in a pristine natural ecosystem provided a research environment that was conducive to promoting honest, rich, and unrestricted participant feedback regarding the phenomenon of environmental dissonance. My decision to conduct this study in such an environment was informed by Bonnett's (2012) observation that individuals ponder conceptions about their place in nature with respect to physicality rather than an all-encompassing notion of a greater whole. Said another way, Bonnett suggested that perceptions of nature and how individuals live within it are better

understood and acted upon relative to particular locales rather than imaginary philosophical paradigms. Bonnett noted, "However nature is to be encountered, ultimately this only occurs authentically through the immediate and sensuous engagement with the particularity and manifold suchness of emplaced things rather than through abstraction and intellectually constructed models (suchness was interpreted by me to mean a state of physical being and a cognitive awareness of it). For only in such places as sites of a blending of the physical and the cultural/social can a substantive awareness of the autochthony of participatory self-arising occur" (Bonnett, 2012, p. 292). Therefore, I believe responses from ecotourists primarily from the United States and Europe visiting the Greater Kruger National Park in the Republic of South Africa provided strong qualitative data important in understanding environmental perceptions of individuals geographically removed from the resource observed.

Specifically the study took place within the Olifants West Nature reserve, which is the westernmost region of the Balule Nature Reserve and forms the outermost western boundary of the Greater Kruger National Park. My qualitative case study inquiry into anthropological, social, economic, and political influences that shape perceptions of environmental values held by visitors to the Kruger National Park on safari provided an understanding of the factors influencing environmental dissonance and long-term ecological sustainability of natural resources.

Specific themes of this study included:

- Understanding the impact of episodic events and memories on environmental dissonance that influences human behavior toward the environment.

- Exploring an environmental paradigm grounded in the intrinsic values of ecosystems and subsystems.

Research Questions

The overarching research question I posed in this study was: What are the social processes that lead people to believe in responsible stewardship of the environment but choose consumptive behaviors that produce harmful environmental effects? The following research sub-questions were designed to shape the research problem into a discoverable, unoffending, and relevant mental scenario to generate data from participants regarding their personal experiences with environmental dissonance, and to discover interconnectivity among factors contributing to consumptive behavior. Alignment among the research problem, research questions, and interview questions is further shown in a matrix provided in Chapter 3:

1. What are the antecedents to the development of environmental dissonance and perceptually guided consumptive behavior?
2. How do individuals perceive and describe environmental dissonance?
3. How do individuals manage consumptive choices and mitigate environmental dissonance?

Conceptual Framework

The conceptual framework of this study does not advance the notion of a dualistic relationship between humans and the environment, but rather the mutualistic and ecological construct of coexistence in biotic relationships. Bonnett (2012) stated, "The so-called external world is not a Cartesian inference or a hypothesis, but what is closest to us; phenomenologically, we are embedded in it and it lies within us" (p. 291). Building

on the theories of ecological psychology and cognitive dissonance, I posit that there exists an environmental fulcrum of social consciousness (see Figure 2) that indicates the balance between human *needs* and human *wants* regarding consumption, and thus the extent of environmental dissonance. Figure 2 further shows that as social, economic, and cultural forces influence environmental leadership, the same forces influence consumer behavior and ecosystem degradation.
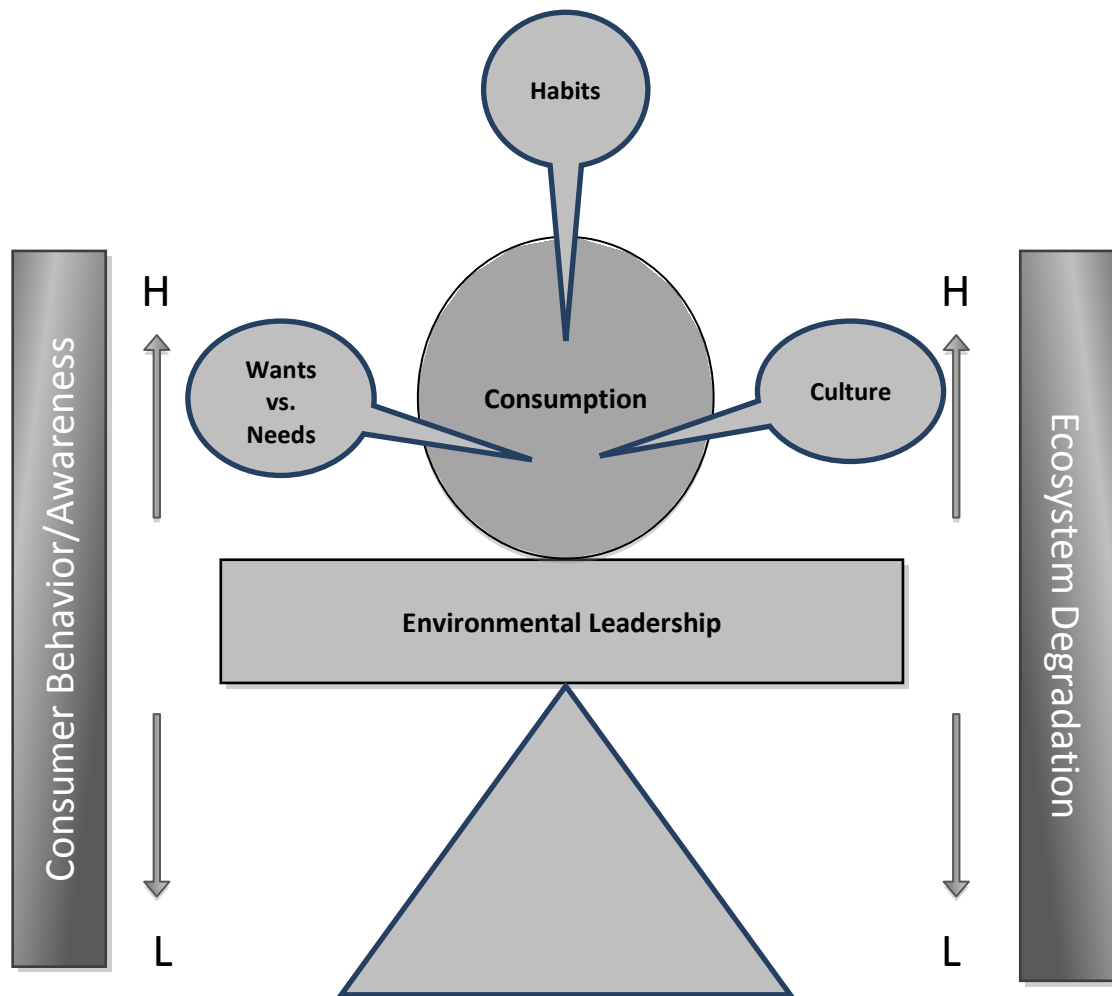
Figure 2. Fulcrum of socio-environmental consciousness.

Similarly there exists a balance between what is ecologically sound for the common good and what is commercially good for the individual. The architecture of this qualitative research design is based on the incorporation of both theoretical and

conceptual foundations. I used ecological psychology and cognitive dissonance as the conceptual lens through which I explored the theory-based constructs of value, memory, behavior, consumption, motivation, sustainable use, and decision in the context of environmental dissonance.

In this study I sought to understand the environmental fulcrum first from an ecological approach, which Heft (2013a) described as a mutualistic view of the relationship between an organism and its econiche. I used the ecological approach to provide the framework for establishing a means to consider interaction among the following three elements; the participant, the environment, and meaningful experiences. The theory of cognitive dissonance described by Festinger (1957, 1961) is a type of misalignment between two sets of information. In practical terms, Festinger explained cognitive dissonance as a mental conflict of the knower between desired outcome and required input to achieve desired outcome, such as a desire to decrease personal consumption of fossil fuel and production of carbon emissions, but a reluctance to give up the luxury sedan or heavy duty sport utility vehicle. I used the theory of cognitive dissonance to further illuminate the influence of mutualistic relations and meaningful environments on normative behavior.

I found scant research specifically involving the theory of cognitive dissonance as a means of exploring antecedents to perceptually guided behavior towards the environment. However, searching the literature resulted in locating a few studies in the realm of environmental psychology and environmental ethics that used the theory of cognitive dissonance for similar environmental research objectives. Kovács, Pántya, Medvés, Hidegkuti, Heim, and Bursavich (2014) conducted a quantitative cross cultural

study on pro-environmental behavior, and specifically the role of cognitive dissonance on environmentally significant behavior, environmental attitudes, and non-behavior. However, the authors did not explore how antecedents to pro-environmental choice-making develop and manifest in ways that lead to responsible consumption and environmental behavior. Similarly, Lanzini and Thorgersen (2014) conducted a quantitative study using the theory of cognitive dissonance to measure the effects of financial inducements versus verbal encouragement on behavioral change in favor of pro-environment choice-making. As with Kovács et al. (2014), Lanzini and Thorgersen did not address the antecedents to perceptually guided behavior. In a quantitative study on the reduction of electricity consumption, Steinhorst, Klöckner, and Matthies (2015) used the theory of cognitive dissonance in framing cost saving versus climate-friendly behavior. Their study also measured the spillover effect onto other pro-environmental behaviors. Similarly, Steinhorst, Klöckner, and Matthies did not address the antecedents to perceptually guided behavior, and none of the three studies examined contextual considerations I explored in this study. Lavergne and Pelletier (2015) conducted a quantitative study confirming the usefulness of Festinger's theory of cognitive dissonance understanding the influence of behavior modification and cognitive restructuring strategies to mitigate cognitive dissonance toward the environment.

The studies that I examined in relation to the conceptual framework of this study focused on behavioral issues, modification, and interventions with little or no mention of potential nexus to the discipline of management and leadership. It also appears the focus of current research is on the back end of pro-environmental choice-making and behavior as opposed to the central tenet of this study that serves as an exploration of various

contexts of the development, manifestation, and mitigation of the lived experience of environmental dissonance. This case study is thus unique, and certainly fills a gap in environmental leadership research from a qualitative methodological perspective. This study is also unique from others in my use of cognitive dissonance theory as the conceptual framework and lens through which I conducted an exploration of various theory-based constructs. I found no other study with a similar conceptual framework, research objective, or research design, indicating this study's significant potential for contributing to theory and the discipline.

Theories of ecological psychology and cognitive dissonance were supported in this study by my use of selected behavioral theories. Specifically, I explored three distinct phases of cognitive dissonance by comparing several theory-based constructs to the development of environmental dissonance which I refer to as the phase of *paradox*; the manifestation of environmental dissonance which I refer to as the *phenomenon*; and lastly the mitigation of environmental dissonance which I refer to as the *propitiation* phase. I explored each phase systemically as a means to holistically describe an ecological approach to understanding why thoughts and behaviors toward the environment might often be in conflict. Employing the aforementioned behavioral theories within the conceptual framework, I used the theory of ecological psychology and the theory of cognitive dissonance to collectively provide a framework to understand cumulative influences that link behavioral theories to the research problem and purpose of this study.

Proponents of conspicuous consumption theory suggest that consumers are primarily concerned about status and symbolism of goods and services, indicating that human *wants* have a stronger influence in consumptive choices than do any other

influences (Patsiaouras & Fitchett, 2012). Much has been written about consumer behavior and demand theory, but very little is found in the context of cognitive concerns or processes regarding the issue of sustainability. Patsiaouras and Fitchett (2012) found many reasons why consumers make choices to consume, generally related to social status, but their study lacks mention of consequential impacts of consumption. Patsiaouras and Fitchett also suggested that motivation research theory may provide the means to explore the link between cognitive processing of human *wants* balanced with social or environmental good. Motivation research theory attempts to combine social psychology with economic behavior. For the purpose of this study, economic behavior could be substituted with environmental behavior as a means to examine environmental dissonance.

Jonsson (2012) suggested that consumption is likely driven by choices related to establishing personal virtue rather than a traditional view of utilitarianism. Jonsson stated that the human need to develop good habits, and thus virtuous character, is potentially more important to establishing happiness than utilitarian consumption. Said another way, perhaps environmental dissonance and its consequential impacts can be better understood by examining perceptually driven relationships between the need to develop virtuous character or habits and utilitarian consumption. An example of a perceptually driven relationship is as follows: if I use public transportation (virtuous habit), I will decrease my carbon footprint, but I will not be able to maintain my current level of mobility (utilitarian consumption). In this example virtuous character, utilitarian consumption, and the consequential impacts of decisions can be traced back to elements of environmental dissonance which is framed by perceptions of needs versus wants.

Researchers using behavior theories such as planned behavior theory to examine decision processes have suggested that strong habitual behavior may actually block the process of activating norms that can reshape existing behavior patterns (Aerstens, Verbeke, Mondelaers, & Huylenbroeck, 2009). I assert that by observing cognitive dissonance and better understanding factors that influence norms that activate the cliché "old habits are hard to break," can in fact break these norms with appropriate awareness. In this study, I examined the cognitive dissonance between hyper-consumption and sustainability using behavioral theory as the theoretical construct. Specifically, I used the theory of planned behavior to examine cognitive influences on attitudes toward environmental stewardship and assignment of extrinsic values that in turn result in awareness of consumptive behaviors and individual carbon footprints.

I used motivation research theory to explore how perceptions of human needs relate to stewardship of natural resources, and reviewed Maslow's (1943) hierarchy of basic human needs to explore how human needs, wants, and dissonance interact. Further, to the extent Maslow focused his theory on the needs of the individual, I examined how the needs of the individual relate to the needs of society as a potential factor that influences environmental dissonance. Datta (2010) stated that Maslow's hierarchy of needs should be reinterpreted with an ecological worldview--a perspective reaching beyond individual needs. Datta also indicated that a sixth level should be added to Maslow's hierarchy, one of transcendence as the individual moves beyond self-actualization to spirituality and service to others. I explored transcendence as a means to better understand environmental dissonance.

My justification for using the chosen theories to support the conceptual framework lies primarily with the need to address positive socio-environmental change, particularly within communities that are most wasteful and unaware of both short- and long-term consequences. Such consequences include, for example, corporate externalities and other long-term consequences such as the extinction of species and degradation of ecosystems. The theories are rooted in behavioral psychology and provided me an opportunity to understand emotions and attitudes of consumers from the foundational perspective of ecological psychology and cognitive dissonance.

Much has been written about decision-making based on cultural norms or economics, but little research has been conducted on evaluating cognitive processes to uncover what most individuals may come to regard as sustainable stewardship, that is, an awakening of the conscious toward responsible consumption. Sustainable stewardship means finding the optimal balance between "it stays if it pays" and "it pays if it stays." Such balance should be considered in the debate over ecological values, keeping in mind that environmental imperialism could be just as catastrophic to society as environmental degradation led by extrinsic valuation of natural resources (Greenberg, 2006). I provide a more detailed explanation of the conceptual framework in Chapter 2.

Nature of the Study

The central question of why is there a gap between consumptive behavior and natural resource sustainability, referred to as environmental dissonance, is a construct served well by the case study approach. Understanding the essence of a lived experience and contemporary phenomenon within a bounded study area is the foundation for the case study approach. My goal in this research was to understand the essence of what lived

experiences influence planned or learned behaviors that manifest in environmental dissonance for individuals visiting a pristine natural environment. Understanding the essence of past cognitive norms of individuals may lead to an understanding of how to engage them from the construct of ecological psychology. This case study approach provided me an opportunity to explore the nature of establishing behavioral norms relative to consumption, which also led to better understanding of how to positively manage awareness of norms and the personal fear of change that prevents pro-environmental choice-making.

Exploring these phenomena through the lens of ecological psychology and cognitive dissonance complemented with a framework of various theory-based constructs, I was be able to collect data useful in understanding barriers individuals experience in making sound consumer choices that take into account individual archetypes such as bounded rationality where participants expressed limitations as to how far they were willing to consider changing consumptive habits or the tragedy of the commons where participants felt somebody else would or should consume responsibly. Such a research design was well aligned with my research objectives and evolved as I learned new information about theory and application.

Operational Definitions

Anthropocentric interpretations: Interpreting the world including environmental systems and relations in terms of human values. For example, geomorphosites such as waterfalls can be assigned attributes such as remarkable or devastating that correspond to human economic, political, cultural values as opposed to natural intrinsic values (Haghe, 2011).

Dissonance: A psychological and/or physiological response when expectations are in conflict with outcomes (Festinger, 1962). In the context of this study, cognitive dissonance relates to one's expectation to be environmentally responsible coupled with contradictory consumptive behavior.

Cognition: Elements of cognition include things that a person knows about himself or herself, about his or her behavior, and about his or her environment such as beliefs, values, and attitudes. Such knowledge is then influenced by one's reality (Festinger, 1957).

Conspicuous consumption: Consumer demand and consumptive behavior was theorized by Thorstein Veblen (1899) in his *Theory of the Leisure Class*. Veblen stated that an individual's need to consume products or services related to the need for development of social networks and the conspicuous elevation of one's social and economic status. Conspicuous consumption is differentiated from the consumptive behavior of meeting basic human needs.

Ecological perspective: An alternative view of psychology that refutes the dualistic traditional approach where mind is separated from matter. Said another way, the ecological approach implies a relational view of mind *with* matter (Heft, 2013a).

Environmental moral phenomenon: A worldview in conflict between environmental absolutism and relativism. According to Brown (2007) greater environmental ethics can be encouraged with a better understanding of such conflict, and with a grounding of environmental beliefs and values in the evolution of wisdom informed by experience and the temporality and interrelatedness of all things.

Mutual anticipation: A mental state that manifests based on a prompt or series of prompts occurring from a relationship between the self and the environment that is both physical and cognitive (Bonnett, 2012). Such a state can define one's behavior in a given physical environment and potentially elucidate on cognitive dissonance.

Extrinsic value: Value determined by human interpretation such as market pricing. For example, on a game farm in South Africa, a herd of impala has a value of X based on the market price for bush meat. That which is good for the sake of something else characterizes extrinsic value (Zimmerman, 2010).

Intrinsic value: "Intrinsic value is one of the most problematic and obscure concepts of value theory" (Bayram, 2012, p.1088). According to Bayram (2012), intrinsic value is that value which can be determined (independent of human interpretations or influence) for its own purpose or need. For example, the impala has intrinsic value to the sub-Saharan ecosystem for its role as a buffer species to apex predators and because of its seed dispersal attribute.

Assumptions

The key assumptions I made in this study are as follows:

1. Consumers are generally empathetic to carbon footprinting and desirous of effective stewardship of natural resources.

2. Research participants would answer interview questions honestly with respect to their own consumptive habits.

3. Visitors to the study area (Greater Kruger National Park) were satisfactory in the context of this case study and represented an excellent research participant pool.

4. Market economies are capable of promoting responsible consumption.

5. Cognitive processes can be modified to accommodate a new environmental ethos that emphasizes responsible consumption.

6. Basic supply and demand economic theories and capitalistic economic systems have led consumers to varying degrees of hyper-consumption.

7. The consumer is ultimately responsible for the consequences of resource transformation, utilization, and waste.

8. The findings of this exploratory study will challenge conventional environmental paradigms and be beneficial to resource managers and consumers from many different cultures.

9. An environmental paradigm that emphasizes intrinsic value modeling will lead to positive social change through behavior modification with respect to consumption and stewardship of natural resources.

Scope and Delimitations

This scope of this research included a case study inquiry of international visitors to the Kruger National Park in the Republic of South Africa. The geographical boundaries of this study were the Balule Nature Reserve, a private nature reserve located on the western boundary of the Greater Kruger National Park in the Republic of South Africa.

 This study was limited to understanding the essence of a phenomenon held by the sample participants regarding environmental dissonance. I employed purposive theory-based sampling, and collected data from visitors to the Kruger seeking a *Big Five* (the five most deadly animals in Africa that are hunted: the lion, leopard, buffalo, rhino, and

elephant) safari experience. I interviewed and observed 14 participants. Observations took place while visitors were in the bush on game drives. If participants would have declined the opportunity to be part of this study, then I could have expanded the research pool into neighboring nature reserves and still maintained the scope of case study within the Kruger National Park. However, such expansion was unnecessary. All interviews were expected to be 60 to 90 minutes in duration, individually conducted in privacy, recorded anonymously, and take place on site in the Kruger Park at the offices, lodges, or while otherwise in the bush. I discuss the potential for transferability of the findings from this study in Chapter 3.

To the extent the locus of this study involved participants closest to the impact of consumptive practices on the environment, I did not involve participants from governmental agencies, nor did I evaluate public policy or assess population demographics. I also did not evaluate lodge operations or nature reserve practices and policies. Finally, I did not assess the effectiveness of leadership within the organizations research participants visited.

Limitations

Concerning limitations, Patton (2002) stated that the researcher should anticipate arguments made by the audience that will question the credibility of the study and its findings. Perhaps the most critical limitation for this study would be from the mind of the "quantitative" reviewer that faults the concept of convenience sampling as lacking randomness. I have made attempts to articulate the essence of the qualitative approach, including support for homogeneous samples and limited site selection. Careful consideration has been given to the appropriateness of the sample strategy relative to the

purpose of the study. It is understood that the use of purposeful theory-based construct sampling in this case study renders the findings statistically nongeneralizable and analytically generalizable (Yin, 2014).

The findings are also limited to the extent that the participant pool was English-speaking, and participants provided data that is biased or was interpreted through a possibly biased lens of the researcher. Other limitations of the study include factors that may influence responses such as emotion, physical disorder, recall limitation, political perspective, or lack of understanding the survey or interview question(s). I worked to mitigate such limitations by using follow-ups to surveys and interviews in order to check for accuracy of recordings and interpretations.

I used triangulation as the primary means to minimize threats to quality and internal validity in the data collection, management, and analysis (Patton, 2002). The data collection and analysis model I used in this case study included the triangulation of data using a variety of sources including interviews and documentation review including artifacts, and observations. I also triangulated multiple theory-based constructs using multiple contexts to analyze a single data set to reveal potential *consistencies of inconsistencies*.

To help insure the quality of data and minimize bias and misunderstandings, I articulated to participants a clear understanding of the tenets of phenomenology and the phenomenon I was researching, as well as methods employed. In terms of researcher discipline, I maintained constant vigilance over personal bias, data management integrity, participant care, and reflexivity. I realized that by conducting a qualitative, naturalistic form of inquiry coupled with content analysis, my personal experiences, values, and

perceptions could potentially influence how I saw, heard, and interpreted forms of input. The rigorous research design was strengthened by triangulation to minimize bias while maximizing impartiality and accuracy of the findings and analysis.

<div align="center">**Significance and Social Change Implications**</div>

This study was driven by my personal and professional interests and subsequent extensive literature review. I was also driven by the need to develop a research design that addressed the identified gaps in the literature pertaining to the research objective of exploring cognitive dissonance between consumption of natural resources and degradation of ecosystems.

Significance to Practice

Beyond reconciling the research gaps I previously identified to influence alternative outcomes in favor of alleviating the research problem, I also considered other more macro-level yet practical implications. One such example is with the implementation of an environmental policy known as "cap and trade," which was established to reduce the financial cost of abating environmental damage attributed to the emission of sulfur dioxide. The policy has, in fact, had the reverse impact, and in some areas has increased environmental damage and mortality rates within the United States (Henry, Muller, & Mendelsohn, 2011). The practical implications of this study are to offer global managers of natural resources and public policy developers an alternate sustainable use paradigm, one that encourages a new set of best practices derived from a new understanding of environmental dissonance that limits the conversion of natural resources into consumables.

Pellissier (2011) has stated that as business organizations and management responsibilities have become increasingly more complex, leadership and management styles that are built on linear and/or mechanistic foundations are becoming more irrelevant and less effective in the global marketplace. Similarly, in the discipline of environmental leadership the issue of *human and wildlife conflict* is becoming increasingly complex and conflicted as competition between rural land use and natural habitats have resulted in the need for holistic management approaches to avoid ecosystem failure. A more eco-friendly and holistic approach to resource utilization may bridge the cognitive dissonance between such conflicts, resulting in significant positive social change toward the environment, thus decreasing ecosystem degradation.

Provided with a better understanding of social influences over human engagement with the environment, business and community leaders will be better equipped to respond proactively and reactively to resource concerns, thus establishing a new construct of consumptive versus non-consumptive resource utilization. Cock (2007) suggested that a central challenge to conservation of natural resources is the need to address them in the context of their impacts on energy consumption and job creation. Human use of a more effective form of economic modeling of natural resources may provide long-term stability in socio-economic markets and socio-environmental systems. Moreover, through this research, I have demonstrated that using intrinsic values for ecological sub-systems supportive of a sustainable natural environment will generally reduce cognitive environmental dissonance and provide better custodianship of the environment, potentially resulting in a more efficient utilization of raw materials and conversion of flora and fauna.

Significance to Theory

The significance to theory has been achieved by adding to the body of leadership and management knowledge pertaining to resource management. Much is written about decision-making based on cultural norms or economics, but little research has been conducted on exploring cognitive processes to uncover what most individuals may come to regard as responsible and sustainable natural resource stewardship. Additionally, in this study I used an interdisciplinary approach to understanding the research phenomenon, and a theory-based construct for examining three distinct contexts of the phenomenon. The implication to theory may be an awakening of the conscious toward pro-environmental choice-making and eco-friendly consumption based on a systemic application of value theory, memory theory, planned behavior theory, conspicuous consumption theory, sustainable use theory, and decision theory.

Significance to Social Change

Through this study, I inform consumers, managers, and leaders of an alternative paradigm to wasteful and unsustainable consumption by adding to the body of knowledge an awareness of personal environmental dissonance. By doing so, positive social change will manifest in greater metacognition by individuals of consumptive uses for natural resources, further resulting in a new consumer construct of stewardship for all natural resources and the potential for healthy and sustainable ecosystems.

A new environmental ethos will require a new way of thinking and processing that embraces complex adaptive change and systems thinking with the goal of creating positive social change. I believe that although complex adaptive change can be a central feature of an environmental paradigm that is conducive to understanding the social

influences over human engagement and consumption of natural resources, a gap exists in understanding causal relationships linked to strengthening the durability of species and habitat. Filling this gap with a new environmental paradigm, ethos, and commitment to a new corporate social responsibility paradigm will provide significant change opportunities for individuals and organizations. Corporations will benefit through the development of new eco-sensitive product markets, management of stakeholder risks and potential conflicts, wise use of resources in the production of goods and services limiting wastage, creation of new customer loyalties, and the ability to attract and retain talented employees with a broad concern for social issues and corporate externalities (Sharma & Mehta, 2012).

The significance of this research and its potential impact on social change may be profound to the extent an environmental paradigm will facilitate a better understanding among all consumers of the need to transform consumptive behaviors that lead to ecosystem degradation. I expect that my findings will lead to the influence of personal consumer choices as well as global environmental, social, and economic policy on matters that affect responsible utilization of all natural resources beginning with endangered and threatened species and/or habitat. Further, drawing on the significance of this study and positive social change, I am able to articulate an understanding of the primary research objective, which is to understand the relationship of cognitive dissonance to consumption and sustainability of natural resources.

Summary

A leading influence on the inefficient use of natural resources and ecosystem degradation are land use decisions that drive transformation of natural resources into

goods and services, which often results in habitat loss and resource depletion (Diaz, 2010). Though global economies thrive on consumption of goods and services, many of which depend on the transformation of natural resources into marketable products, demand for such consumables can and has in some cases outpaced the planet's ability to sustain ecosystems. In this chapter, I have provided a view that consumer behavior has harmed the quality of ecosystems and in some cases has led to substantial ecosystem collapse.

My goal for this qualitative study was to develop an understanding of antecedents to environmental dissonance that influence the sustainability of ecosystems, paving the way to a new environmental paradigm that is better equipped to manage natural resources and establish a new consumer culture that is more concerned with the sustainability of the planet's natural resources than personal consumptive desires. The approach I used in this study to understand how consumers fundamentally, perceptually, and practically value natural resources will help to develop alternative market approaches to conventional economic paradigms that minimize intrinsic values of natural resources. For a summary of the key components of this study, see Figure 3.

In addition to providing the background, problem statement, and purpose of this study, Chapter 1 contained specific research questions, the conceptual framework, nature of the study, operational definitions, assumptions, scope and delimitations, limitations, as well as the anticipated significance and implications to social change. Chapter 2 is an analysis of current literature regarding theory-based constructs and their application to consumer demands in the context of ecosystem degradation. In the literature review, I identified gaps in research concerning development, manifestation, and mitigation of

environmental dissonance and consumptive uses of natural resources and ecosystem degradation. I used the literature to provide support for the conceptual framework which holds that behavior modification for natural resource stewardship is possible by connecting cognitive dissonance to personal consumptive habits and consequential environmental impacts of meeting consumer demands. Chapter 2 also contains confirmation of the need to develop a new environmental paradigm and ethos that will result in positive social change indicated by responsible consumerism.
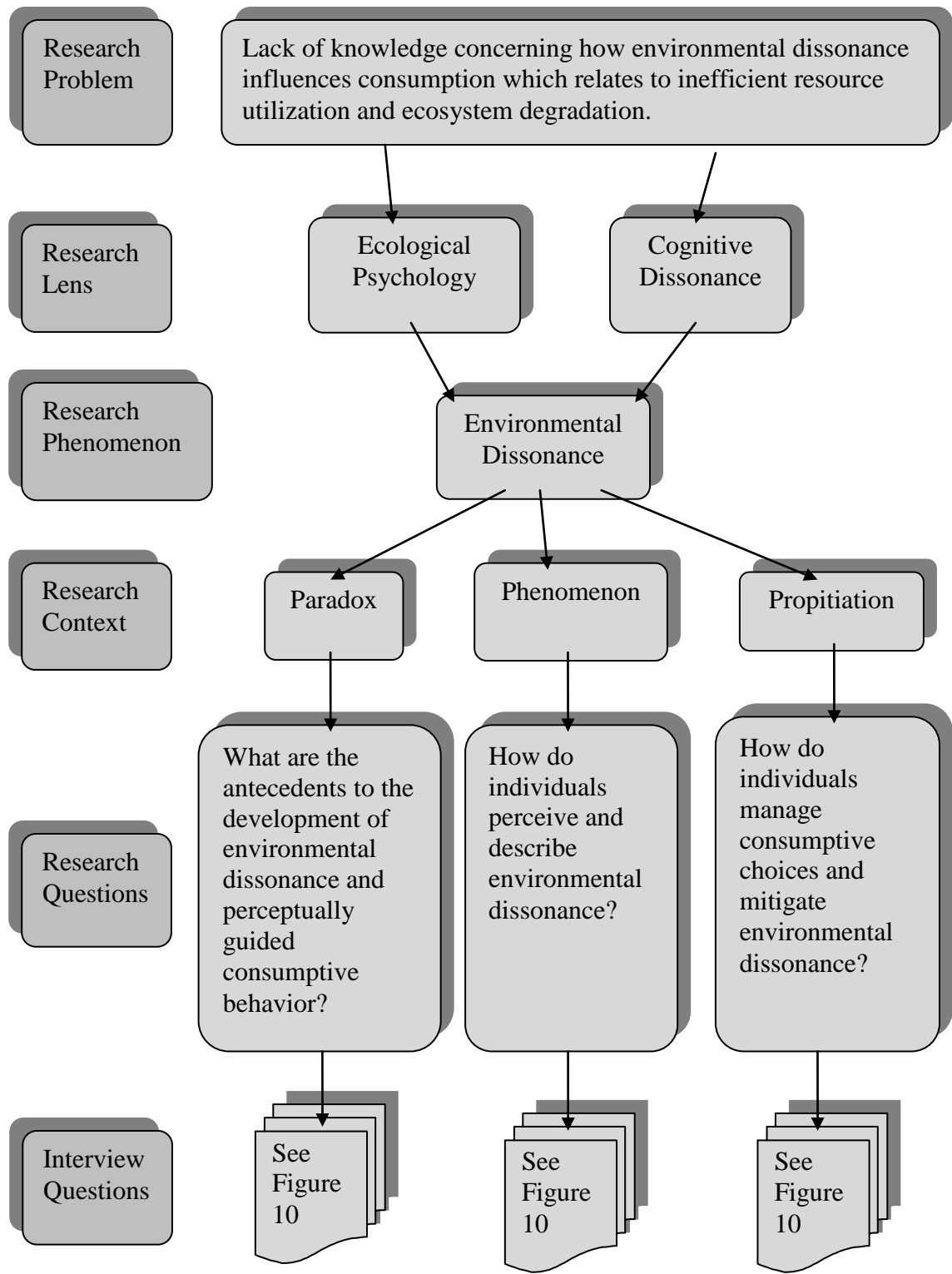
Figure 3. Flowchart of key research components.

Chapter 2: Literature Review

Perhaps one of the most influential social paradigms that has emerged over time is one that demonstrates a paradox between the value of economic development and the value of natural resources based on peoples' need to consume. Whether consumption is based on subsistence, comfort, or financial gain, modern environmental policy has emerged and evolved into a socio-economic theme of "it stays if it pays," requiring nearly all natural resources to have a stated extrinsic or economic value which may or may not be commensurate with its value to the ecosystem. The research problem I explored in this study, and specifically within the construct of this literature review, is the lack of knowledge concerning how environmental dissonance influences consumption, which in turn relates to insufficient resource utilization and ecosystem degradation. The purpose of this qualitative case study was to understand the breadth, depth, and reasons why environmental dissonance exists among visitors to the Kruger National Park. Further, as I previously stated in Chapter 1, the purpose of this study was also to explore environmental dissonance of individuals and how such conflict relates to the consumptive behavior of consumers before and after participating in a multisensory experience in a pristine African bush environment.

In this interdisciplinary literature review I present, summarize, critically compare, contrast, and synthesize current applicable scholarly research, and thus identify substantive gaps in social behavior research relative to establishing values of natural resources based on extrinsic versus intrinsic values which may contribute to the phenomenon of environmental dissonance. Holden (2005) questioned whether or not nature possesses an extrinsic value (a value determined by human benefit), or an intrinsic

value (a value determined independent of human consumption). Holden further suggested

there is little evidence that either industry or consumers are moving the conservation

ethic away from extrinsic values toward a more balanced, environmentally friendly socio-

economic paradigm based on intrinsic values. On the other hand, Goldman and Schurman

(2000) stated that environmental sociologists are in fact finding that the health of the

biophysical environment does matter to people, and that they are willing to make changes

consistent with more effective environmental stewardship and consumptive practices.

Herein lays the essence of a gap between *social will* and *social do*. Said another way,

existing social theory does not explain the gap between what people believe and know to

be "good" behavior toward the environment, and their practices of hyper-consumption

that include ignoring the environmental consequences. I believe the contrasting views of

Holden and Goldman and Schurman are not dichotomous, but rather indicative a gap and

an opportunity for further clarification on the social drivers of ecological conservation

from an ecological perspective of environmental dissonance. Writing about natural

resource conservation, Jones (1999) stated that intrinsic incentives are not that important,

supporting the notion that social drivers are fluid. This position is consistent with

Brown's (2007) assertion that environmental ethics evolve with changing circumstances.

While much is written about intrinsic and extrinsic motivations that influence

actors to commit organizational crime and misconduct (Winkel, Wyland, Shafer, &

Clason, 2011; Wyland, Bollmus, Freimark, & Hedrich, 2012), in this study I focused on

the intrinsic and extrinsic motivations of individuals that lead them to a state of cognitive

dissonance. I conducted this literature review to develop an understanding of how

individuals respond to such factors as intrinsic and extrinsic values and motivations that

influence the evolution of an environmental ethos and perhaps the devolution of environmental dissonance. Lastly, the literature review is constructed in a way conducive to the case study methodology, based on contextual themes described in the following section.

Overview and Thematic Organization of Chapter 2

I have organized this literature review first by describing the strategy I used in assembling resources that informed the objectives of the study. The effort to uncover appropriate research documents was followed by an in-depth review of literature found to be systemically pertinent to conceptual framework. Where appropriate, I synthesize the various behavioral theories relative to the research problem, questions, and design, and then discuss them from the lenses of ecological psychology and cognitive dissonance. I report source material thematically, as opposed to chronologically, based on the overarching theme of environmental dissonance and because of a general lack of available sources that addressed the research problem on an ecological scale. That is to say, a gap in research exists not only on the research problem, but also on the holistic way of addressing. The thematic design of this literature review which includes the themes of paradox (development of environmental dissonance), phenomenon (manifestation of the environmental dissonance), and propitiation (mitigation of environmental dissonance) provides the reader a friendly format while establishing contextual triangulation among the central tenets of this study. Finally, I present the literature review from an environmental paradigm to reveal opportunities for specific research regarding environmental dissonance and how field research could be used to promote a new understanding among resource managers of how to potentially avoid or

minimize market demands for hyper-consumption and ecosystem degradation. I conclude with a discussion of my chosen research methods for this qualitative case study.

Literature Search Strategy

The strategy I used in this interdisciplinary literature review consisted primarily of an exhaustive digital search of the Walden University online database and library services including Walden dissertations, ProQuest dissertations, Google scholar, Stanford University Archives, PubMed Central, ProQuest Central, and generic Internet searches for basic leads. The primary search method I employed was the Boolean keyword search technique. I limited my review to sources that were written in English, peer reviewed, and confirmed to be scholarly. Additionally, I made an effort, when feasible, to limit retrieval of materials to a publication date within five years of the date of the search.

The fields and disciplines I searched included business and management (Business Source Complete, ABI/INFORM Complete, Emerald Management Journals, EBSCO, ProQuest and SAGE Premier), health sciences (Science Direct, and PubMed Central), social work research (Soc INDEX), and psychology (PsycINFO, Psyc ARTICLES, APA Psych NET, and SAGE Premier). I used the following keywords in search of primary source material: *environmental leadership, natural resource stewardship, sustainability, conservation economics, social justice, environmental justice, environmental paradox, corporate social responsibility, social marketing, social brain, cognitive dissonance, situated cognition, episodic memory, metacognition, planned behavior, community psychology, ecological psychology, ecological perspective, ecosystem degradation, consumptive use, non consumptive use, natural resource consumption, sustainable consumption, conspicuous consumption, capricious*

consumption, motivation, intrinsic and extrinsic values, psychology, environmental conservation, psychological research, environmental protection, climate change mitigation, adaptation, and *behavior change.* Theories I reviewed included *capricious consumption, conspicuous consumption, cognitive dissonance, decision, ecological psychology/perspective, extrinsic value, episodic and nostalgic memory, intrinsic value, metacognition, Maslow's hierarchy of basic human needs, planned behavior, self directed, situated cognition, social brain, social identity, sustainable consumption,* and *sustainable use*.

My search strategy also included reviews of books, articles, and reviews written by authors and critics of key theories such as those regarding ecological psychology, cognitive dissonance, and other theories used in the theory-based analysis of this study. My search for applicable studies was also aided by leads provided from personal conversations with professionals working in the field of conservation, and with colleagues within a professional association I am a member of, the Southern Africa Wildlife Management Association. As I identify potential sources, I reviewed the abstract of each study and its citation history, and then downloaded it to Zotero reference management software. I further organized the sources by topic within Zotero.

As previously mentioned, I found little research directly relevant to the research problem, which resulted in the need to design this case study thematically and contextually. Note that though I have chosen only a few of the themes that moderate behavior toward the environment, I consider the ones chosen systemically, as opposed to mechanistically. I took great care and deliberation to synthesize and present the findings from a mutualistic ecological perspective. Volumes are written about each of the themes

in this literature review, but I found very little research that addressed environmental concerns from a cognitive or ecological perspective. Please refer to Appendix A for a table of the documents I found and used in this literature review.

Conceptual Framework

The following account of the conceptual framework I used in this study is grounded on a historical review of seminal theories and their contributions to ecological psychology as well as contemporary interpretations of the pioneering research of behavioral and applied psychology (see Figure 4). In this section I have developed a relational context between theory and my plan for the collection/analysis of data. Specifically, ecological psychology and cognitive dissonance was used to provide the context in which I explored the antecedents to environmental dissonance, manifestations of environmental dissonance, and mechanisms used in dissonance reduction or propitiation. The three categories are developmental stages of environmental dissonance leading to potential consequences of ecosystem degradation.
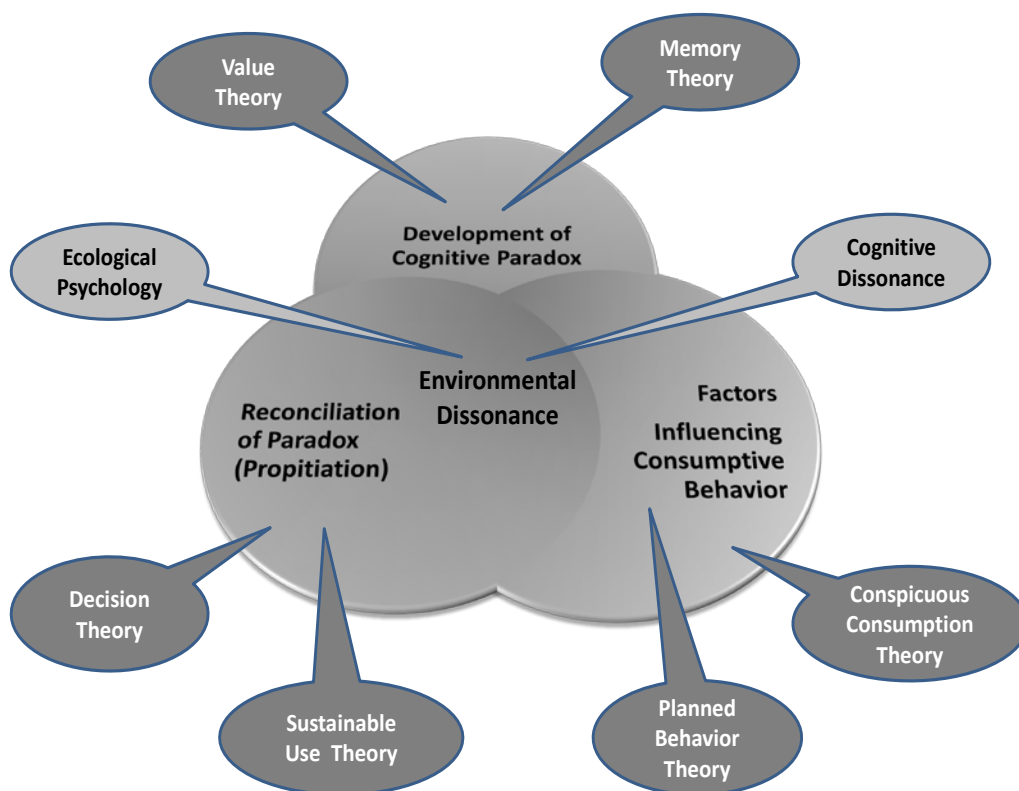
Figure 4. Conceptual framework and contribution to theory.

Ecological Psychology and Relations Between the Consumer and Consumed

Ecological psychology is the primary lens that I used to conduct this study. Throughout this study the terms *ecological psychology* and *ecological perspective* (a somewhat broader use of the term to include relationships not restricted to psychological applications) are interchangeable unless otherwise specifically noted. It is also important to note that my use of ecological psychology in the context of this study denotes a cutting edge approach to understanding the role of leadership and organizational change in a demonstrably needed shift in consumptive behavior and the way in which scholar practitioners promote such a shift (Kaiser, 2014). Kaiser stated that a more effective environmental conservation model must make better use of the scientific domain through

greater interdisciplinary dissemination of environmental knowledge and know-how, consistent with the ecological psychology. Browne and Bishop (2011) stated that reductionist thinking in the domain of natural resource management and sustainability is not helpful due to the dynamic nature of environmental paradoxes. Their assertion supports a mutualistic and inductive approach to understanding consumer dissonance.

Ecological psychology was described by Heft (2013a) as a mutualistic view of relationships between an organism and its econiche. Such a perspective on the relationships between humans and the environment established the conceptual framework for understanding human interaction *with* the environment and specifically antecedent considerations among the participant, the environment, and meaningful experiences. Similarly, Bonnett (2012) stated that *mutual anticipation* (a relationship between the self and its environment) can explain attitudes and behavior toward one's immediate environment. Likewise, an ecological or mutualistic perspective can be characterized by understanding one's environmental perceptions and by observing one's environmental responses. I contend that such antecedent considerations are based on prior perceptual learning that Gibson (2000) defined from an ecological perspective as the selection and processing of certain contextual information available in relation to the perceiver's body structure and capabilities. Said another way, antecedent considerations leading to environmental dissonance were more effectively identified in this study when perceptions were recorded at the time relevant information was immediately available to the perceiver and when in context as in this study, while on safari.

MacMillan (2012) stated ecological approaches to inquiry can be used to explore linkages between learning and doing which allow for examination of one's environment

in the context of enabling belief structures. The ecological psychology lens is different from other behavioral and cognitive psychological approaches that are dualistic in nature and promote the notion that humans are separate from their surroundings or have dominion over them. Such distinction was important in this study to the extent I differentiated between intrinsic/extrinsic values and responses by participants in the context of a pristine and wild environment. A mutualistic approach to inquiry, a central tenet of ecological psychology, was well suited to provide protection of data from anthromorphic influence and extrinsic bias.

Ecological psychology is distinguished within the field of psychology from behavioral psychology by the nature of relationships whether dualistic or mutualistic and by the origin of motivation. In support of an ecological perspective, Bronfenbrenner (1977) stated Lewinian theory or field theory can be viewed in ecological terms as a synthesis of the science of the mind and the science of behavior. MacMillan (2012) stated that the ecological approach in research provides a rich and complex understanding of behavioral metasystems affirming my belief that a mutualistic psychological approach to inquiry was appropriate for this study. It is such a synthesis that serves as the conceptual framework of this study that promotes an unbiased view of motivation and behavior relative to environmental dissonance and the nature of the perceived environment and safari experience. Bronfenbrenner (1977) further affirmed the ecological perspective in that behavior and personal development is driven by a complex of internal and external systems collectively known as the environment and all interacting. He further stated that understanding behavior must include both *objective properties* of the environment and their *meaning* to the perceiver. MacMillan (2012) stated that ecological psychology

encourages the researcher to consider *affordance networks* rather than the influence of individual affordances in isolation.

> An affordance network is the collection of facts, concepts, tools, methods, practices, agendas, commitments, and even people, taken with respect to an individual, that are distributed across time and space and are viewed as necessary for the satisfaction of particular goal sets. (Barab and Roth, 2006, p. 5)

Similarly, Smith (2009) stated that the environment or milieu is not simply the sum of things perceived, but more like an accumulation or landscape of objects that an individual has the ability to perceive in a pragmatic way implying an intrinsic relationship between the perceiver and the environment. Bronfenbrenner (1977) stated that research designs, methods, and experiments follow Lewinian equation of $B = F(P, E)$ where behavior and development are a function of the relationship between the perceiver and the environment. Costall (1984) supported the notion that dualistic Cartesian research designs restrict the research participant's ability to adapt their responses in context as they might in the real-world suggesting that mutualistic methodologies allow participants greater freedom to potentially change their environment as opposed to only respond to it. Similarly Ernst and Wenzel (2014) stated that environmental psychology is a leading discipline and approach to understanding and developing a pro-environmental change in behavior in the context of changing one's environment and consumption or preservation of it. In this study, the lens by which I explored, sought, recorded, and analyzed data was consistent with the same a mutualistic perspective.

An Environmental Perspective of Cognitive Dissonance

In this study I used the theory of cognitive dissonance in addition to ecological psychology as the conceptual framework and lens to further understand the nuances of mental conflict when a participant was confronted with a matter of consumption, whether real or perceived. Leon Festinger (1957, 1961) originally defined cognitive dissonance as a type of misalignment or conflicting interests between two sets of related information and held that "Cognitive dissonance can be seen as an antecedent condition which leads to activity oriented toward dissonance reduction just as hunger leads to activity oriented toward hunger reduction (Festinger, 1957, p. 3)." Festinger further defined dissonance theory in the following way:

- There may exist dissonant or *nonfitting* relations among cognitive elements (knowledges considered as opinions, beliefs, values, and experiences).

- The existence of dissonance gives rise to pressures to reduce the dissonance and to avoid increases in dissonance.

- Manifestations of the operation of these pressures include behavior changes, changes of cognition, and circumspect exposure to new information and new opinions. (Festinger, 1957, p. 31)

The following seminal explanation of cognitive dissonance offers a practical understanding that provides relevance between the established conceptual framework and this study:

The theory of cognitive dissonance suggests that an individual has cognitive elements (or *knowledges*) about himself, his past behavior, his beliefs, and attitudes, and his environments. If one cognitive element follows from another,

they are said to be consonant. If one does not follow from another, they are said to

be dissonant and arouse a psychological tension called cognitive dissonance.

(Oshikawa, 1968, p.429)

Festinger (1962) further stated the theory of cognitive dissonance can explain why an

individual will try to reconcile such conflict; to make the two sets of information more

consistent with each other. Cognitive dissonance is a mental state that can evolve into a

state of dissonance reduction forming the basis for motivated behavioral change

(Festinger, 1962). Using cognitive dissonance to explore paradoxical or dissonant

relationships in the context of a mutualistic environment provided a new way of

understanding how such mental routines evolve into behavior. Such an inquiry resulted in

richer and more meaningful data than a similar attempt using a framework of a dualistic

nature where the participant was cognitively separate from or physically immune to the

consequences of such behavior. Overlaying cognitive dissonance on ecological

psychology will provide a systemic view of how cognitive perceptions and environmental

realities intertwine which ultimately manifest in degrees of consumption or preservation.

MacMillan (2012) stated that individuals and their goals can be developed by the

coexistence and interaction of social and material environments. Likewise, and developed

from the perspective of ecological psychology and cognitive dissonance, a specific

contextually oriented environmental theme can be applied to decision making regarding

how individuals perceive and respond to their natural environment. I have termed

ecological dissonance as the conceptual framework for this study as it provides an

opportunity for focused research on conflicting antecedent factors that impact

perceptually driven relationships between the observer and the observed, the knower and

the known, or in this research the safari tourist and the flora and fauna of the Kruger National Park. Ecological dissonance will be referred to throughout this study as the conceptual framework and specifically used to explore how cognitive and behavior theories influence the development, manifestation, and mitigation of environmental dissonance and how gaps in research can be used to promote a better understanding of the breadth and depth of the research phenomenon of environmental dissonance which I describe as:

- A general misalignment of consumptive behavior and the maintenance of healthy ecosystems.

- An inadequate market response to consumptive behavior and lack of acknowledgment for all consumptive costs on environmental systems.

- A mismatch between social and economic influences with respect to personal choices to consume.

In summary, the conceptual framework of ecological dissonance is a comingling of both ecological psychology and cognitive dissonance for the purpose of providing a lens through which participant data was considered rich and less likely to be influenced by participant bias. This conceptual framework was uniquely qualified to produce objective data from participants due to its inherent interest in a mutualistic and collective approach to the development and understanding of participant responses as opposed to a more traditional dualistic and independent means. The balance of this chapter and specifically the following literature review is a synthesis of current research on the overarching research question of identifying the social and cognitive processes that lead people to endorse responsible stewardship of the environment yet choose consumptive

behaviors that produce harmful environmental affects. Specifically, the following

sections of the literature review consider the paradox of competing antecedent

environmental beliefs and behavior, perceptions of environmental dissonance (the

phenomenon), and the process of dissonance reduction in the context of the research

problem described as a lack of knowledge concerning how environmental dissonance

influences consumption which relates to inefficient resource utilization and ecosystem

degradation. With respect to the phenomenon of environmental dissonance, this literature

review revealed what subject matter needs further exploration by identifying what has not

been sufficiently addressed and how existing literature will inform and guide my research

questions and findings.

<div align="center">**Literature Review Related to Key Concepts**</div>

The Paradox of Environmental Dissonance
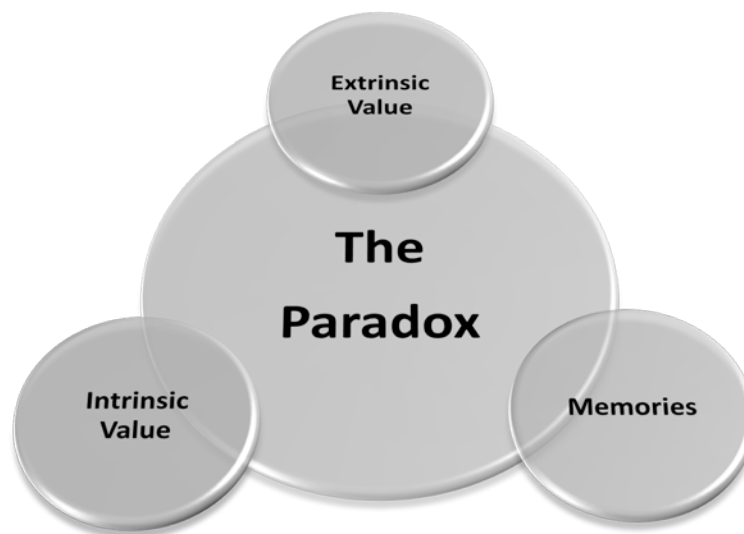
Figure 5. The paradox of environmental dissonance.

Concerning the research question identifying antecedents to perceptually guided consumptive behavior; I have explored specific sources in this section of the literature review for antecedent cognitions that can form perceptions and behavioral responses to the paradox of environmental dissonance. Intrinsic values, extrinsic values, and episodic memories are not exhaustive of influences on the development of environmental dissonance paradox but are the focus of this section. I reviewed these influencing factors in the context of the research problem to understand better the antecedents to perceptually guided consumptive behavior. This section of the literature review is an expansion on the lack of knowledge concerning how the environmental dissonance of individuals influences consumption and potential ecosystem degradation.

To understand how environmental dissonance can affect consumption that contributes to ecosystem degradation, it is helpful to determine influencing factors present in the cognitive process prior to a choice being made to consume. Whether such consumption is perceived or real, direct or indirect, responsible or reckless can develop a state of conflict for the individual leading to perceptually guided behavior. The literature review regarding environmental dissonance is scant but much is written about how cognitive dissonance generally influences behavior in the context of a paradox which can be applied thematically to matters of consumption. Specifically, in this section of the literature review, I sought a better understanding from prior research regarding how perceptions of intrinsic and extrinsic values affect environmental dissonance and if episodic memories influence establishment of antecedent perceptions regarding consumption. Additionally, I sought to establish the depth of current knowledge on how

episodic memories, from an ecological psychology perspective, promote or reconcile the paradox of environmental dissonance and perceptually guided behavior.

Brown and Bishop (2011) stated that a paradox can be characterized as a construct of complex conditions that produce conflict between motivation and behavior which generally are not easily resolvable. The goal of life to be death is an example of such a paradox. They further stated that some individuals may respond to such conflict with a propensity to retreat from the paradox or deny it exists. Gore (2006) advanced Brown and Bishop's assertion when he stated that the denial aspect of an environmental paradox was not limited to repudiation of a looming catastrophe such as climate change, but also to the acceptance of a realistic solution. Albrecht, Brooke, Bennett, and Garnett (2013) stated a major change in how people respond to the effects of climate change and its impact on natural resources requires a movement away from individual or anthropocentric ethical considerations and a paradoxical man versus nature construct to one where intrinsically valuable living things and human interaction with the environment take on a much broader ethical role. Brown and Bishop (2011) stated that the environmental paradox is best understood if analyzed holistically with attention given to various strata of a potential paradox including personal, organizational, and societal levels of analysis. Such levels of analysis provide a window to view contributing factors to an environmental paradox such as social and environmental justice needs, economic fairness, and implications to lifestyle choices. Similarly, McDonald and Boucher (2011) noted paradoxical socioeconomic paradigms that have protected natural resources are often associated with wealth resulting in less efficient conservation efforts within disadvantaged communities and debate is taking place in many countries and

communities on the paradox and prioritization of biodiversity (exclusionary non-use of protected areas) over mitigation of extreme poverty through community based resource management (Lele et al. 2010). Brown and Bishop (2011) further stated that paradoxes can be stimulated by a convergence of personal control in the decision process and societal or organizational pressures toward behavior. However, Mouël (2014) stated that the free will (perceived control, a central element of planned behavior theory) of individuals in a decision making process may not be so free to the extent neuroscience research has indicated a somatic relationship (brain to body interface) between what was previously regarded as free will and what is now understood to be subconscious motor response. Though influences on subconscious motor behaviour is beyond the scope of this study the implication of Mouël is that a paradox may exist within the development of perceptions that influence responsible behavior toward the environment; a state of environmental dissonance between perceived free will and non perceived subconscious mandates. Brown and Bishop (2011) further identified the existence of paradox and the broad scope of potential context but did not address how antecedents to paradox evolve at the individual or consumer level. I sought to identify such antecedents at the individual level to better understand their relationship in forming a cognitive dualism or a framework of environmental dissonance and perceptually guided behavior.

Examining the paradox of intrinsic and extrinsic values regarding nature and consumption.

The notion of understanding and responding to paradox has intrigued mankind for millennia or at least since the dawn of western philosophy; Plato (402e) wrote that there can be no communion between extravagant pleasure and virtue which establishes a

debate regarding the development of moral high ground based on the consequences of consumptive behavior (Zimmerman, 2015). Said in ecological terms, "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise" (Leopold, 1966, p. 224). Bonnett (2012) stated that energy is born from a paradoxical relationship between such things as birth and death, growth and decay, lightening and darkening, sound and silence, motion and stillness and it is one's participation in such energy that provides the greatest degree of fulfillment. It is from such a perspective that I explored the nature of paradoxical influences on resource consumption and ecosystem degradation. I viewed the formation of personal values toward stewardship of the environment and natural resources in general, for the purposes of this study, as the primary antecedent in the throughput of information leading to perception, attitude, and ultimately action or behavior.

Much has been written about the moral aspect of *values* since the time of Socrates, Plato, and Aristotle but in this literature review I am primarily interested in understanding the gaps in literature as to how individuals assign values to natural resources and specifically how the determination is made to assign an intrinsic value or an extrinsic value to flora and fauna. For example, what are the pieces of information that an individual uses to declare that an endangered plant species has either intrinsic value (a value for its own sake) or an extrinsic value (a value it has for the sake of something else). Said another way, "Intrinsic value arguments for the preservation of species hold that living things have an essential, inherent value in themselves, unlike instrumental and prudential arguments that hold entities have value only because humans value them (Albrecht et al. 2013 p. 835)." Further, what does the literature reveal about making such

determinations of intrinsic and extrinsic values, how do potential extenuating factors such as economic and cultural influences lead to paradox and environmental dissonance, and how do such values impact or influence individual behavior towards the environment? Haivas, Hofmans, and Pepermans (2014) stated intrinsic values can manifest in ways that cause behaviors that satisfy basic human needs of the self more so than extrinsic values. They claimed that intrinsic values can lead to intrinsic motivations; behavior based on self interest and needs rather than external interests and demands. Similarly, Ims, Pedersen, and Zsolnai (2014) stated that dependence on extrinsic motivations (external interests) can result in the displacement of intrinsic motivations implicating that behavior can be influenced by external forces that ultimately may be in conflict with one's intrinsic values. Similarly, Kim (2013) stated that in the context of construal theory, extrinsic value orientations can moderate low versus high-level mental construals (constructs/paradigms). He further stated extrinsic value orientations can cause individuals to focus on concrete thoughts associated with low-level construals which can result in the development of personal values toward materialism and degrade higher level construals associated with altruistic thoughts and self-control related to consumption. Sheldon (2010) further stated that individuals spend inordinate amounts of energy in pursuit of extrinsic values due to market pressures, social needs, and one's life environment. I posit a construct that pits intrinsic and extrinsic value orientations against one another is an example of environmental dissonance. Haivas et al, (2014) did not address how cognitive dissonance might lead to a behavioral paradox, but did suggest that individual responses to intrinsic values are not universal and may be related to other psychological factors. Diaz (2010) stated according to the Bern Convention that intrinsic

value from a biological perspective is conditional upon achieving the ultimate goal of effective biodiversity conservation and sustainable use. From a behavioral perspective Guest (2014) stated that Maslow's sixth element in his hierarchy of human needs indicated that people are motivated by such intrinsic values as "…truth, goodness, beauty, perfection, excellence, simplicity, elegance" (Maslow, 1969, p.4).
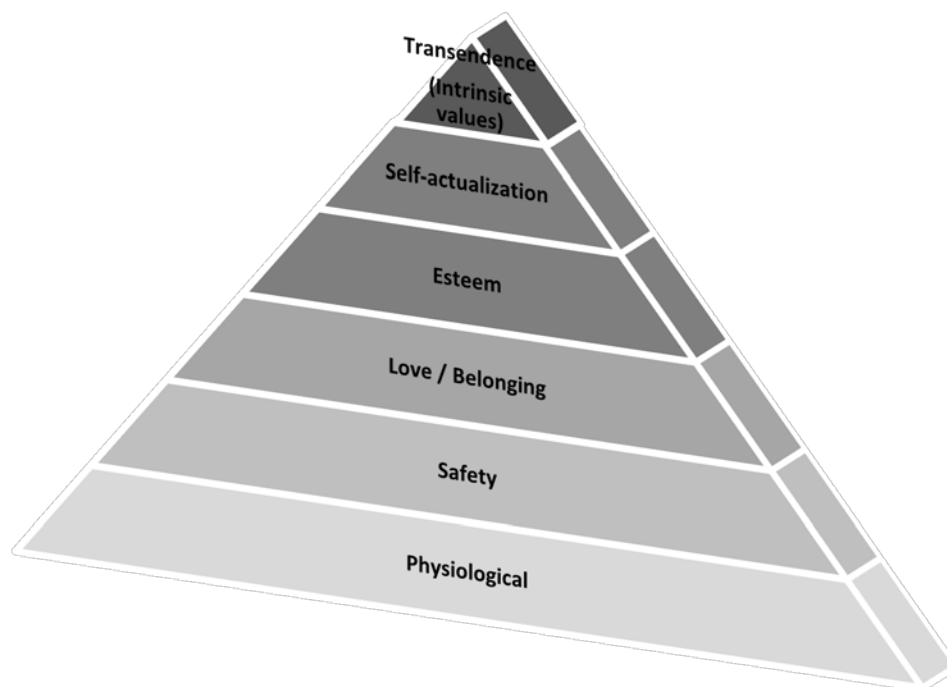
Figure 6. Maslow's hierarchy of human needs including transcendence.

I discuss in the final section of this literature review the nexus between intrinsic values that pertain to biotic and abiotic entities and intrinsic values that contribute to human behavior. According to Zimmerman (2015) a gap exists in commonly held distinctions of what in fact holds intrinsic value with respect to environmental entities and environmental qualities. He further stated that labeling *things* having intrinsic value or not is a conceptual exercise to the extent individuals fully understand what it means for that *thing* to have intrinsic value. Zimmerman (2015) acknowledged that many philosophers have argued over even the existence of intrinsic value, but rebuts them as

mainly interpretations of other such extrinsic influences as instrumental value, final value, and noncognitive theory. For example, Albrecht et al. (2013) stated that instrumental value is the foundation for environmental stewardship which could be interpreted as an ethos that simply places an anthropocentric value on a natural resource. In this case study, I did not entertain such debate; rather, I attempted to provide insight from the individual strata as to how environmental entities and qualities are perceived in terms of value and what participants understand about intrinsic and extrinsic values. For example, did participants comingle the concepts of intrinsic and extrinsic value? Did they perceive there was a different value such as an ecological or mutualistic value that would identify with a combination of intrinsic and extrinsic values? Did they consider or acknowledge differences between the intrinsic *values* of an object and the intrinsic *properties* it may have? The literature is not clear as to how individuals perceive and distinguish between such values with respect to the consumption of natural resources.

The paradox of intrinsic versus extrinsic values may turn out after all to not be a paradox, but rather an interpretation of relativity. Zimmerman (2015) stated that extrinsic values may in certain cases be derivative of other values such as intrinsic values suggesting a mutualistic or ecological relationship consistent with the conceptual framework of this study. Further research is necessary to explore human understandings of the origin of value with respect to the environment and how consumers manage the paradox or systematic development of value and subsequent consumption of natural resources.

Exploring the role of memories on the development of paradox and Environmental Dissonance.

Cognition is a central theme in this study and as such considerable attention is devoted to understanding the influences of cognitions on behavior and specifically human behavior toward the environment. Harris et al. (2014) further stated that spontaneous social cognitions influence the accuracy of subjective valuations based on environmental influences. Though the literature discussed the physical origin of behavioral guides that help produce perceptions of value, the literature was vague at best on how memories interact or what role they play in the development of intrinsic and extrinsic values or hypotheses. I posit that memories are only one of many environmental influences that can be used either consciously or subconsciously in the formation of perceptions as well as intrinsic and extrinsic values of natural resources and subsequently behavior in the form of consumption. Lange et al. 2012 came close to explaining values and judgment generation using the HyGene model of hypothesis generation. They stated during the process of hypothesis generation that environmental data is compared in a global memory match followed by a process that identifies specific episodic memories which are then matched against all known hypotheses. In the model, hypotheses are then subjected to working memory (semantic memory) and further filtered to find the hypotheses with best fit described as leading contenders. Similarly, Fox, Cooper, and Glasspool (2013) stated that cognitive processes evaluate relationships between episodic memory and semantic memory resulting in strategy generation.

Lange et al. (2012) stated that the number of hypotheses that can be managed by a person is constrained by their cognitive limitations. What the authors are not clear about

is what constitutes such limitations. I suggest that the lack of environmental experiences such as an extreme wildlife encounter is such a limitation meaning that context or the lack of context can limit the generation of both memory and values. Kim (2013) stated that attitudes and beliefs held by individuals are not always at the fore of routine thoughts but are often brought to the fore by certain cues in one's environment. Such cues can be stimulated by memories of events or circumstances. Similarly, people's stereotypes and cultural values can also be stimulated based on a situation or experience (Campbell & Mohr, 2011). Baldwin, Biernat, and Landau (2015) stated that a better understanding of certain memories such as those considered nostalgic could lead to a better understanding of the intrinsic self and well being. By extension I hold that a better understanding of the antecedents or moderating factors that promote intrinsic and extrinsic value systems likely also promote well being and disposition in favor of responsible consumption.

Included in this section of the literature review was an examination of studies that centered on issues of memory and how memories may influence consumptive behavior. The study of nostalgic and episodic memory offered an insight into how memories potentially inform perceptually guided behavior. It is assumed that memories can have an influential role in the development of paradox and subsequently environmental dissonance. It is further assumed that memories are in part shaped by environmental experiences beyond the biotic or ecological type but also by familial and cultural experiences. The literature is scant regarding memory and consumption and the role memories can play in shaping or reshaping behavior with respect to perceptions, attitudes, and exploitation of natural resources. Such a gap provides me an opportunity to

add utility to existing theory by examining the application of theoretical constructs detailed in the following sections.

Understanding the Phenomenon of Environmental Dissonance
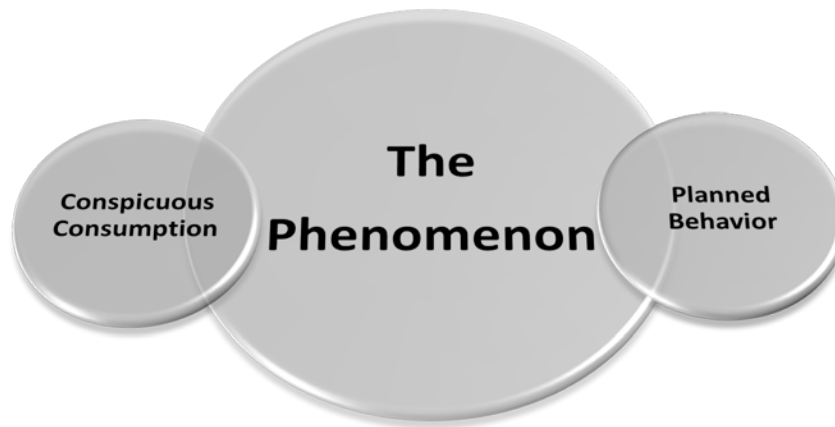
Figure 7. The phenomenon of environmental dissonance.

Concerning the research question of how individuals perceive and describe environmental dissonance, in this section of the literature review I explored two theories used in this study to examine the phenomenon of environmental dissonance and the lack of knowledge for how environmental dissonance influences consumption and potential ecosystem degradation (the research problem). Conspicuous consumption and planned behavior were used in the context of a conceptual framework of cognitive dissonance and ecological psychology to better understand how individuals perceive and describe environmental dissonance.

To further expand on the knowledge of how environmental dissonance influences consumptive behavior, a thorough understanding of the how the phenomenon occurs in daily life is necessary. Often times individuals are confronted with scenarios of

environmental dissonance and choose one of two perspectives (Bonnett, 2012) Bonnett stated that from a Western perspective environmental problems are often thought of as an opportunity to seek technical solutions and modify personal behavior that result in the least amount of impact on what individuals perceive as *the good life* or they choose to see environmental problems as the need to comprehensively change current perceptions of *the good life*. It is through the pragmatic understanding of cognitive dissonance that I gained the inspiration to explore how individuals perceive their own experiences with environmental dissonance. Gawronski (2012) stated that from a pragmatic perspective cognitive inconsistencies (dissonance) indicate potential errors in a person's belief system resulting in a mental state that is uncomfortable and in search of revision(s) or validity. Gawronski further stated that erroneous errors in a belief system can undermine decision making indicating that cognitive consistencies (the absence of cognitive dissonance) are supportive of contextually correct actions. Similarly, Boldt (2013) stated that ethical convictions that produce motivational forces that in themselves do not guarantee a specific behavior should be corrected based on the unattainable outcome which suggests that environmental dissonance can be self-managed. I posit that metacognition of conflicting cognitive data sets, whether such conflicts are based on belief systems or ethical considerations, might lead to more effective decision making with respect to consumption and ecosystem degradation. Therefore a review of literature concerning environmental factors that influence how individuals develop their primary considerations that manifest in environmental dissonance helped to understand how individuals perceive environmental dissonance. This section includes a review of literature of available sources regarding conspicuous consumption or that which is sought

for enhancing one's social status. Situated cognition and planned behavior will also be reviewed in the context of routine and pragmatic consumptive behavior to better understand the phenomenon of environmental dissonance.

Conspicuous consumption and perceptions of how it influences daily life.

Conspicuous consumption has been characterized in the context of a lost society in the following way:

> "We're lost. Finally we get down to the point where we look around and we wonder, where did the consumers go? Where's my market, where are my customers? The consumers consumed the consumers! The consumption of consumers by consumers has consumed the consumers. There's no consumer society because the consumers consumed the consumers consuming the consumption." (Talen, 2012)

Although actor William Talen's comments are provided as humor, they do accurately portray the essence of hyper consumption in the daily life of consumers. Talen's monologue further implicates the need to better understand the human mind and how it processes information including conflicting data sets that sponsor environmental dissonance. Understanding the phenomenon of environmental dissonance hinges on understanding the factors that cause people to consume particularly when such consumption is contrary to intrinsically held values.

Volumes of research have been written to understand and exploit consumer behavior. Gherasim and Gherasim (2013) stated that several models have been developed to explain consumption including a Pavlovian model that relies on concepts of impulse, suggestion, response, and relapse; a Freudian model that uses psychoanalytics to assess

attitude and opinion; the Hobbes model that studied organizational consumer behavior;

the Maslow model that applied a hierarchical approach to consumption and human needs;

the Marshall model based on marginal utility decisions made by consumers; complex

behavior models including cognitive processing; and lastly the Veblen model that applies

the theory of conspicuous consumption. Gherasim and Gherasim further stated the

Veblen model which evolved from the work of Thorstein Veblen (1899; 1994) and his

theory of the leisure class which further evolved into the theory of conspicuous

consumption. All of the models described by Gherasim and Gherasim (2013) could have

been used in this study to explore the phenomenon of environmental dissonance however,

Veblen's conspicuous consumption theory I maintain was the most appropriate as it

considers specific variables of interest in this case study approach that relate to

perceptions and realities of daily life. Such variables include culture and sub-culture,

social classes, reference groups (a social group that one aspires to), and groups of

belonging, all aspects that potentially influence perceptions of daily life. The conspicuous

consumption theory based construct provides a context by which to examine influences

on individual behavior that are central tenets of this study and provide an opportunity to

understand how individuals perceive and describe their own experience with the origin,

manifestation, and mitigation of environmental dissonance. Wisman (2011) made a

connection between inequality and excessive consumption indicating that households in

wealthy societies, with emphasis on U.S. households, have grown to be dangerously

materialistic resulting in ecological devastation. According to Wisman (2011), inequality

causes people to increase consumption in order to satisfy a social network and need for

self-respect therefore a rise in equality will likely result in rising ecological

consequences:

> But of all the negative consequences of excessive inequality, the greatest
>
> contemporary threat is arguably its contribution to increased environmental
>
> degradation. Indeed, avoiding devastation of our habitat may be the greatest
>
> challenge ever faced by humanity. (Wisman, 2011, p. 878)

Wisman further stated that as capitalism matures conspicuous consumption would be

democratized making it vital in attempts to achieve social respectability or social status

and it would be so powerful over consumers that it would have devastating consequences

on the environment. Wisman provided a sound argument for the role of capitalism in the

development of environmental dissonance, but fell short in providing an understanding of

how other variables such as intrinsic values may influence such democratizing or

mainstreaming of consumptive behavior. Like Veblen, Wisman focused more on

economic systems and resulting social inequalities as the cause of conspicuous

consumption and the hastening of humanity toward catastrophe. In comparison, my

research recognized the environmental outcomes described by Wisman and attempts to

understand the individual's role in developing habits defined by conspicuous

consumption that can be observed in daily life.

Kasser (2011) stated many studies have demonstrated that as consumers hold

materialistic goals higher than their personal well being that they develop propensities to

be more manipulative, competitive, and otherwise commit ecologically degrading

behaviors. What was not known was how individuals perceive their unique material goals

relative to their intrinsic values and how they evaluate extrinsic influences on intrinsic

values. With respect to conspicuous consumption theory, Patsiaouras and Fitchett (2012) stated there is a lack of research regarding the cognitive antecedents of consumer behavior combined with only a superficial analysis of how consumer desires are generated. Such a void they claim has resulted in the marginalization of concepts that form sound modern marketing theory and consumer research.

I have found that the literature indicates that materialism stems from an extrinsic value orientation and it is not well understood how strong extrinsic forces *crowd out* intrinsic values and subsequent behavior (Kim, 2013; Sheldon, Gunz, Nichols, & Ferguson, 2010). Though much is written about consumer behavior and materialism, little is known about such behavior in the context of ecosystem degradation. Patsiaouras and Fitchett (2012) claimed that consumer demand theory has failed to explain psychological and social variables that contribute to consumption which has caused the development and use of other tools such as psychoanalytic methods, interviews, and observations as a means to better understand and even predict consumer behavior providing further evidence in support of this study and research design. "General theories of rational consumer demand avoided acknowledging and discussing the irrationalities and absurdities in the behavior of the conspicuous consumer (Patsiaouras and Fitchett, 2012, p. 170)." Understanding the antecedents to consumption and how those antecedents influence perceptions of environmental dissonance is a central tenet of the research questions provided in this study; how do individuals perceive their own environmental dissonance as it relates to consumption and ecosystem degradation. Does one consider extrinsic forces such as materialism and if so what processes are consciously used to

mitigate or reduce dissonance? How do individuals consider the crowding out of intrinsic values by extrinsic forces?

Perceptions of environmental dissonance and the theory of planned behavior.

The theory of planned behavior (TPB; Ajzen, 2012) is generally referred to in the context of a model that predicts behavior based on an individual's intent to perform an act moderated by their attitude, perceived behavioral control, and subjective norms (Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009; Ajzen & Sheikh, 2013). Perceived behavioral control means a person's perceived ability to perform the behavior and subjective norms refer to social pressures upon the behavior being considered. TPB is commonly used by researchers to explain pro-environmental behavior making it a relevant theoretical construct to explore in this study Botetzagias, Dima, and Malesios (2015). It is important to indicate that while TPB is effective in predicting a person's intent to behave in certain ways, it is also effective in predicting behavior in a holistic behavioral domain or category (Jiang, Lu, Hou, and Yue, 2013). In this section of the literature review pertaining to how individuals perceive and describe the phenomenon of environmental dissonance from the perspective of their daily routine, I sought to understand from the literature how research has approached normative planned behavior and whether or not consumer awareness of planned behavior has been seen as a moderating factor in environmental behavior. Aertsens et al. (2009) concluded that a framework using values theory and planned behavior theory helped to understand consumer behavior toward consumption of organic food. They also found consumption of organic food positively and significantly related to intentions to purchase organic food

where intentions are moderated by perceived behavioral control. Said another way, a person's ultimate behavior can be informed by self-awareness of specific value orientations (Han, 2015; McDonald, 2014). Botetzagias et al, (2015) found in their study of recycling behavior that perceived behavior control is consistently better at predicting intentions to recycle rather than attitude. They further found that demographic characteristics and subjective norms were statistically non-significant predictors of a person's intent to recycle. Contrarily, Michaelidou and Hassan (2014) stated that qualitative interviews can indicate the deeper role subjective norms have on planned behavior. What the findings suggest to me is that perceived behavior control is a key indicator of behavior and cognitive processes that can illuminate environmental dissonance prior to action in a way that may influence such action. Little research was found establishing a relationship between environmental dissonance or conspicuous consumption and planned behavior, but I assert awareness of one's planned behavior or cognitive habits can lead to a broader self-awareness that includes how one interacts with the environment and specifically how one perceives consumptive behavior. Further I assert that an awareness of the cumulative intentions to perform of an individual that can define one's behavior is paramount in understanding how perceptions of environmental dissonance ultimately evolve from working memory to perceptions, to actions. Similarly, Zimmerman (2013) stated research shows behavior is not reducible in a deterministic fashion to a collective of individual decisions rather that decisions are built on cumulative inputs that create momentum and that the result is more accurately described as an assimilation of patterns rather than choices. I assert the same applies to variables affecting cognitive and environmental dissonance; a mosaic of variables that influence

conspicuous consumption and planned behavior better describes how one perceives one's action rather than an examination of individual inputs. Just as this research advances the mutualistic paradigm over the dualistic; from an ecological perspective provides an alternative paradigm to examine and understand planned behavior and its affect on consumption. With respect to planned behavior, Zimmerman (2013) stated the construct of human decision making is characterized as clusters of cognitions triggered mutually by a single cue. In this study I sought to understand from the participants if this can be identified through a narrative of their lived experiences before and during their safari experience. Understanding cognitive habits through such a narrative perhaps will provide the individual with a new means of not only recognizing environmental dissonance, but also new ways to mitigate it. According to Zimmerman (2013), "Cognitive habits accordingly permit learning. They are building blocks that can be assembled in a variety of ways to create different structures, and it is these structures that constituted our thought and our behavior" (p. 48). For this reason I assert that understanding the mosaic of variables that influence planned behavior is vital in understanding how individuals perceive and articulate environmental dissonance. Similarly, it is the conscious thoughts of consumers that manifest in the decision to purchase bottled water but it is the intuitive brain that knows how to drive the car to get to the store in order to purchase the bottled water. In the context of this study, would heightened awareness of variables such as acceleration, tire grip, and braking of the car by the driver provide a better understanding of attitudes, perceived control, and subjective norms of driver performance thus affecting driver behavior? What was not known based on my literature review was how a better

understanding or self-awareness of planned behavior can influence perceptions of environmental dissonance and ultimately the mitigation of it.

The theory of planned behavior has been criticized for its dependence on rational cost-benefit analysis in modeling and predicting environmental behavior; critics suggest that other motives that defy strict cost-benefit analysis include motivations of selflessness, sacrifice, altruism, and other personal moral norms also influence planned behavior (Botetzagias et al. 2015). To reaffirm, I sought to implement the theory of planned behavior in this study to the extent perceived behavioral control might contribute to awareness of environmental dissonance leading to responsible mitigation of it. de Leeuw, Valois, Ajzen, and Schmidt (2015) stated in their study of key beliefs held by high school students exhibiting pro-environmental behavior that accurate information in the decision making process was less important than understanding subjective beliefs and how those beliefs affect intention and behavior which further supports my assertion that understanding one's perceived behavioral control can influence environmental dissonance that could manifest in environmentally unfriendly ways. De Leeuw et al. (2015) stated that intentions to act environmentally responsible and perceived behavioral control are the two most immediate antecedents to pro-environmental behavior indicating alignment with the essence of understanding how individuals perceive and describe their own experience with environmental dissonance. Dill, Mohr, and Ma (2014) further stated that the environment in which the behavior occurs is also influential to the extent it influences attitude and perceived behavioral control suggesting that conducting this study in a pristine wildlife environment could help to produce rich and deep narratives about participant's views on pro-environmental behavior.

Exploring Propitiation of Environmental Dissonance
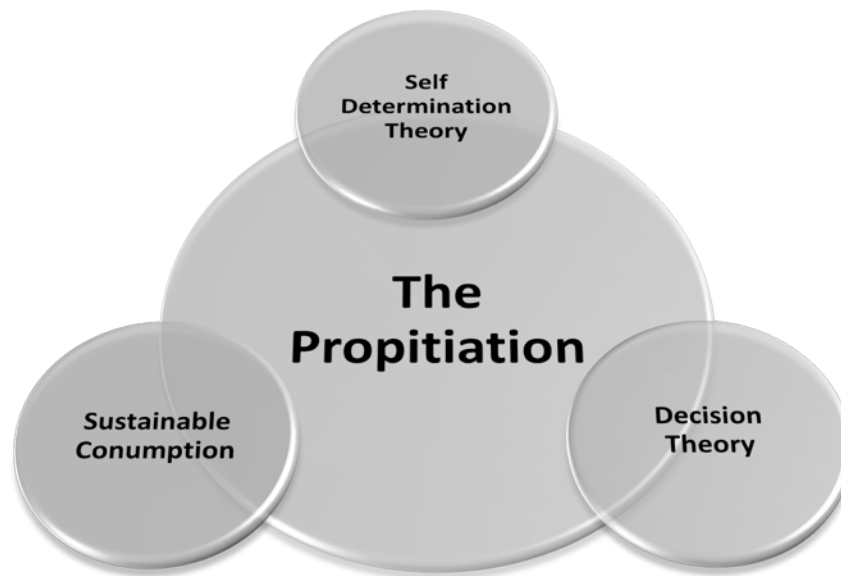
Figure 8. Propitiation of environmental dissonance.

The consumptive habits by the affluent developed societies and individuals are presently unsustainable and cannot be justified or defended particularly in the wake of developing countries aspiring similar consumptive benefits (Hoque, 2013). The final research question involved understanding how individuals manage or reconcile their consumptive behaviors with pro-environmental ethics. The answer lies in propitiation. Propitiation, the mental mitigation of environmental dissonance, is achieved using a variety of methods. Factors influencing propitiation explored in this section of the literature review illuminate how individuals in this case study manage environmental dissonance. Specifically, I reviewed the influence of such theory as self determination, sustainable consumption, and decision theory as factors that foster the process of dissonance reduction then concluded with exploration of research specific to decision

processes that help to understand a person's final expression of how they manage consumptive choices and mitigate environmental dissonance.

Thus far I have used the literature to inform this study on the origin, development, and manifestation of environmental dissonance in daily life. In the balance of this literature review I will provide a better understanding of what current literature provides on the reconciliation or dissonance reduction process individuals might experience that precedes propitiation and consumptive behavior. Specifically, I will search the literature for knowledge on the intersection of self determination theory, sustainable consumption theory, and decision theory to help understand reconciliation forces that manifest in consumptive behavior. Further, I will also search literature that addresses the intersection of basic human needs with sustainable consumption considerations and the age old dilemma of interpreting could versus should.

According to Festinger (1957) experiencing a condition of cognitive dissonance gives rise to the need to reduce or eliminate it; moreover, the complexity of the reduction or reconciliation process is a function of the magnitude of the dissonance. Festinger further stated there are three ways to achieve dissonance reduction, 1) changing a behavioral cognitive element or how we feel or act upon something, 2) by changing an environmental cognitive element or our social or physical environment, or 3) by adding a new cognitive element that changes either the social environment or physical environment in a way that changes one's behavior. I posit that it is within such a reconciliation process referred to as dissonance reduction, the keys to developing a new environmental paradigm can be fostered. According to Bonnett (2012) the way in which individual's process environmental cognitive conflict or environmental dissonance is to

either consider ways in which the mitigation can be controlled with technical solutions that have minimal impact on perceptions of quality of life or; reconsider one's perceptions of wants and needs that theoretically represent *the good life*.

   The role of self-determination in reconciling consumptive choices.

   Understanding the nexus between the assignment of intrinsic values of living and non-living things with intrinsic motives can be explored through the lens of self-determination theory (SDT). Such a lens can provide the basis for an understanding of how individuals propitiate their conscious thoughts with their actions. In other words, SDT can provide insight as to how individuals perform environmental dissonance reduction. SDT further provides a behavioral construct that can be used to examine intrinsic and extrinsic motivations of people and how such motivations can manifest into certain behaviors. Haivas et al. (2014) stated that within the context of SDT people have three basic needs, the need for autonomy, competence, and relatedness. Haivas et al. (2014) stated the need for autonomy related to a person's sense of free will, the power of choice, and ownership of behavior. They further stated that satisfaction of needs is linked to intrinsic motivation and the internalization of external values and that intrinsic motivation emerges when people are engaged in something they are interested in absent of external pressures. So what does the SDT construct mean in terms of understanding how people ultimately assign intrinsic values to natural resources? The answer is not provided in the literature. In this study I intended to divulge the perceptions people have as they relate to the interconnectedness of self-determined intrinsic values and the influence external factors may have on participant responses. I will attempt to understand how individuals perceive the need to self regulate one's behavior as a consequence of

environmental dissonance based on environmental pressures and primarily social pressures. I acknowledge that an exploration of SDT in the context of this study was only tangential and not a primary focus of this research. The influence of SDT on pro-environmental behavior is beyond the scope of this study and a logical *next step* in my life long research goals and objectives. SDT is presented in this literature review primarily as a means to establish a reference or connection between this study and future research I plan to conduct. Other areas of interest for future research surfaced while writing Chapter 4 and are presented in Chapter 5 of this dissertation.

The role of sustainable use/consumption perceptions and the nexus between intrinsic values and human behavior.

Much has been written about the concept of sustainable use in terms of natural resources; however, sustainable use was not the subject matter of this study. A clear delineation is warranted at this point in the literature review regarding my exploration of sustainable use theory and its application to this study. Within the conservation discipline, there are seemingly two distinct motivations to promote sustainable use theory and both depend on motivations or vested interests of the advocate. Some conservationists maintain that sustainable use concepts are important for ecosystems preservation against rampant growth in human population and consumption while others see sustainable use concepts as vital in order to codify a means to extract as much natural resource from an ecosystem as possible just short of ecosystem collapse. The latter is coined eco-efficiency. Lorek and Fuchs (2013) stated that sustainable consumption is a construct that pertains to behavior and that a strong commitment to such pro-environmental behavior is paramount to long term behavioral change in favor of

responsible consumption indicating an emphasis on the influence of cognitive processes and perceptions. I reference sustainable use primarily because of its popularity as a theoretical construct within conservation networks but more appropriately suited for this study was the theory of sustainable consumption. Sustainable consumption is a notion of immediate relevance to the participants in my research pool and its ease of understanding as a measure of consumptive behavior make it appropriate. Sustainable use in the context of this study refers to the reasoned management and utilization of natural resources without specific reference to its specific commercial value. Sustainable consumption on the other hand refers to consumer behavior evidenced by thoughtful consideration and action toward pro-environment choice-making to consume fewer natural resources.

Throughout this study I have developed an understanding of intrinsic value orientations and the role perceptions (and awareness of one's perceptions) play on the development of attitudes and beliefs about how natural resources are observed, transformed, or consumed. This study was also not an examination of altruistic motivations but an examination of how thoughts that might be considered altruistic manifest into normative behavior toward the environment and consumption. Kim (2013) stated that altruistic thoughts are likely less prevalent in the daily lives of consumers in a materialistic world or culture because such thoughts are generally more abstract. It is for this reason I maintain there exists a gap in the literature about how sustainable use perceptions might have a role to play in the relationship between intrinsic values one holds for the environment and ones ultimate behavior towards it providing an effective measure of environmental dissonance and mitigation.

In order to fully understand the role of sustainable use perceptions and the influence such a role has on the formation of a nexus between intrinsic values and human behavior, this study focused on the process of making choices in an effort to mitigate environmental dissonance. Dermody, Hanmer-Lloyd, Koenig-Lewis, and Zhao (2015) framed the concept of sustainable use as an imperative to change consumptive behavior to more sustainable choice-making in order to address a fundamental ecological crisis. Dermody et al. stated pro-environment choice-making will "increase life chances of more people and the planet by equalizing the distribution of resources to increase quality of life; integrate the needs of future generations into current choice-making by not excessively using resources and; reduce the negative environmental impact of overconsumption and consumerism to significantly minimize ecological destruction" (p.1473). Pertinent to the earlier discussion of conspicuous consumption and construal theory, Dermody et al. (2015) stated that with deeper commitments to sustainable consumption choice-making that pro-environmental behavior is seen as a threat to the *dominant social paradigm*. Similarly Hoque (2013) stated suppliers of goods tend to ignore or minimize the issue of consumption reduction because it does not fit with the traditional economic growth paradigm; instead marketing and sales strategies have shifted to *green consumption*. Though the authors do not state whether or not their assertion is universal, it is interpreted to pertain at least to developed societies where the construct of conspicuous consumption is prevalent. In their study they identify indirectly the paradoxical relationship between pro-environmental behavior indicated by sustainable consumption and ecosystem degradation indicated by conspicuous consumption but fall

short in a discovery of mitigating the paradox or reducing potential environmental dissonance.

Hoque (2013) stated that for there to be shift in social policy toward sustainable consumption a new lifestyle paradigm would be needed. Hoque stated that in the UK the use of bathrooms alone consume 80% of the total power used in an average household. Research on the link between consumer behavior and resultant environmental impacts is limited due to complexity of scale however, more research is viable and should be pursed relative to the findings of Hoque (2013); a focus on behaviors that have the greatest negative impacts (Gatersleben, Murtagh, & Abrahamse, 2014; Dietz, Stern, & Weber, 2013). Profoundly, Hoque declared that how individuals organize their daily lives has a major impact on the environment therefore it is reasonable to extend that as consumers are better informed about how they develop their closely held intrinsic values and how those values interact with choice-making that perceptions of quality of life and desirable lifestyles can be reevaluated. The corporate global community appears to be taking note of a shift in social policy. Luchs, Phipps, and Hill, (2015) stated there are several motivations for such a shift in social policy in favor of sustainability concepts, a top reason is that more and more people are buying goods and services identified as eco-friendly. Kiron, Kruschwitz, Haanaes, and Von Streng Velken, (2012) stated the global corporate community is reaching a positive tipping point indicated by two thirds of the respondents in their study of 4000 managers from 113 countries stating that sustainability was necessary for remaining competitive. Their finding was an increase up from only 55% two years earlier. Bonini and Bové (2014) likewise found 43% of the respondents in their study have aligned the business mission, goals, and objectives in the context of

environmental sustainability which is a finding up 30% from two years earlier. Contrarily, at the consumer level researchers have indicated a slightly different trend with consumers lagging the shift toward consuming less or consuming differently suggesting an attitude/behavior gap may be growing where the global corporate community may be outpacing its customers (Phipps Ozanne, Luchs, Subrahmanyan, Kapitan, Catlin, Gau, Naylor, Rose, Simpson, & Weaver, 2013; Prothero, Dobscha, Freund, Kilbourne, Luchs, Ozanne, & Thorgersen, 2011).

As indicated earlier in this literature review there is a nexus between intrinsic values developed for the purpose of attributing economic value to biotic and abiotic entities and intrinsic values claimed by Maslow (1969) that contribute to human behavior. Assuming that awareness of multiple variables that factor into the development of environmental dissonance and perceptions, it was reasonable to further assume that with greater understanding of how such variables intertwine will lead to dissonance reduction and more efficient use of natural resources. Consistent with a greater awareness of factors that influence environmental dissonance and the central tenets of this study, Prothero et al. (2011) stated more research is necessary from an interdisciplinary perspective as degrees of separation between and among the physical and cognitive factors are narrow. I interpret their assertion to mean in the context of this study that more research is necessary to understand from a qualitative and multi-disciplinary perspective how people and the planet survive in a mutualistic fashion as opposed to the classical view of dualism and determinism. I have found a substantive gap in research pertaining to how such sets of perceptions or realities converge and how they may or may not contribute to human behavior, resource consumption, and consequential ecosystem

degradation. A broader leadership gap has also been identified by the need to identify how multi-cultural stakeholders can effectively work together on a global scale through governments and business organizations as well as person-to-person to create a deeper commitment to understanding the intrinsic values of natural resources and the need to not only live sustainably but to restrain from consumption (Dermody et al., 2015; Hoque, 2013: Hurst et al., 2013; Kovacsa et al., 2014).

Decision Time – Managing consumptive choices.

With respect to propitiation of paradoxical mental scenarios described as mitigating environmental dissonance, I have learned conducting this literature review that many factors such as serial order of data (order effects), data consistency (is new data consistent with existing data), context, and reflexivity/reflectivity can have a moderating impact on the process of dissonance reduction and consumptive behavior (Lange, Thomas, & Davelaar, 2012; Usher, Tsetsos, Yu, & Lagnado, 2013). In this section of the literature review, I have established a lack of understanding for how current theories of decision making fail to explain how individuals manage decisions when overlaid with cognitive dissonance.

The decision making process is one that is dynamical and includes two fundamental processes, (a) the process of collecting information and data also known as evidence and (b) the process of confirmation or manipulation of values and beliefs (Usher, Tsetsos, Yu, & Lagnado, 2013; Gherasim & Gherasim, 2013). Hong and Chang (2015) stated consumer decision making stems from either a cognitive reason-based construct or an affective feeling-based construct and that in Western cultures the feeling-based construct can lead to more effective decision making. Their assertion makes no

correlation to the quality of a decision. It does however infer that feelings and emotions play a pivotal role in the process of decision making and by extension a role in how individuals mitigate conflicting data sets and mitigate dissonance. Knox, Otto, Stone, and Love (2012) stated effective dynamical decision making paradigms include a mindful balance of exploratory and exploitive human behavior coupled with reflective and reflexive thought processes. Contrarily, Gherasim and Gherasim (2013) stated that making *good* choices is often not the result of a particular decision process rather one achieved in response to external stimuli that controls behavior. Likewise, Hoque (2013) stated that cognitive dissonance increases as the magnitude of importance and impact of a decision increases. Such divergent explanations indicate a gap in the literature with respect to the material question regarding how individuals mitigate environmental dissonance. They further concluded that when presented conflicting data the preferred method of decision making that involved changing beliefs was an exploratory reflective process as it usually yielded the quickest and highest reward. Knox et al. (2012) did not specify that their findings applied to cognitive dissonance, but to decisions about personal benefit. Their study made no mention of how values are established or modified by new information or how memories of prior experience or knowledge might moderate decision making.

Much has been written on decision making and theories abound that describe how individuals arrive at conclusions and choice, but little is known about the reconciliation process of mitigating antecedent paradox. Hoque (2013) stated that consumers with limited cognitive capacity have restricted abilities to become aware of environmental problems and devote mental resources to them which complicates pro-environmental

behavior by a great many people. What is not clear in the literature is how understanding the collective knowledge of paradox, environmental dissonance, and reconciliation play holistically on decision making from both a conscious and subconscious perspective. Fox, Cooper, and Glasspool (2013) stated that a canonical approach to dynamical decision making provides a unified and interdisciplinary opportunity to understand adaptive human behavior. They stated that canonical theory is an inquiry about the lifecycle of decision making, the general functions that guide the lifecycle of decision making, the attributes of decision making that lead to fit with a unified theory of cognition, and how a unified theory of cognition manifest across fragmented cognitive sciences. The unified theory of dynamical decision making addresses the holistic nature of this study, but does not address the influence of value formation and dissonance. Fox et al., (2013) came close to suggesting a correlation between the establishment of values and dissonance reduction but in the context that new information simply predisposes existing information. Such a scenario may or may not apply to dissonance reduction. Similarly, Trueblood and Busemeyer (2012) stated quantum cognition and specifically quantum inference model could provide an explanation of how individuals respond to paradox as a result of incompatible data sets. Trueblood and Busemeyer provided that the quantum approach to explaining human judgments should be considered for the following reasons which I hold are consistent with processing data when seeking dissonance reduction:

- Human judgment is not a simple read out from a pre-existing or recorded state, instead it is constructed from the current context and question.

- Before measurement, cognition behaves more like a wave than a particle allowing for individuals to feel a sense of ambiguity about different belief states simultaneously.

- Changes in context produced by one judgment can affect later judgments.

- Cognitive logic does not necessarily obey the rules of classic logic such as commutative and distributive axioms (Trueblood & Busemeyer, 2012, p. 1,2).

With respect to understanding the antecedents to perceptually guided consumptive behavior, how individuals perceive and describe environmental dissonance, and how individuals manage consumptive ethical considerations, the literature has provided no clear conclusion. What quantum cognition approach and the balance of my literature review has revealed is that paradox and cognition play a pivotal role in human behavior, sometimes for good purposes and sometimes not. Paradox may be both misunderstood and underappreciated from a scholarly and pragmatic perspective which in itself describes a paradoxical relationship. Moreover, the gap in understanding the correlates among the development of ecological paradox, the state of environmental dissonance, and the execution of propitiation is affirmed by "The existence of opposite tendencies within the psyche is all too obvious and becomes the dramatic source of all human conflicts in the psychologies of both Freud and Jung. However, according to Jung, the opposites also have the mysterious capacity to unite" (Mouël, 2014, p. 46).

Qualitative Case Study Research

I chose to use the case study methodology for this research with a specific focus on individuals visiting a relatively unique environment that will arguably provide at least

the potential for unique experiences. The case study

- copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result;

- relies upon multiple sources of evidence with data needing to converge in a triangulating fashion, and as another result; and

- benefits from the prior development of theoretical propositions to guide data collection and analysis (Yin, 2014, p. 970).

The case study methodology has a long history as a tool for conducting rigorous qualitative research that is confined or bounded within what would be considered a geographical area unique to the research problem being explored. Ernst and Wenzel (2014) stated that the case study methodology and particularly transdisciplinary case studies are very well suited when analyzing complex problems that are rooted in society; they characterized the case study methodology as one that adopts the approach of not talking *to* society but instead talking *with it* (Naustdalslid, 2011; Scholz, 2011) in the spirit of co-leadership between academia and stakeholders being studied. Ernst and Wenzel (2014) further stated that in the case study methodology with specific reference to developing research on pro-environmental behavior that a basic assumption is multiple conceptions from different people, which include intrinsic values, conspicuous consumption, and sustainable use, contribute to finding solutions.

The primary source and means for collecting data was restricted to a specific wildlife game reserve, visitors to the reserve, workers from the reserve, interviews, and observations where I acted as a participant observer. Since my aim in this study was to explore the phenomenon of cognitive dissonance within the environmental context of a

unique wildlife experience, the case study methodology was uniquely oriented toward the collection of data from individuals whose behavior may or may not be transferable beyond the confines of the wildlife reserve. Creswell (2013) and Patton (2002) were the primary sources used in the development of the research design and methodology I have chosen.

Managerial Implications Drawn from the Literature

This interdisciplinary literature review has revealed in order to affect the consumers preferred lifestyle in a pro-environment and pro sustainable way that consumers need to be empowered to respond accordingly. Hoque (2013) stated that it is mandatory to motivate consumers with positive leadership, eco-friendly practices, and social support in order to reestablish the importance and priority of intrinsic values and to defend against powerful external forces that *supplant* pro-environmental intrinsic motivations. I posit this literature review supports that in some cases there is an imbalance or misalignment between perceived human values of certain flora and fauna and the ecological value the species actually provides to the vitality of the ecosystem; Goldman and Schurman (2000) consider the misalignment a *society-nature divide* further substantiating the existence of a cognitive and behavioral gap between consumption and resource sustainability. Stocker and Kennedy (2009) stated that a holistic view of stewardship is needed to challenge the narrowly defined environmental paradigm of utilitarian-economic modeling suggesting that too much emphasis is placed on extrinsic values; a paradigm leading to environmental policy manifesting as, *it stays if it pays*. The challenge for today's environmental managers and leaders is to understand the delicate and complex balance between perceived notions of extrinsic and intrinsic values to the

ecosystem and to recognize matters of extinction economics and uncontrolled consumption. Holden (2005) offered several non-economic benefits of a healthy ecosystem that should be considered when assessing economic values of environmental subsystems to provide a balance between conservation and economic development such as the values of life support, recreation, science, aesthetics, genetic diversity, history, religion, and culture.

Bonnett (2012 stated that places are imbued with feeling and value providing intimations of a range of responsible and ethical stewardship. Brown (2007) stated that ecological philosophy and environmental ethics will be promoted when managers understand the interrelatedness of all things including basic conservation values. Though Bonnett (2012) stated there is an intimate reciprocity between ethical behavior and environmental concern that shapes a person's interest in stewardship, what is lacking in the literature is the identification of a connection between intrinsic values of natural resources and a mutualistic sense of human interconnectivity with them. The fondness for nature and the development of sensibilities for its care is well established in the literature but a gap remains in what aspects can be managed for to bring about specific human behavior with respect to natural resource consumption and ecosystem degradation. Sheldon et al. (2010) stated, "If extrinsically oriented persons can be convinced that their goals and objectives really will not produce happiness, despite their belief's to the contrary, this might produce benefits not only for them but also for society" (p. 174).

Summary and Conclusions

The essence of this study is based on an ecological perspective or view of the cumulative impacts of specific theory based constructs explored in this literature review.

From an ecological perspective multiple contexts including the development of paradox in the form of cognitive dissonance, the manifestation of perceived environmental dissonance in daily life, and the process by which individuals mitigate or reduce environmental dissonance has been discussed. Ernst and Wenzel (2014) stated that environmental psychology as a discipline has not been effective in transforming basic research related to the impact of human behavior on ecosystem degradation and further stated the reason is due to a lack of trandisciplinarity of research methods and that environmental psychological knowledge is not getting to the practitioner. To me this indicates a clear gap in the transdisciplinary knowledge between psychology discipline and the leadership discipline and how such a gap influences the development of pro-environmental behavior which this study directly addresses.

The multi level, abstract, systemic, high construal nature of this study is unique in the literature that I reviewed and reported on in this chapter. Most studies attempted to provide findings and conclusions based on narrowly defined contexts which are in the scientific tradition. I did not stray far from that tradition, but did use the ecological psychology perspective as the conceptual framework to find fit among the various theoretical constructs that were studied. Substantial gaps were found in the literature that provide clear evidence of knowledge with respect to each of the theoretical constructs and how they systemically informed cognitions or cognitive processes that lead to environmental dissonance, consumption, and ecosystem degradation. I posit this literature review supports that in some cases there is an imbalance or misalignment between perceived human values of certain flora and fauna and the ecological value the species actually provides to the vitality of the ecosystem; Goldman and Schurman (2000)

consider the misalignment a *society-nature divide* further substantiating the existence of a cognitive and behavioral gap between consumption and resource sustainability. Stocker and Kennedy (2009) stated that a holistic view of stewardship is needed to challenge the narrowly defined environmental paradigm of utilitarian-economic modeling suggesting that too much emphasis is placed on extrinsic values; a paradigm leading to environmental policy manifesting as, *it stays if it pays*. The challenge for today's environmental managers and leaders is to understand the delicate and complex balance between perceived notions of extrinsic and intrinsic values to the ecosystem and to recognize matters of extinction economics and uncontrolled consumption. Holden (2005) offered several non-economic benefits of a healthy eco-system that should be considered when assessing economic values of environmental sub-systems to provide a balance between conservation and economic development such as the values of life support, recreation, science, aesthetics, genetic diversity, history, religion, and culture.

Chapter 3 includes a detailed global description of the research design that will efficiently and effectively provide guidance for the capture of data aimed at better understanding the research problem, the gaps in knowledge related to the research problem, and avenues for future research using other approaches and methodologies. In addition to the general research design framework, specifically, the following sections provide for the rationale of the chosen research methodology, my role in conducting the research, and a discussion of issues related to research trustworthiness and all known ethical concerns. My aim in the following sections is to provide the reader an understanding of the rigor of this study and provide the means for critical review of my chosen research design and methodology.

Chapter 3: Research Method

The purpose of this qualitative case study was to understand the breadth, depth, and reasons why environmental dissonance exists among visitors to the Kruger National Park. Further, I sought to explore environmental dissonance of individuals and how such conflict relates to consumptive behavior of consumers before and after participating in a multisensory experience in a pristine African bush environment. I used interview questions and related prompts to probe the perceptions and behaviors of English speaking ecotourists whose responses informed my construction of a psychological model for how ecological values are established and acted upon in the context of natural resource consumption and environmental leadership. Within the context of a case study, I added to the body of knowledge regarding the influence of consumption theory, behavior theory, and motivation theory on perceptions of natural resource stewardship and consumption. On the basis of an ecological perspective, I contend that the findings provide a greater understanding of how to facilitate a more effective environmental paradigm useful to a wide range of natural resource managers and consumers.

Conducting this case study in a pristine natural ecosystem provided a research environment conducive to promoting honest, rich, and unrestricted participant feedback regarding the phenomenon of environmental dissonance. My choice of potential research environments and logic is bolstered by Pyone and Isen's (2011) claim that experiential purchases such as a wildlife safaris often create a higher sense of happiness as opposed to more tangible material purchases, resulting in higher-level abstract thoughts and value orientations which can manifest in higher levels of self-control relative to consumptive choices. Specifically, I conducted the study within the Olifants West Nature reserve,

which is the westernmost region of the Balule Nature Reserve and forms the outermost western boundary of the Greater Kruger National Park. My qualitative case study inquiry into anthropological, social, economic, and political influences that shape perceptions of environmental values held by visitors on safari in the Kruger National Park provided an understanding of the factors influencing environmental dissonance and long-term ecological sustainability of natural resources.

Research Design and Rationale

For this research, I chose a qualitative case study research design. The overarching research question I posed in this study was: What are the social processes that lead people to endorse responsible stewardship of the environment but choose consumptive behaviors that produce harmful environmental effects? The following research sub-questions were designed to shape the research problem into a discoverable, unoffending, and relevant mental scenario to generate data from participants regarding their personal experiences with environmental dissonance, and to discover interconnectivity among contributing factors toward consumptive behavior:

1. What are the antecedents to perceptually guided behavior?

2. How do individuals perceive and describe environmental dissonance?

3. How do individuals manage consumptive choices and mitigate environmental dissonance?

I further explain alignment among the research problem, research questions, and interview questions in a matrix provided in the Research and Interview Questions section of this chapter (see Figure 10).

When choosing a specific qualitative tradition, I initially determined that grounded theory the best option. I decided that an emerging theory would explain what or how individuals formulated and implemented certain decisions that ultimately impact the environment through consumptive behavior, but I came to realize that understanding the "what or how" at the back end of decision making may not fully address my research interests. Not only did I want to understand motivations and the narratives that can be provided by research participants, I also wanted to better understand the up-front relationships, the cognitive inputs and processes, that result in specific behaviors. Grounded theory thus does not seem to be the appropriate method for such investigative protocol. Grounded theory may provide for future research opportunities regarding a single phenomenon, rather than providing for a comprehensive understanding of a broader behavioral pattern.

I also explored the phenomenological research methodology and design as an effective way to investigate the phenomenon of environmental dissonance. Understanding the essence of a lived experience is the foundation for the phenomenological approach, and the goal of my research was to understand the essence of what lived experiences influence behavior. According to Patton (2002), the phenomenological approach is a retrospective reflection upon antecedents without which the phenomenon would not occur. Understanding the essence of past cognitive norms may lead to an understanding of how to change them. The phenomenological approach provides an opportunity to explore the nature of establishing behavioral norms relative to consumption, which may in turn lead to better understanding of how to positively

manipulate awareness of norms and the personal insecurity of change that might prevent behavioral change.

An alternative approach to the phenomenological research method is EP. EP may actually be more appropriate for this study because it is used to develop an understanding of the relationship between human behavior and the environment (Patton, 2002). My reluctance to make EP the first choice was that EP is used to understand behavior by observing it (Patton, 2002). However, my interests were primarily in understanding antecedents to behaviors. To an extent, assumptions can be made about consumptive behaviors that do not need to be "observed." For example, the researcher does not need to observe an individual wasting paper or driving a gas-guzzling automobile to understand waste. Although EP facilitates a direct investigation of the relationship between personal behavior (consumption) and sustainable utilization (stewardship), similar to grounded theory, EP seems to primarily address the "back-end" factors influencing behavior. EP does seem to be very much aligned with conspicuous consumption theory from the perspective of physical needs, satisfaction, and pleasure. Patsiaouras and Fitchett (2012) noted that conspicuous consumption theory explains that consumers make choices generally related to social status, which aligns well with an approach that examines the relationship between consumptive behavior and the impacts of such behavior on the environment.

An alternate qualitative approach I further considered is heuristic inquiry (HI). HI would be an interesting research approach to not only understand what influences others in developing consumptive habits, but also what influences my own. Using HI can provide a researcher an opportunity to observe and understand personal influences in

relation to the phenomenological experience of others. While this approach could have been used to provide an interesting twist by setting forth an exploration of my own experience, I was not convinced that my own experience is relevant to the norms of others that may not have similar values. Said another way, I was concerned that while this approach aligns well with the intent and purpose of my research, I may be an anomaly and not representative of a particular sample frame. The most substantial attribute of HI may be the extent to which the approach is well-suited to observe and analyze intense human experiences such as the one planned for in this study: exposure to and interaction with a truly wild "big five" sub-Saharan African environment.

After an exhaustive review of various research designs, I concluded that many of them could provide excellent research opportunities. Patton (2002) stated the researcher should not ask which theoretical framework is right, best, or most useful because such a decision is dependent on the objectives and skills of the researcher. Patton further stated that researchers must determine the relative value of any given research perspective to their unique research objectives, and that research perspectives often cross-pollinate based on the unique abilities of the researcher and unique circumstances of the researched. The case study method is potentially most suitable when the researcher is asking how and why about a contemporary phenomenon over which the researcher has no control (Yin, 2014). Yin (4014) stated, "A case study is an empirical inquiry that investigates a contemporary phenomenon [environmental dissonance] in depth and within its real-world context, especially when the boundaries between phenomenon [environmental dissonance] and context [paradox, phenomenon, and propitiation] may not be clearly evident" (p. 953). I concluded that, for the purpose of this study, a

qualitative inquiry utilizing a case study approach with an ecological psychology lens supported by a framework of cognitive and behavioral theory would provide data useful for understanding barriers individuals may experience in making sound consumer choices that take into account individual archetypes. Such a research design was well aligned with my personal research interests as well as standards of academic rigor, and provided an opportunity to collect and analyze data in a way that contributes to the breadth and depth of understanding environmental dissonance for the expressed purpose of informing leaders about the stewardship of natural resources and safeguarding the environment.

Role of the Researcher

In this study, I adopted the role of "participant as observer" (PaO), a role that allows for the deepest and richest data to be uncovered. This role allowed me to engage with participants in the midst of their experiences for the purpose of gaining rich detail regarding their views and reactions. This role was effective in providing substantial insights into participant responses to the research questions and their behaviors during observation sessions.

Patton (2002) stated there is no straightforward test for indicating reliability and validity in qualitative analysis, and that the human factor is both its great strength and fundamental weakness, so researchers are charged with doing their best to use their full intellect to fairly represent the data captured, analyzed, and communicated in accordance with the objectives of the study. In this context, my primary role as the researcher was to engage the participants and study environment in such a way as to utilize all available and appropriate capacities to fairly represent and analyze the data that I collected, and to insure fair and consensual treatment of all participants.

Perhaps the most significant role I played as the researcher had to do with relationships. In order to develop rich data from participants in this qualitative case study, I was obligated to insure participants understood the phenomenon being studied, their relationship to the phenomenon, my role as an intruder into their personal lives, and why their participation was important and good. Further, as the researcher and PaO it was my responsibility to continually reflect on such relational issues during the term of the study to make sure that if relational changes had occurred, that I had addressed them prudently. Lastly, I had a reflective role needed to acknowledge how my own participation in the study affected how I viewed the phenomenon, how I viewed the data that was recorded, how I viewed the competence of the participants, and how my personal views influenced data analysis and reporting.

Commensurate with my role as the researcher, it was my responsibility as researcher to disclose any personal or professional relationships I had within the confines of this case study to achieve confirmability and dependability. In this context I acknowledged that I have a non-familial and non-financial relationship with the safari lodge owners where my research was conducted. Specifically, I support the operations of an environmental research camp located on the reserve within the confines of this case study, and I co-organized an all female anti-poaching unit that is based on the reserve. I further acknowledged that my relationships with property owners, lodge operators, and game reserve staff would not interfere or comingle with the form and function of this study. I acknowledged that I would be continually cognizant of conflicts of interest and that I had no power or authority over any of the participants and there were no financial interests between me and anyone involved in this study.

Methodology

As described above, the methodological approach considered most appropriate for this research was the case study. In this study, the types of data most useful and relevant were a combination of observations, interviews, and document review (Creswell, 2013, p. 160). Patton (2002) asserted the ideal qualitative approach supportive of triangulation is one that consists of three primary characteristics; useful qualitative data, systemic and inductive analysis, and is content rich (p. 248). I used an observation method to collect data regarding the emotional aptitude of participants when responding to the research problem and questions.

The observations I conducted during this study included journaling the physical and intellectual reactions of English speaking participants to specific observed animal behavior while on safari (game drive) to better understand how experiences such as close encounters with wild animals in a pristine ecosystem affects decisions to consume natural resources or preserve them. Other observations included how people respond emotionally to commercial development within an otherwise undisturbed natural environment. Similarly an observation was conducted to view how participants respond to economic activities and conversely the poverty of indigenous tribal residents. The observations were intended to reveal how eco-tourists interpret consumptive and non-consumptive uses of natural resources and the influence such interpretations have on the assignment of intrinsic or extrinsic values toward specific environmental assets such as flora and fauna.

Interviews were conducted to retrieve fundamental data for this study. I used a combination of structured and semi-structured interview questions with a focus on the social and economic background that informed the opinion and knowledge of the

participants regarding meaningful stewardship of ecosystems and the perceived impact of consumptive uses. Participants were asked to explain how they felt about the stewardship of natural resources and the value natural resources provide to the mental and physical health of the individual and the biological integrity of the planet's ecosystem. In the interviews, I also explored how people contrast the importance of economic development and a healthy natural environment. I also collected data about how participants feel about globalization and its impact on addressing the environment and poverty. Interviews were followed up with provision of the interview transcripts to allow confirmation of previously provided feedback and to allow for an expansion of information given.

Reviewing documents beginning with a literature review helped me to frame an understanding of the relationship between advocates for traditional consumptive practices and policy and advocates for greater environmental protection. A textual analysis of documents and visual images provided a deeper understanding of environmental and economic policy leading to an emergence of factors and variables that influence consumptive uses of natural resources. Data collection methods primarily consisted of field notes from observations, interviews, and document reviews. The document review relied primarily on written accounts by the participants of a profound moment they experienced during their safari visit to the Kruger National Park; this was explained in greater detail in the instrumentation section. In terms of the methodology of this study, I had three primary concerns with data collection methods that guided the sampling process, (a) integrity of data, (b) the ethical treatment of participants, and (c) maintaining an open ended process.

Participation Selection Logic

   The primary geographical area of interest in this case study was the Olifants West Nature Reserve (OWNR), a sub-region of the Balule Nature Reserve (BNR) (see Figure 9). Within the OWNR there are several independent private game lodges spanning all economic strata from the *bush camp* to the five star *luxury lodge*. Facility operators are generally restricted to 12 guests per night and the vehicles used to go on safari are generally limited to nine passengers. As disclosed above, the primary reason I chose this geographical area to conduct a case study was based on personal familiarity with the region and access to it both spatially and to its stakeholders. Further, this region was well established and known for its magnificent and pristine biodiversity providing the richest possible safari experience which in turn I maintain provided the best possible physical setting for this study. The access I have to property owners, lodge operators, and governing authorities across the entire BNR/OWNR provided me with a unique opportunity for a rich in-depth study based primarily on a trusted conservation relationship that has been evolving since my initial visit to the OWNR and its stakeholders in 2009.

   My research included participants on safari at two lodges which are owned by the same operating company in which I have no vested, operational, or otherwise commercial interest. One of the two lodges is considered moderately priced and the other luxury with a five hospitality rating. The primary reason I chose these two specific lodges was again based on my familiarity with the property owner/lodge operator and that the operational aspect of the lodges are fairly typical for the region and for the confines of the bounded case study. Using purposeful theory-based sampling methods (Patton, 2002) to gain a

better understanding of manifestations of theoretical constructs relative to the research phenomenon of environmental dissonance, it was anticipated that sampling would occur in groups of six at two different lodges. The primary factors in the sampling design for this study included homogeneity of the phenomenological experience among participants, access to participants, and the diverse interest that each individual may have as well as an assumed collective interest in conservation.

Selection of participants could not be achieved in advance of my arrival at the research site as contact information of guests was not available and arrival information was generally considered unreliable. I managed the recruitment of participants at the lodges as participants arrived. I resided either at the lodge during the study period. Guests at the lodges usually arrived in pairs and as potential participants arrived I provided each of them an orientation about my case study research and sought their interest in participation. My goal was to collect data from between 12 and 20 lodge guests based upon sufficiency of the data collected and data saturation; a final number based on the quality of data received during the data collection period. Though it was not necessary, I had a contingency to also seek participants from guests at the research camp on the reserve which is generally occupied by graduate students from Africa, Europe, and the United States as well as volunteers. I was able to secure 14 participants from the lodges.
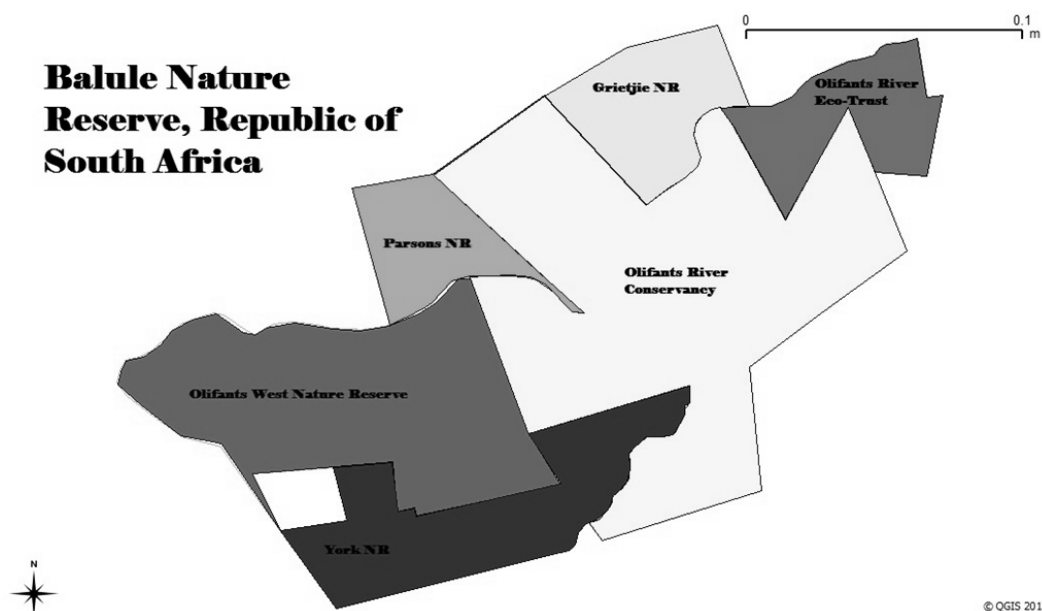
Figure 9. Map of Balule Nature Reserve sub-regions including OWNR on the far left.

Instrumentation

The primary means of data collection consisted of structured interviews using an open ended self designed interview guide following standard qualitative interviewing protocols, unstructured observations while on safari drives, and finally participants were asked to provide a written account of an event in their life that demonstrates an experience with environmental dissonance. Maxwell (2013) described using multiple methods of data collection such as using both interview and observation as they are complimentary and expansive; the multiple methods can broaden the range of different aspects to a phenomenon. Data review consisted of an examination and analysis of journal notes, field notes, observations, interview notes and recordings, written accounts provided by participants plus any other activity, environmental consideration, or dialogue that left an impression on me relative to the research questions and research objectives.

The research questions were the primary means to my data capture design and I have created them to address the central tenets of the research problem from multiple

contextual perspectives (see Figure 10). Content validity is established by the holistic

approach to examining key contextual aspects of the research phenomenon; the

development of environmental dissonances, the manifestation of environmental

dissonance, and finally the mitigation of environmental dissonance. The interview guide

built on such perspectives was used to uncover manifestations in behavior (or

perceptions) that support or deny specific theoretical constructs discussed in the literature

review (see Figure 4, p. 34). Given the triangulation of theoretical constructs and the

highly personal nature of perceptually guided behavior, I assert that this instrumentation

design was sufficient for the purpose of this case study. The interview guide I used in this

study is provided as Appendix D. Also provided is a global illustration of the interview

question framework as Appendix E.

Participants were also asked to prepare a written account of an event during their

safari experience that provided a profound *ah-ha moment* in which they challenged their

own preconceived notions about the environment and consumption. Participants were

provided a writing prompt to aid in their immediate recovery of thoughts and feelings of

their unique experience relative to the paradox, phenomenon, and propitiation of

environmental dissonance (see Appendix I).

Research and Interview Questions

The following are open ended interview questions that I used during the

interviews to solicit data for this study.

RQ1. What are the antecedents to the development of environmental dissonance

and perceptually guided consumptive behavior?

1. There are many ways to establish value for *goods and services* and two higher

    level ways of considering value is the value something provides by its mere

    existence (intrinsic value) and another consideration is the value something

    provides for the benefit of something else (extrinsic value). How do you

    consider the role of establishing intrinsic/extrinsic values in nature?

2. Sometimes I think about things like the popular debate of climate change and

    claims of how the planet is responding leading me to also think about my

    perspective on value of the environment. I question if my view is realistic and

    how it might be influenced or informed. Do you think about potential

    differences and if so how often and under what kinds of circumstances?

3. Do you experience times when you are worried or concerned about the

    consumption of natural resources (such as waste, abuse, depletion)? If so, can

    you describe sources/experiences of conflict that you have had around

    thoughts of environmental values (social, economic, political, cultural,

    educational…).

4. Describe a memory(s) you have that specifically shaped your thoughts on

    ecosystem values.

5. Describe a memory that was triggered while on a game drive that made you

    question a previously held perception of the environment.

6. Did the experience of interacting *with* nature in a protected pristine game

    reserve change your perspective on environmental values and if so how?

RQ2. How do individuals perceive and describe environmental dissonance?

7. Often time's individuals experience a state of mental conflict when

contemplating or discerning between opposing sets information or data. Such

a state is called cognitive dissonance. Cognitive dissonance can even occur

without being conscious of it and should not be confused with as a state of

confusion or guilt. An example of environmental dissonance could be for

some people the mental conflict about using plastic bags provided by the

grocery store or use recycled ones. Tell me a story about an experience you

had when you either experienced or witnessed environmental dissonance.

Describe the emotional aspect of your response to the experience.

8. Describe a daily routine that you have observed when another person did not

consider the environmental impact of their actions. Did their actions influence

your own thoughts about environmental impacts?

9. Describe what being environmentally reckless means to you and tell me how

you feel when you observe others being reckless with the environment.

10. How do you determine and describe excessive consumption?

11. Describe a feeling environmental remorse you may have had either by an

activity you were involved in or one that was witnessed.

12. Has your stay in the bush impacted how you think about the environment and

how it should be transformed or preserved?

RQ3. When individuals experience cognitive dissonance a natural response is to

remove the state of conflict which typically results in a decision process to accept one set

of information and discard the other. How do individuals manage consumptive choices

and mitigate environmental dissonance?

13. How does your cultural background influence how you value environmental conservation?

14. Describe a memory you have when a television, radio, or print commercial influenced you to consume beyond your current levels of consumption.

15. Describe what sustainable use means to you in your daily life and how you achieve it. If you do not achieve it, describe the barriers.

16. Has the safari experience changed your notion of sustainable use and if so how?

17. Give me an example(s) when you recall an event where you evaluated whether or not to consume because you perceived it to be either wasteful or excessive in some way.

18. How would you describe changes in *environmentalism* both personally and socially over the span of your life including examples of decisions you made to accommodate such change?

RQ 1: What are the antecedents to the development of environmental dissonance and perceptually guided consumptive behavior?

Context: Paradox

RQ 2: How do individuals perceive and describe environmental dissonance?

Context: Phenomenon

RQ 3: How do individuals manage consumptive choices and mitigate environmental dissonance?

Context: Propitiation

Interview Questions:

1) How do you consider the role of establishing intrinsic/extrinsic values in nature?

2) Do you think about potential differences and if so how often and under what kinds of circumstances?

3) Do you experience times when you are worried or concerned about the consumption of natural resources (such as waste, abuse, depletion)? If so, can you describe sources/experiences of conflict that you have had around thoughts of environmental values (social, economic, political, cultural, educational…).

4) Describe a memory(s) you have that specifically shaped your thoughts on ecosystem values.

5) Describe a memory that was triggered while on a game drive that made you question a previously held perception of the environment.

6) Did the experience of interacting with nature in a protected pristine game reserve change your perspective on environmental values and if so how?

Interview Questions:

1) Tell me a story about an experience you had when you either experienced or witnessed environmental dissonance. Describe the emotional aspect of your response to the experience.

2) Describe a daily routine that you have observed when another person did not consider the environmental impact of their actions. Did their actions influence your own thoughts about environmental impacts?

3) Describe what being environmentally reckless means to you and tell me how you feel when you observe others being reckless with the environment.

4) How do you determine and describe excessive consumption?

5) Describe a feeling environmental remorse you may have had either by an activity you were involved in or one that was witnessed.

6) Has your stay in the bush impacted how you think about the environment and how it should be transformed or preserved?

Interview Questions:

1) How does your cultural background influence how you value environmental conservation?

2) Describe a memory you have when a television, radio, or print commercial influenced you to consume beyond your current levels of consumption.

3) Describe what sustainable use means to you in your daily life and how you achieve it. If you don't achieve it, describe the barriers.

4) Has the safari experience changed your notion of sustainable use and if so how?

5) Give me an example(s) when you recall an event where you evaluated whether or not to consume because you perceived it to be either wasteful or excessive in some way.

6) How would you describe changes in 'environmentalism' both personally and socially over the span of your life including examples of decisions you made to accommodate such change?

Figure 10. Flowchart indicating alignment among research questions, context, and interview questions. IQ's have been abbreviated, please refer to Appendix E.

Procedures for Recruitment, Participation, and Data Collection

The following is a data collection protocol adapted from Creswell (2013, p. 148) consistent with a standard appropriate for a qualitative study using a case study approach and social constructivism framework:

1. The participant pool and site selected will be non-indigenous English speaking visitors and volunteers within the Olifants West Nature Reserve, Greater Kruger National Park who have participated in a series of game drives where extreme interaction between study participants and flora/fauna have helped to cause an emotional reaction or inform the participant on the essence of consumptive and non-consumptive uses of natural resources in a pristine sub-Saharan environment.

2. A typical homogeneous sample is a group of lodge tourists that participate in a series of game drives within the same game viewing vehicle. Such a group ranges in size between two and nine adult individuals.

3. Specific sampling sites were determined primarily by the willingness of lodge owners within the game reserve to participate in the study. Purposeful theory based sampling is expected to reveal examples of manifestations of the specific theoretical constructs discussed in the literature review of this study (see Figure 3). According to Patton (2002), the advantage of purposeful theory-based sampling is to examine the theoretical construct and its variations in the context of actual behavior.

4. I will be the sole collector of data and as previously mentioned the type of data to be collected will be observations, interviews, photographic, and

textual. Observations and interviews will include between 12 and 20 participants in order to gain depth and perspective in emerging theory. In terms of sample size Yin (2014) stated that sampling logic commonly used in determining sample size for surveys does not apply in the single case study design since it requires an element of generalization. Yin further stated that the number of participants in a single case study is therefore highly subjective based primarily on the discretion of the researcher and the scope of the study.

5. The information I foster from participants will be recorded digitally when mutually agreed and transcribed for each observation, interview, and data collection protocol. The use of manual and electronic journaling including both descriptive and reflective notes will be essential. Data will be collected while on safari game drives with participants and during private interviews with participants at the lodge. Game drive observations usually span between two and four hours; individual interviews are expected to take less than one hour each. The frequency of game drives are twice daily and typically guests stay at the lodge for three to five days.

6. Common data collection issues the researcher may encounter include participant behavior such as reluctance, lack of truthfulness or completeness of responses during an interview, openness or willingness to expose true opinion or feeling during an observation, and logistical issues that interrupt the safari experience of the participants.

7. The data collected will be electronically stored initially then transcribed for entry to a computer for sorting, categorizing, and coding. The use of a

software program Nvivo 10 is expected to greatly enhance the coding process. Software will be used to triangulate multiple forms of data and data among multiple participants. The computer assisted qualitative data analysis software (CAQDAS) program allows me to form linkages between formally disparate types of data such as audio and visual i.e., recorded interviews and satellite photos.

8. Participants will be debriefed at the end of their safari experience and provided details for follow up and provided the means to contact me with any further questions or concerns. Participants will be provided a time sensitive summary of their responses to the interview after they leave the reserve and will be encouraged to affirm or amend their comments within a specified time frame provided on the summary document. Participants will be asked if they would like a copy of the findings and or approved dissertation. Participant names and contact information will be kept confidential, no names will appear in any documents disseminated to the public, and names and contact information of individuals that remove themselves from the study or are removed by me will be removed from all stored data and documents.

9. Participants will be advised that if at any point during the study they require access to my academic supervisor, his contact information will be provided. Contact information for the Walden University Research Participant Advocate is provided in the Informed Consent form and all participants will be given a copy of that form.

Data Analysis Plan

The data analysis plan for this study was based on Yin (2014) and Patton (2002) general analytic strategy using theory based data analysis for case studies. Following the theoretical propositions illustrated in Figure 3 that indicate three specific contexts of the research phenomenon (environmental dissonance) and research objectives, the data analysis plan will be shaped to correspond with the flow and function of the findings in the literature review. My approach to managing the data analysis included two structural components, building and using a data management system as well as building and using a documentation scheme (Miles, Huberman, & Saldana, 2014). The data analysis plan flowed with the development of theory based analysis to indicate relevance and variations between theory and data collected from participants. According to Yin (2014) such a protocol will guide the case study yielding analytic priorities. Once the data was collected and compared, I attempted to "get a sense of the whole" using inductive analysis (Patton, 2002, p. 440).

The data analysis phase of this study was grounded in an inductive approach and my ability to link data collected to the theory-based propositions indicated in Figure 3. The primary methods included pattern matching, explanation building, and cross-case/context synthesis (Yin, 2014). Lastly, a general analytic strategy of applying rival explanations will be used where appropriate and included in the data analysis.

The strategy used in analyzing the qualitative data began before the interviews and observations occurred with considerable thought exercises on "files, units, and organizing" of data in the context of Creswell's Data Analysis Spiral (2013, p. 183). Next, I identified terms and themes that will likely be commonly used among the

participants as a means to test the interview questions and prompts for relevancy to the research question. Pre-coding was difficult in part due to an aversion to pre-determine outcomes. However, considering the research questions, interview questions, and how the participant might (or might not) respond provided me with a good initial strategic framework for analyzing the data. The primary data analysis strategy followed Creswell (2013) such that the central steps included coding and reducing data to themes and making comparisons of data provided among the participants. Specifically I used the Interview Guide worksheet (Appendix D) to guide the research questions and interview questions. The worksheet was only used for recording codes and themes as they may have emerged, salient or unique points made by the participant that require special attention, or emotional and physical responses that could not be recorded on the digital voice recorder. The worksheet provided me space on the left side to record descriptive observations and on the right side reflective notes about how I responded to the interaction. Similarly the Field Observation Journal (Appendix H) and the Personal Story Worksheet (Appendix I) were used to record and analyze findings from field observations and experiences. I then contracted a transcriber service that was built into the NVivo 11 CAQDAS as a matter of efficiency. Transcripts were then reviewed by me for accuracy.

Issues of Trustworthiness

Issues of trustworthiness regarding my research objectives and design are developed in the structured orientation of this study through a strict adherence to academic rigor and standards. From a practical standpoint the trustworthiness of the data and the way in which I present it with the findings in this study was established on my ability to effectively stimulate, manage, and document the data. For this study to be

trustworthy I created a mosaic of the research study in a way that is credible, transferable, dependable, and confirmable.

Credibility

In this qualitative study an important foundation was to create a mosaic of the research that is credible to all stakeholders. To achieve credibility I recorded, reviewed, and relayed all relevant data in ways that are understandable, plausible, and engaging but only to the extent rich and meaningful data was collected. I was cognizant of slipping from analysis to embellishment so as not to create a mosaic that would not be representative or credible to all concerned.

Triangulation was a major component of this study and added substantially to my efforts in creating a credible research opportunity and outcome. I triangulated among theory based constructs, among contextual relations within the research phenomenon, and I triangulated the responses from participants both articulated and observed. Through detailed and structured triangulation, linkages were easily understood and made relevant to the research background, problem, and questions.

Throughout the course of the data collection and analysis process, I continually sought rival or alternate explanations to discoveries and insured they were considered in the findings and conclusions of this study. It was critical in my view to the credibility of this study to consider all relevant explanations that might influence the mosaic.

Transferability

Certain aspects of this study will likely be transferable, but generalizability is not a key factor in this case study although I implemented standards normally prescribed to address transferability. Such standards include fully describing the participants and study

areas so the readers can ultimately determine transferability (Miles, Huberman, & Saldana, 2014). Also a key aspect to providing the reader the means to determine transferability of the mosaic was for me to provide a clear understanding of all potential limitations throughout the study including assumptions and developments unique to the bounds of this case study. Perhaps the most transferable aspect of this study will be the findings of the theory based constructs relative to broader aspects of the research questions and phenomenon. As this is a case study, in my view the results are expected to allow the reader a greater understanding of a narrowly defined research problem that will stimulate future research using different methodologies for the direct purpose of providing generalizability. Alternatively, in this study my focus was to provide a mosaic where the pieces fit in a way that provides the reader an experience they can in some aspect or context relate to.

Dependability

The dependability of the findings and conclusions in this study again relied on my ability to articulate the research objectives and indicate a clear path to discovering key aspects of the research phenomenon of environmental dissonance in the context of a bounded case study. Triangulation of research problem context, theory-based constructs, and research questions were a key factor in creating clear pathways to establishing dependability. To provide a bright and engaging mosaic I was clear about research design features such as the research questions and how they relate to the research problem. I was clear about my role as the researcher in the process of collecting data. I was be able to draw the participants into the study questions by providing them the means to relate to the research through their own lived experiences drawing correlations to the theory-based

constructs of the research. Said another way, the dependability factor in my view was

substantially correlated to my ability to draw the participant into the theory-based

construct in a way that can be easily achieved by comparing the construct to some aspect

of their life that was relevant to them.

Reliability of data is paramount to achieving dependability of the outcome from

this case study. Data collected from interviews and observations were continually

checked, to the extent possible, for bias and other influential factors that may render the

data undependable. Data collection forms have been created with a column providing a

reminder for me to note any such conflict.

Confirmability

To achieve a high degree of trustworthiness for the input, throughput, and output

of this study beyond the classic notion or standard of *good data in – good data out* I made

every attempt to recognize and minimize bias on my part. The essential issue of

confirmability is the extent to which the researcher is neutral and free of unacknowledged

bias that might influence the study (Miles, Huberman, & Saldana, 2014). The research

design I created including numerous graphics to help illustrate key aspects of the research

process provide the audience of this study clear linkages within the mosaic which allow

both a sequential and systems view of the study including not only the main features of

the study but also the background and potential future use of the findings. Again, I rely

heavily on the metaphor of a mosaic to fully engage the audience so there will be limited

prospects for questioning my role as the researcher and undue influence. In this study

confirmability is likened to the principle of transparency and will be achieved through

laborious research design, providing clarity, indicating linkages, expression of academic

rigor and professionalism, and declarations of bias, potential bias, and conflicts of interest.

Ethical Procedures

This study has been prepared using the guidelines provided in the Walden Research Ethics Planning Worksheet. I attained approval by the Walden University Institutional Review Board on data collection methods and human participation prior to initiating any field work. Participant recruitment consisted of an overview of the study including their role, my role, details of the informed consent form, and how data will be captured and secured. The purpose of the presentation was to insure each individual had a full understanding of their rights as a participant in this study. The presentation was given to guests shortly after they arrived at the lodge. Potential participants were provided a copy of the informed consent form and sufficient time was provided to each person to consider their participation and to ask for clarifications.

All interactions with participants were conducted within the strictest compliance of university standards to include full disclosure to participants on the purpose and use of the study. All proper documentation such as a signed informed consent form (see Appendix C for informed consent form) were secured prior to engaging with field work. Further, I acknowledged no support for covert or deceptive data collection methods. With regard to participants, no conflicts of interest or power differentials were expected and no participant was compensated for their participation. Lastly, I acknowledged the need to minimize bracketing by overuse or influence of personal experiences. Bracketing by either me or the participant can discourage free and honest flow of data.

Summary

In this chapter I have provided a detailed design of the ways in which I achieved an efficient and effective exploration, through case study analysis, of the research phenomenon – environmental dissonance. A mosaic including the rationale for choosing the research site in the Greater Kruger National Park, recruiting non-indigenous English speaking participants, and establishing rigorous methods for gaining maximum benefit from the data collection process was provided. Linkages among key aspects of this study were provided so that clarity is achieved by the audience with respect to the research design methods. I provided clear pathways to trustworthiness of the methodologies I chose for this study by establishing a relationship for the reader between articulating theory-based constructs and relevance to research questions. Further I established trustworthiness in the mechanical aspects of this study by providing cross contextual relationships among three specific aspects of the research phenomenon.

The purpose of this chapter was to establish the depth and breadth of scholarship in this study, my role and limitations as the researcher, and to provide the reader with a comprehensive impression of academic and pragmatic scope. It is further the purpose and mission of this segment on methodologies to assure the reader that data captured was done so in a way that could be further articulated in the following chapter. Based on the procedures outlined in this chapter, the following chapter will provide a comprehensive detail of my findings.

Chapter 4: Results

The purpose of this qualitative case study was to understand the breadth and depth of environmental dissonance among visitors to the Kruger National Park. Environmental dissonance has been defined as a mental conflict between two sets of information. Environmental dissonance is framed by perceptually guided behavior involving consumption and choice-making between human needs and wants. Further, the purpose of this study was to explore environmental dissonance of individuals and how such conflict relates to consumptive behavior before and after participating in a multisensory experience in a pristine African sub-Sahara bush environment.

The overarching research question I posed in this study was: What are the social processes that lead people to endorse responsible stewardship of the environment but choose consumptive behaviors that produce harmful environmental effects? The following research sub-questions were designed to shape the research problem into a discoverable, unoffending, and relevant mental scenario to generate data from participants regarding their personal experiences with environmental dissonance and to discover interconnectivity among factors contributing to consumptive behavior. Research Question #1 was designed to address the first of three contextual aspects of environmental dissonance, the development of conflicting data sets. I examined the applicability of value and memory theoretical constructs to the antecedents that perceptually guide consumptive behavior.

RQ 1: What are the antecedents to the development of environmental dissonance and perceptually guided consumptive behavior?

Research Question #2 was used to address the manifestation or experience of environmental dissonance which is the second contextual aspect of environmental dissonance. Using planned behavior theory and conspicuous consumption theory, I examined how participants perceived and articulated environmental dissonance.

RQ 2: How do individuals perceive and describe environmental dissonance?

Research Question #3 pertained to the attempt to reduce or mitigate dissonance, the third and final context of environmental dissonance. In this context, I used decision theory and sustainable consumption theory to understand how participants managed environmental dissonance.

RQ 3: How do individuals manage consumptive choices and mitigate environmental dissonance?

The remainder of this chapter was organized to provide a review of the research setting including conditions that influenced either me or the research participants at the time of the study. Specifically, I provide a description of the demographics and characteristics of the participants relevant to this study, the procedures for collecting data including variations or anomalies from the protocol indicated in Chapter 3, data analysis, evidence of trustworthiness, and finally a summary of the study results.

Research Setting

This study was conducted in cooperation with Ezulwini Game Lodges at two of their facilities located on the Olifants West Nature Reserve, Balule Nature Reserve, Greater Kruger National Park, Republic of South Africa. During my six-week stay at the two lodges, Billy's Lodge and Ezulwini River Lodge, I recruited 14 individuals to participate in this study, and all 14 agreed. I interpreted this recruitment rate as an

encouraging indication of interest and the relevance of the subject matter to the

candidates. Each participant was booked at Ezulwini for a five-day safari package which

allowed me ample time to methodically schedule introductions, interviews, and

observations. Generally recruitment and data collection were conducted with the

following schedule:

- Day one: Introduction to study.

- Day two: Consent to participate & game drive observation.

- Day five: Interview & collection of questionnaire.

Ezulwini Game Lodges are considered luxury lodges, and are situated deep in the

sub-Saharan African bush also known as the *Lowveld.* The lodges are located near the

westernmost boundary of the Greater Kruger National Park. The lodge facilities were

developed in traditional African-style construction, and include all modern comforts and

amenities. River Lodge is a refurbished hunting lodge with remnants of hunting

memorabilia and folklore. Billy's Lodge is a relatively new facility, but also maintains

the traditional African-style "rondavel" suites (a round building structure with thatch

roof) as well as contemporary luxury suites. The lodges are relatively tightly confined to

achieve minimal geographic sprawl, and both lodge properties are ringed with an

electrified "elephant fence." There is no physical barrier to prevent apex predators such

as lions and leopards from entering the grounds thus requiring all guests to be escorted

during hours of darkness to and from their rooms and the main lodge. This detailed

description of the physical setting is important to note as it is a substantive part of what I

felt provided the pristine natural environment relevant to the discovery of the research

phenomenon and is therefore important for others to consider, should this study be

replicated. All interviews and questionnaires were completed onsite at one or both of the lodges. Guests typically spend their first two nights at one lodge and the following three nights at the other lodge.

Additionally, the research setting included afternoon game drives where I acted as participant as observer to record any relevant reactions by the participants while out in the bush on safari. Game drives were conducted in special-purpose open Land Rovers for maximum viewing benefit, and the evening drives normally departed the lodges at 4:00 PM and returned to the lodge at 8:00 PM. During the drive and usually at sunset, the drive was interrupted for a "sundowner" to provide guests an opportunity to enjoy a drink and snack while walking within a safe distance from the vehicle. Again, the detailed description provided here is important and relevant to establish visualization for the reader of the total natural and wild experience of the research participant. I provide greater detail later in this chapter.

The interviews, with one exception, were conducted in private yet in an open environment at the end of a sky deck or game viewing platform with tables, chairs, monkeys and an occasional elephant foraging nearby. The one exception was made due to inclement weather, and I conducted that interview privately in the wine cellar at Billy's Lodge. The questionnaires were also completed in private, and I collected them on the last day of the participant's stay at the lodge.

The space I primarily used for administrative work and reflection was the private chalet I resided in during my stay. Internet connectivity was challenging at times, which forced me to make alternate plans with respect to work routines. Lastly, no substantive changes were required to any of the plans outlined in the research proposal.

Demographics

The participant pool for this case study was limited to visitors of the Greater Kruger National Park in the Republic of South Africa, and specifically those visitors that booked accommodations with Ezulwini Game Lodges located on the Olifants West Nature Reserve. The participants were not selected in advance, but instead were recruited shortly after their arrival at the lodges. When I determined that potential recruits fit the criteria for participation, I then invited them to be part of this study. The target sample size for this study was a minimum of 12. I decided the final number of participants based on my subjective determination of reaching data saturation. I invited 14 participants, and all 14 agreed and signed the consent form. No participants withdrew from the study, and only two participants indicated early signs of reservation about their participation. The two reservations were grounded in the feeling that they were on vacation and concerned that the study would impede or distract from that purpose. Both reserved individuals became very enthusiastic about the study as they engaged in the environment and further considered the implications of my research.

All 14 participants were U.S. citizens, and all but one resided within the continental United States. One was a U.S. citizen who was a permanent resident of Italy for over 20 years. The majority of participants resided in the Northeast (4) and Midwest (4) regions of the United States. The remaining participants were from the West (3) and the South (2). Perhaps more relevant to this study is that 64% (9) individuals stated they lived in urban communities, 14% (2) lived in suburban communities, and 22% (3) lived in rural communities. The gender makeup of the participant pool was 57% female (8) and 43% male (6). The largest generational group was from Generation X (8 participants

between the ages of 35 and 50 at the time of this study), followed by Baby Boomers (3

participants between the ages of 51 and 70), the Greatest Generation (2 participants older

than 70), and lastly a Millennial (1 participant between the age of 18 and 34). The

educational level was the most interesting demographic finding in this participant pool.

The pool was highly educated with 43% (6) holding a masters degree, 36% (5) a

doctorate, one had a bachelor's degree, one had two years of college, and one was a high

school graduate. Lastly and perhaps most relevant to this study, of the 14 participants, 10

indicated they had no prior wilderness experience.

Data Collection

Triangulation of data was a primary strategy for completing this study. To that

end, the data collection process included field observations, private interviews, and an

open-ended questionnaire referred to as the Personal Story Worksheet (Appendix I). I

designed each form of data collection in this study to invoke distinctly different levels of

cognition and articulation of participant's thoughts and behaviors. For example, I

assumed that observing reactions to wilderness encounters would provoke different kinds

of responses than those from an interview conducted in the safety of game lodge

facilities. Similarly, it was my intent to conduct the semi-structured interviews in a

wilderness environment using open ended questions to stimulate conversation that would

reveal the participant's personal perceptions of the environment and their behavior

toward it. Likewise, I expected that an open-ended questionnaire would stimulate

potentially deeper consideration of the subject matter enhanced by the physiological

exercise of transmitting thoughts to pen and paper.

Fourteen eco-tourists participated in all three elements of the data collection strategy. I greeted each person upon their arrival at either River Lodge or Billy's Lodge at which time I told them who I was and very briefly why I was residing at the lodge. I purposely kept my initial comments to a minimum in recognition of the potential for travel fatigue and anxiety. I provided each participant a packet of information that included a one-page introduction of me and the study, a consent form, and the personal story worksheet. I asked that each candidate review the package after they had time to check into their rooms and relax. My hope was that each candidate would review the package, ask questions, and sign the consent form prior to the afternoon game drive on the day of their arrival or no later than the afternoon game drive of the following day so that I could observe their initial reactions to the wilderness experience. All 14 did in fact return the signed consent forms so that I could complete all 14 observations within the first 24 hours of their safari experience.

In recognition of my own anxiety and learning curve during the initial data collection phase, it is noted that at the beginning of my first participant interview, the interviewee offered constructive criticism as to my initial approach and introduction. The participant advised me to slow down the introduction and pitch to participate in the study as it was a bit *deep* to fully consider what I was saying at a moment when travel anxieties were at their highest. I had already noted this suggestion and had already changed my introduction strategy of trying to get signed consent forms upon arrival to within 24 hours after arrival. I determined there would be no substantive loss of data whether I observed the first, second, or third game drive of the participant. On the other hand, the risk of a high pressure recruitment strategy would very likely dissuade participation or in the least

taint feedback. Interesting to note, all 14 participants stated that their participation in this study enhanced their safari experience.

The management of data collection was achieved specific to forms of data capture and individual participant. For the non audio data, an indexed portfolio was used to organize participant feedback that provided a separate section for each participant which was coded EG01 through EG14. All paperwork including consent forms, notes, post interview summaries, and completed questionnaires were then secured in the appropriate sections. Additionally, all paperwork was immediately scanned to PDF files and stored on my laptop in secured files created for each participant. Audio recordings were kept in three different file locations on my laptop in the event a file got corrupted. All audio recordings and electronic files were backed up on the Cubby cloud in the event of catastrophic equipment failure, theft, or loss. Lastly, no substantive deviations from the data collection plan in chapter three were noted.

Field Observations

In the role of Participant as Observer (PaO) I anticipated that field observations would provide immediate indications of outward emotional expressions of participant perceptions and behavior toward the environment and secondarily cause internal questions or cognitions of paradoxical relationships between the pristine wilderness and their consumption of it. In order to conduct the field observations, two game drives were available, a morning game drive that departed the lodge at 6:00 AM and an evening game drive that departed the lodge at 4:00 PM. Based on my experience with lodge guests and game drives I chose to conduct the field observations exclusively during the evening game drives. It was my experience that ecotourists were typically much more sedate in

the early hours and therefore the evening drives would produce a higher degree of participant interactivity and energy in general. During each of the observation sessions I did interact with participants and other individuals on the drives offering information about specific flora and fauna of the ecosystem and about issues of animal poaching and anti-poaching efforts on the reserve. At all times I reminded myself of the potential to lead thought processes and bracketing of conversations with the participants. I remained constantly vigilant of the potential for me to bias participant feedback and that my purpose was to observe their reactions and to minimize my participatory role.

The process I used to record my observations was simply to sit in a strategic spot in the game viewer (Land Rover) when available so that I could see and hear participant responses and not interfere with preferred seating of other guests. I took notes using a steno pad and pen; on the left side of the steno paper I wrote key notes about participant reactions and on the right side I wrote reflective notes about what I observed. It was not possible to take extensive notes during the field observations due to the nature of the roads and rougher *off roading*. The roads, often jeep trails, were very rough making it very difficult to write extensively therefore I made extensive use of jotting down keywords then completing the note taking when the vehicle stopped. At about midway through the evening game drive it was customary to stop the vehicle and allow guests to stretch their legs and enjoy a drink and snack during the sunset. This African game drive ritual is called the *sundowner*. During the sundowners I was able to interact more directly with each participant and further build rapport which was helpful in the lead up to the interview session to be conducted in a few days time.

With two exceptions only one field observation was needed for each participant. In two cases I decided to conduct a second observation because of the lack of feedback initially provided. After conducting each field observation I immediately returned to my chalet and completed the note taking process. I used the notes from my steno pad to retrace the field observation and provide greater detail to what I had observed and reflected upon during the game drive. Generally the field observations yielded less data than I anticipated in terms of emotional or physical response to the environment but offered quality supplemental data.

Interviews

All fourteen interviews were conducted onsite as indicated. The plan for conducting interviews was to first provide the participant with as much time in the bush as possible prior to the interview without risking the loss of an interview due to unforeseen scheduling or other circumstances that would not permit enough time prior to the departure of the guest. The target was to conduct each interview on the fourth or fifth day of a five day safari guest package. Guests typically departed the lodge and reserve on the morning of the sixth day after a morning game drive and breakfast. The majority of interviews were conducted on the fifth day with one occurring on the morning of the sixth day. Due to the nature of guest arrival dates, scheduling the observations and interviews was challenging, but manageable. I was able to conduct all interviews on the preferred rotation.

Interviews were conducted outdoors on the game viewing platform at both River Lodge and Billy's Lodge with one exception due to inclement weather. One interview was conducted indoors in the wine cellar at Billy's. Conducting the interview indoors did

not influence the interviewee in a manner contrary to the other interviewees. Interviews were all conducted after the morning game drive and during a period between breakfast and lunch generally between 10:00 AM and 2:30 PM. One of the interviews was briefly interrupted when a grazing elephant passed under the game viewing platform.

The content of the interviews centered around three primary research questions representing the development, manifestation, and mitigation of environmental dissonance. Using an interview guide during each interview, all three research question were explored using a total of 18 interview questions designed to stimulate conversation with the interviewee about each of the three main themes of the research phenomenon. Only one interview was conducted per participant and the length of interview sessions varied between 35 minutes and 124 minutes with the average session being 63 minutes long. Each interview was recorded using a Sony voice recorder and auxiliary power was provided in the unlikely event of electrical failure which in fact did occur but not during an interview. Immediately following each interview session, I transferred the audio files from the recording device to multiple locations on my laptop. Additionally, after each interview, I completed a post interview summary indicating highlights of the interviewee responses and potential follow up questions. As stated in the consent form each participant signed, I provided a copy of the transcribed interview to each participant and asked each person to review and reply with modifications to existing statements and or additional comments they would like to offer. To date, no changes or additions have been supplied by any of the respondents.

Questionnaires

The final component of the data collection was the open ended questionnaire referred to as the Personal Story Worksheet. Using the questionnaire, I solicited feedback from participants by posing one probing question for each of the three thematic areas of this study, the development, manifestation, and mitigation of environmental dissonance. I advised participants to review the questionnaire and take time at the end of each day of their stay to reflect on the questions and complete the form by the end of their safari. To complete the questionnaire and add depth and richness to the exercise, each participant was further asked to provide a digital photo of something they experienced in the bush that provided a visual representation of an answer to one of the questions. By the end of the safari all 14 participants provided completed questionnaires, but none had provided photos. An additional request for the photos was made when copies of interview transcripts were emailed to the participants. To date only five participants have provided a photo.

<div align="center">

Data Analysis

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My aim in this section was to provide a description of the codes I used in the analysis of this study. The method I used to develop codes derived from a combination of summative and conventional content analysis. Represented are major categories and themes that emerged during my review of the participant feedback. Further, I have illustrated specific codes from all 14 participants and provided a sample of relevant quotes that indicate support for the codes.

There were three goals for the data analysis component of this study. The first goal was to find relevant pieces of information revealed in the participant feedback that

would paint a mosaic of the research phenomenon from the collective lens of the participant pool. Further a goal of the data analysis was to formulate a mosaic of contributions to the theories relative to the contextual themes of the research phenomenon. Lastly, in order to create a triangulation of data analysis, in terms of process, a goal was to provide a mosaic of alternate explanations for the research phenomenon that would provide avenues for future research. To determine initial codes, themes, and categories, I used conventional content analysis to create codes that defined the research phenomenon in relation to the research questions well; I then used summative content analysis to create codes that would help to better understand the context of the phenomenon in which the codes and themes were meant to identify. My strategy was an effort that assured maximum efficiency of the coding process.

I analyzed the data using a modified framework of data spiraling the various forms of data, (Creswell, 2015), cross case analysis of each participant (Yin, 2015), and thematic and categorical cycles (Miles, Huberman, and Saldana, 2014). The research findings are illustrated in this chapter using a tiered systematic process of cycling from detailed feedback (first cycle) to a broad view of themes (third cycle). The first cycle of coding began with the analysis of themes related to each of the three primary research questions and interview prompts. The second cycle of analysis involved the codes relevant to theoretical constructs used in this study. Finally, the third cycle of analysis involved exploring codes relevant to each phase of the research phenomenon. Using NVivo 11 computer aided qualitative data analysis software (CAQDAS) to inductively organize and code the participant feedback for each cycle of analysis; transcripts of each interview were scrubbed for relevant data. My aim in this process was to inductively

move coded units of information gathered from the participants to larger representations

or mosaics of themes relevant to the research phenomenon and problem. The following

table represents codes developed using content analysis.

Table 1

List of Codes Used to Analyze Data

Phase of coding	RQ #1	RQ #2	RQ #3
Cycle #1 Codes	Personal values*	Perceived control	Behavior
	Culture*	Conservation*	Choice-making*
	Development	Waste*	Sacrifice
	Antecedents	Consumption*	Saving
	Perceptions*	Supply and demand	Repurpose
	Mentorship	Market forces*	Recycle
	Learned behavior	Social norms	Impact*
Cycle #2 Codes	Intrinsic value	Conspicuous consumption	Self determination
	Extrinsic value		Decision & Choice
	Episodic memory	Planned behavior	Sustainable consumption
	Nostalgic memory		
	Basic human needs		
Cycle #3 Codes	Paradox	Phenomenon	Propitiation
	Value systems	Pragmatic experience	Perceptually guided behavior

Note. Codes identified with an asterisk represent themes where all participants provided feedback. Additionally, except for the theme of climate change indicated in Table 2, all codes identified with an asterisk received the highest number of references during the interviews.

Codes for Research Question #1

Codes for the question, "what are the antecedents to the development of environmental dissonance and perceptually guided consumptive behavior" produced unanimous response codes around *personal values, culture, and perceptions*. Generally participants used these responses as a means to understand and articulate antecedents with respect to their own experience and notions of social norms. Personal values were referenced in this study 90 times and predominantly discussed in the context of childhood memories, family values, and teachable moments with the respondent's own children. Examples are, "I have those type of values."; "I mean, those type of values-- the environmental things"; "I don't know if it changed my values. I've always loved nature"; "Oh my God, this is wrong, and it's teaching the wrong values to my children."; "I'm German and English and that is a part of my culture that my parents-- probably just my parents' family values that got instilled from them."; "That taught me a lot of values and a lot of respect around hunting and what you take versus what you don't. You take what you're going to use."

The notion of *culture* shaping or establishing antecedents to environmental dissonance was difficult for most respondents to articulate in relation to their own perceived dissonance, but all of them made references to how their own *culture* likely played a role in the development of their worldview on environmentalism and by extension antecedents to consumptive behavior. Examples of such references are, "We did so many things in nature that that was really a culture that my parents instilled in us."; What's great about these accommodations, for example, is that they are very true to the culture, to the environment, how it's created, the thatch roof and all that."; "Am I really

thinking about the environment too much? Not really. Yeah, I just try to be-- don't be a jerk about things, but that was probably the extent of how my immediate culture influenced my decisions about the environment."; "With our surplus of resources that we've had for so long in our culture everything is expendable and we forget about the fact that it's not."; "So, I would say yeah, being in other cultures has made me sensitive, where as my culture had desensitized."; "There's just this awareness for them, but they didn't grow up in that status culture of things.".

Perception, as a code, was an effective theme that emerged from conversation about personal awareness of predisposed biases of the participants toward environmental dissonance. Respondents discussed how their environmental notions prior to their safari experience were markedly different than what they experienced after the safari which could indicate a potential paradox of cognitive data leading to environmental dissonance. Examples of quotes that support using *perceptions* as a code are; "Along with a feeling that Africa is so vast that it's impossible to stop poaching and that eventually the poachers are going to win. That's the perception I brought to Africa. As I was moving around here-- well no, I've got to say, not quite that dire."; "So it's given me kind of a different perception. And then living in a city with not really a lot of green space. Now I say, "Oh, man, it's beautiful." when we get out of the city. And I hadn't maybe thought about that before because I've been surrounded by it growing up or for most of my life. And so now it's kind of there's this appreciation, it's like, Oh, isn't that beautiful? Because you don't see it as much."

Codes for Research Question #2

Questions seeking to describe how individuals perceive and describe environmental dissonance solicited the greatest number of total responses. The codes that I found most prevalent and illustrative of how respondents understand the manifestation of environmental dissonance included *consumption, market forces, waste, and conservation*. Using NVivo, I found that *consumption* was referenced 111 times, more than any other code in this study.

Participant statements relevant to the code of *consumption* revealed examples of environmental behavior in the following quotes, "For me, the excessive consumption that we have around our house is going to the grocery store. We buy a lot of things that end up rotting before we even eat them, so I feel guilty about that constantly."; "I don't believe in heavy consumption of anything."; "Your house just continues to fill with all this stuff you don't need. I'd just call that reckless consumption."; "You get rid of a third of the rainforest there, and a third of the rainforest here. Pollution is going to be worse and worse. The oxygen, CO2 consumption is going to be changing. Our ozone is going to be worse. We'll be getting diseases - more and more diseases - because of the loss of the ozone."; "And I just think there's so many people and how much the consumption there is really hard to fathom and how much of it people are throwing away or people are doing."; "I did (worry about consumption of natural resources) during the Gulf Wars, and the impact that the idea that maybe we would run out of natural resources, like oil or something, but that-- not so much nowadays, I just don't because I still feel like it's such an American thing to not-- again, in my little suburban life".

I used *market forces* as a code to analyze the manifestation of environmental dissonance which resulted as a top tier code and captured statements made by all study participants. The following are a few excerpts from the interviews that support the theme of *market forces* and the influence *market forces* had on participants notion of how environmental dissonance manifests, "Colorado where they're trying to start mining rare earths. In the meantime, China's going around the world buying rare earths. They are cornering the market on rare earths. This is serious stuff. So, to begin with, just our national survival is dependent on having an appreciation for this, and having certain independence. The U.S. used to be, I think, almost independent in terms of rare earths and now we're totally dependent on others."; "We could sell 100 houses if they were on the market today, so let's get them up and sell them. People are looking, they need a place to live, and they're just kind of filling that need."; "Any natural product or natural resource that is just over-- say, there's a market excess, there's a surplus on the market because somebody saw their business as capitalized whatever it is, whether you're making cars, or it's steel, or it's rubber, or it's petroleum, or houses and it's made out of wood, lumber, and diamonds, it's jewelry, gold or whatever it is, to an excess, to where there isn't that return that they're envisioning or anticipating. It comes back to still the depletion of whatever resources went into that. Then it becomes a business decision or organizational decision that they either reduce the price, scale back, put on discount. Then you go, "That's kind of a waste." It has raped the countryside of its resources, and now they're not moving as quickly, and yet there's still this harm done."

Codes for Research Question #3

The question of how individuals manage consumptive choices and mitigate environmental dissonance inspired dialogue with participants that led to the most often referenced codes of *choice-making*, and *impact*. Discussions *of choice-making* were generally related to consumption and often time's specifically wasteful behavior. The following are examples of participant quotes that support the code of *choice-making*, "I have grocery store anxiety all the time. Organic versus non-organic versus what's the right choice. Is it the right choice? Is either of them the right choice?"; "And I know that soon after our last trip, it's only been in the last few years that I actually have this moment, and then, it's not about guilt. But I always have this moment where I'm like, "I should make a better choice even if it's a little bit more trouble, it's not that big of a deal." Like that recognition of a little can go a long way whereas I used to think I don't because what doesn't matter, what impact can I have? That something that has changed for me, for sure, where I just-- sometimes, I catch myself and I'm like, "All right, let's buy the more eco-friendly detergent," kind of thing for me."; "Here I think, if I had a choice, I'd prefer a safari and I would limit zoos because what that does is take them out of the natural and put them into a more constrained, limited--artificial environment."

The code *impact* also rated high in terms of total number of times referenced. The following are examples of how participants felt human impact on nature influenced their thoughts on mitigating environmental dissonance, "Also, I'm like, "Okay, let's use stainless steel instead of plastic," all those different things so that we can all have an impact on the environment, and that's where I need to work harder with them."; "I'm able to provide different things for my kids which has a bigger impact on the environment.

Like having four kids, we have three vehicles, and we have snowmobiles, and we have all these things that have a big impact on the environment."; "Like the global warming thing, it's kind of-- you look at history, there's been times where the icecaps have melted and then came back. So I think a lot of that has a natural process, too, that we may or may not be able to impact. We have to impact it globally, which I don't think we'll ever make a significant dent in that."; "But I know there's different locations that they now charge you for the plastic and stuff like that, which I think is a good impact because then you're less likely to forget your bags."; "Okay, these are the natives that live here and grew up in this environment and yet they're destroying their own environment without any concern. That was a big impact on me. This experience will probably reinforce the things I already know I should do more at home."; "I'm like "Okay, you guys want all this stuff and I'm trying to buy organic stuff." But then on the other hand, it has a negative impact too because you've got to go to the grocery store more frequently."; "But it's the technology, they're just-- the technology is advancing exponentially, but the technology to repair these things is not. They're disposable, just like you said, which impacts our environment even more."; "And then, you can't do too many things in life where somebody doesn't say, how is that impacting the environment? Whether it's the car you drive, the food you eat, the paper versus plastic in the grocery store, whether you put in solar panels or geothermal?. All these things say, "How is that going to impact the environment?"

During the first cycle of coding the data, themes emerged that were not anticipated. The emergent themes are listed in Table 2. As indicated, no new themes emerged concerning the development of environmental dissonance; new codes emerged only for the manifestation and mitigation of environmental dissonance.

Table 2

Statements Aligned with Emergent Codes

Phase	Paradox	Phenomenon	Propitiation
Emergent Codes		Health	Environmentalism
		Pollution	Interaction with nature*
		Product shelf life	
		Climate change*	Government regulation
		Public and private interests	Partisan politics
		Ecosystem interdependency	
		Guilt	

Note. Codes identified with an asterisk represent themes where all participants provided feedback. Additionally, except for the theme of climate change, all codes identified with an asterisk received the highest number of references during the interviews. Climate change ranked seventh in the context of environmental dissonance manifestation related codes.

 Climate change was a code that emerged during the analysis, but I was surprised that it was limited to a total of 29 references from all 12 participants combined. The following quotes are examples of feedback provided regarding *climate change* in the context of manifestation of environmental dissonance, "Like having four kids, we have three vehicles, and we have snowmobiles, and we have all these things that have a big impact on the environment. But I do think that there are natural climate changes that will occur regardless of what we do."; "Because I'm a runner, I'm out and I'm watching all the

animals change, and the environment change. And I'm like, "Oh my gosh, this is changing the whole ecosystem here if this warmth continues."; "Maybe this is not global warming, and maybe the other guys are right and that this is just the way it's happening." So, I don't know what to believe now."; "I think it's so hard to know or it's such a guess to say whether we were causing this climate change or whether it's natural. And we have such-- we have such a want, a need, to fix things sometimes or save them."; "climatologists and folks that are arriving at conclusions on what's happening with the climate are doing it with the information that they have--available."

Following the codes of *personal values and consumption*, the code *interacting with the environment* emerged in relation to Research Question #3 during the coding process and rated the third highest mentioned theme in this study with 80 references. The following quotes regarding the code *interaction with the environment* exemplify the influence of being in a wild and pristine natural environment had on the way in which participants thought about pro-environmental choice-making. Participants stated, "I've had a strong feeling of keeping things clean and not destroying as much as possible. But yeah, going out on these game reserves, it's just like, God, this is all nature."; "When I went on the game drives originally, you have a whole different view of what it's going to be like. I didn't know what to think, but then it was like, "Wow."; "And then, just on going on these drives, thinking of how privileged I am to go on these drives, and I'd love to bring my kids. Probably won't for several years, if we do. But is it going to be the same?"; "Well, I just like to see the natural habitat versus a zoo. The animals are doing what they want to do, eat when they want to and move around and find the water. I don't want to stunt them. Why should we, as humans, control them?"; "Our reefs are dying

because of pollution. We're losing different species of fish. I know we're talking general, but this is my life. I love to scuba dive, and I see this. And I think our world is changing too fast, and we're not taking care of the world."; "I love the greenness, and all of a sudden, "Jesus, that just jumped out on us." A giraffe came out in the middle of nowhere and we had to stop. I like that. I like that feeling of surprise."; "The thing about summer out here in Africa and everything is so harsh, but you can instantly see if one thing is removed or something changes, like right now with the drought and stuff, now has a wonderful way of adapting. So there's that, but just removing one thing from it or looking at it, you see the delicateness of it and it's interesting. I guess I didn't really actually think about that until now, but you just look at the smallest little thing and it's like, wow. You just remove it and you're not--The whole thing's going to change." "But I think here, it's so much more apparent how that ecosystem works because you see it and it's right there."; "…you just think, oh my gosh, how--Everything's connected in amazing ways that we never-- that I, speaking for myself, never fully appreciated until I spent some time here."

I further analyzed my coding structure and organization using an iterative process to frequently check the relevance and efficacy of the data analysis process. As I read through the interview transcripts I conscientiously reviewed the categories of codes against the thematic nature of the research phenomenon. Except for interview feedback regarding Research Question 2 during the second cycle, the number of coding references followed the pattern I anticipated which was to receive a decreasing number of references per code as the analysis moved from cycle one to cycle three. Table 3 reveals a deficit of responses collected thematically during cycle #2 regarding the phenomenon or

manifestation of environmental dissonance. The following table represents the total

number of statements provided by the participants during the interviews that align with

each cycle of analysis and the corresponding phase of environmental dissonance.

Table 3

Statements Aligned with Phases of Environmental Dissonance Codes

Phase	Paradox	Phenomenon	Propitiation
Cycle #1 Codes	299	538	373
Cycle #2 Codes	125	84	173
Cycle #3 Codes	92	133	112

Discrepant Cases

Feedback provided by the participants did not reveal any substantive

discrepancies with respect to the collective response. Similarly, no feedback was

provided that was considered counterproductive or disingenuous. Only one participant

emphasized a propensity to regard economic development as a higher priority than

general considerations of ecosystem health but that same participant (EG10) provided

substantive feedback relative to the application of nostalgic memory and learned

behaviour on ecosystem values. All participants enthusiastically engaged in all aspects of

the data collection process with one moderate exception; only five participants provided

digital photos as a part of the personal story worksheet exercise. Only two of the fourteen

participants expressed initial reluctance to participate however, both enthusiastically

engaged as they learned more about the study and had time to consider the implications

of their participation on their safari experience. Both reluctant participants commented that participation in the research study added value to their wilderness experience.

Evidence of Trustworthiness

Credibility

Relative to the data collection and analysis phase of this study it was a priority to create a mosaic of the research that would be credible to all stakeholders. To that end I was meticulous about the way I recorded, reviewed, and restated all data provided by the research participants. I insured that all data used in this study was understandable, plausible, and engaging. During this phase I kept myself cognizant of avoiding unintentional embellishment of feedback.

Triangulation was foundational in creating a credible research opportunity and outcome. I used triangulation among theory bases constructs, contextual relations within the research phenomenon, and among the responses/observations from/of the participants. Triangulation also made cross case analysis more meaningful among the participants and linkages easier to identify that were relevant to the research background, problem, and questions. Throughout the data collection and analysis phase triangulation provided a multi-dimensional strategy to identify rival or alternate explanations to the research questions.

At the end of the data collection phase each participant was provided copies of their interview transcripts in order to provide an opportunity for each person to validate and or elaborate on what was transcribed from audio files to text. This general framework supported the credibility of the themes that were established and their relevant findings. No adjustments to the credibility strategies stated in Chapter 3 were required.

Transferability

Aspects of this study are likely transferable but as a case study the findings are not generalizable to a broader population. In support of achieving transferability, I fully described in this chapter the participants and study areas so the readers can ultimately determine transferability (Miles, Huberman, & Saldana, 2014). For example, the majority of participants were college graduates and most had obtained a masters or doctorate degree. Such academic achievement in a sample pool is not representative of a larger population but might be of those that book safaris at luxury lodges. Further, such academic standings in the research pool may have introduced research bias to the extent participants understood the research process and offered responses they thought I was seeking. Nonetheless, participants provided sincere and rich feedback regarding their opinions, experiences, and worldviews relevant to the research problem that should be transferable to other research opportunities.

Also a key element to provide the reader the means to determine transferability was for me to provide a clear understanding of all potential limitations throughout the study including assumptions and developments unique to the bounds of this case study. Perhaps the most transferable aspects of this study are the findings of the theory based constructs relative to broader aspects of the research questions and phenomenon. As this was a case study, in my view the results are expected to allow the reader a greater understanding of a narrowly defined research problem that will stimulate future research using different methodologies for the direct purpose of providing generalizability. I have provided a mosaic of environmental dissonance indicating where the pieces fit in a way

that provides the reader an experience they can relate to. No adjustments to the transferability strategies stated in Chapter 3 were required.

Dependability

The dependability of the findings and conclusions in this study relied on my ability to articulate the research objectives and indicate a clear path to discovering key aspects of the research phenomenon of environmental dissonance in the context of a bounded case study. This was achieved firstly during the introduction to the study and reemphasized during the field observations and interviews. Conveying and achieving triangulation of the research problem context, theory-based constructs, and research questions were critical in creating clear pathways to establishing dependability. I was clear with the research participants about research design features such as the research questions and how they relate to the research problem. During the introduction and recruitment phase I was also very clear with the participants about my role as the researcher in the process of collecting data. I was able to draw the participants into the study questions by providing them the means to relate to the research topics through their own lived experiences and drawing correlations to the theory-based constructs of the research.

Reliability of data was paramount to achieving dependability of the outcome from this case study. Data collected from interviews and observations was dutifully checked, to the extent possible, for bias and other influential factors that would have rendered the data undependable. No adjustments to the dependability strategies stated in Chapter 3 were required.

Confirmability

To achieve a high degree of trustworthiness for the input, throughput, and output of this study beyond the classic notion or standard of *good data in – good data out,* I strived to recognize and minimize researcher bias and bracketing. The essential issue of confirmability was the extent to which I remained neutral and free of unacknowledged bias that might influence the study (Miles, Huberman, & Saldana, 2014). The research design I created including numerous graphics to help illustrate key aspects of the research process provide the audience of this study clear linkages within the mosaic which allow both a sequential and systems view of the research including not only the main features of the study but also the background and potential future use of the findings. Again, I rely heavily on the metaphor of a mosaic to fully engage the audience so there will be limited prospects for questioning my role as the researcher and undue influence. In this study confirmability is likened to the principle of transparency and has been achieved through laborious research design, providing clarity, note taking/reflectivity, indicating linkages, expression of academic rigor and professionalism, and finally, declarations of bias, and conflicts of interest. No adjustments to the confirmability strategies stated in Chapter 3 were required.

Study Results

In terms of organization of the prior section, I have presented the results by research question for logical flow and thematic consistency. The balance of this chapter provides a glimpse of the study mosaic from the perspective of each of three research questions, interview prompts, and responses from participants including field observations and questionnaires.

Interview Findings for Research Question 1: What are the antecedents to the development of environmental dissonance and perceptually guided consumptive behavior?

The theme of the first research question, understanding the development of environmental dissonance was explored during the interviews using the following corresponding interview prompts:

P1. There are many ways to establish value for 'goods and services' and two higher level ways of considering value is the value something provides by its mere existence (intrinsic value) and another consideration is the value something provides for the benefit of something else (extrinsic value). How do you consider the role of establishing intrinsic/extrinsic values in nature?

P2. Sometimes I think about things like the popular debate of climate change and claims of how the planet is responding leading me to also think about my perspective on value of the environment. I question if my view is realistic and how it might be influenced or informed. Do you think about potential differences and if so how often and under what kinds of circumstances?

P3. Do you experience times when you are worried or concerned about the consumption of natural resources (such as waste, abuse, depletion)? If so, can you describe sources/experiences of conflict that you have had around thoughts of environmental values (social, economic, political, cultural, educational…).

P4. Describe a memory(s) you have that specifically shaped your thoughts on ecosystem values.

P5. Describe a memory that was triggered while on a game drive that made you question a previously held perception of the environment.

P6. Did the experience of interacting *with* nature in a protected pristine game reserve change your perspective on environmental values and if so how?

Research Question #1 focused on elucidating factors that helped identify cognitions participants had that potentially led to the development of environmental dissonance. Based on participant feedback the predominant antecedents included the influences of personal values developed in childhood, current perceptions of the environment, social culture, and personal culture. Codes were developed using a combination of summative and conventional content analysis relative to the research question, interview prompts, and actual feedback. The following table represents the frequency of statements made in relation to the interview prompts listed above.

Table 4

Frequency of factors influencing the development of Environmental Dissonance

Phase of coding	RQ #1	Frequency	Percentage of statements
Cycle #1 Codes	Personal values*	90	30%
	Perceptions*	67	22%
	Culture*	63	21%
	Learned behavior	34	11%
	Mentorship	29	10%
	Development	9	3%
	Antecedents	7	2%
Cycle #2 Codes	Intrinsic value	35	28%
	Episodic memory	30	24%
	Nostalgic memory	27	22%
	Extrinsic value	24	19%
	Basic human needs	9	7%
Cycle #3 Codes	Value systems	92	N/A

Predominant within the results for RQ #1 were the influences of personal values, perceptions, culture, intrinsic values, and memories. Participant quotes that support the findings of Research Question #1 are listed in Table 5 below.

Participants were 100% consistent with identifying personal values as having the most influence on the development of attitudes toward the environment, custodianship of natural resources, and habits of consumption. Most participants referred to experiences

during their youth that promoted their current values toward the environment and that instilling those values on their children was a priority. Some had realized that the experiences they had and wanted to repeat with their children had not been realized and generally followed by a brief expression of regret. References were made to the young not having the same opportunities to experience nature and thus miss the opportunity to develop the same personal values that the participants held.

Perceptions of the environment and specifically ecosystem health and degradation were also substantially credited by the participants for having a formative influence on the development of environmental dissonance. Examples of climate change debates and the efficacy of corn based ethanol were the primary anecdotes provided by the participants to articulate personal experiences with environmental dissonance. Regarding climate change, most participants perceived that global warming was indeed occurring, but there was no clear indication that they believed it was due to natural causes or manmade. Most respondents considered that global consumption of natural resources was a contributing factor in global warming and that their personal perceptions of environmental health was in fact a source of environmental dissonance and that their experience in the bush provided a reality check with respect to how ecosystems work and their fragility. Based on the data, I posit the wilderness experience has forever changed the participants' perception of nature and by extension their perceptually guided behavior toward it.

Culture was also a major theme in the development of environmental dissonance found in the interview data. Interestingly the feedback was a mixture of responses relative to culture in terms of social influences and personal influences. All respondents referred

to the consumer culture but in terms of personal culture most referred back to their ancestry and memories of the familial conditions they experienced. The majority of participants indicated they had either parents or grandparents that "lived off the land" and they identified with that culture in terms of having an influencing impact on their attitude toward the environment.

Intrinsic values related to personal values, but were expressed in feelings while having experiences with nature. Respondents stated that intrinsic values regarding nature were generally only considered when interacting with nature rather than situations that would be considered dissonant. Respondents acknowledged the influence of extrinsic forces on their environmental attitudes but generally denied they had experienced times where they had to consider the influences of one over the other. All participants remarked that their attitudes about the environment were primarily formed by their understanding and sense of intrinsic values for nature.

The development and retention of formative experiences primarily in early childhood was a substantive finding in this study. All participants relayed stories of childhood memories with parents around their interaction with nature, primarily camping, hiking, and farming experiences. Memories were relayed in a way that displayed emotion and having influenced their personal relationships with family members. Memories expressed by the participants were generally defined as either specific activities (episodes) or specific feelings (nostalgic) of joy or responsibility.

The following table represents a sample of statements made by participants during the interviews that support the findings above. Excerpts were selected using codes that all participants responded to indicated in Table 1 and represent findings relative to Research

Question #1, the antecedents of environmental dissonance, value and memory theory, and

generally the paradox of environmental dissonance experienced in daily life.

Table 5

Interview statements aligned with the Development (paradox) Phase of Environmental Dissonance Codes (RQ #1)

Theme	Relevant Quotes
Personal values, perceptions, and culture	"I want my kids to have value in those things that are important - time and the environment." EG01 "My mom was big into nature, and used to take us canoeing, and camping, and so that's probably where the love for woods and respect for nature." EG02 "But in one sense I'm always reevaluating the way I look at things, maybe that's just the field of oncology and patients dying, and appreciating everything day-to-day and stopping and smelling the roses. Just human nature, get out of that even though I see it every day, these are just great reminders that this is a big world and there's a lot of it I haven't seen, a lot of things that God put on this earth, and to appreciate it." EG03 "And when you come to a place like this, you realize how important every little thing is to nature." EG04 "I had a little bit different visions coming here. I thought it was going to be more-- I guess the word would be staged. This area we have rhinoceroses. This area we have elephants. But it's still in the wild. No. Coming here, it's, "Jesus, there's an elephant here," and we come across rhinoceroses. And they were there, but they're going from different area to different area. This is all different than what I expected. It's better. This is really, really cool." EG06 "I grew up in a log house that was built by my mom and dad. Yup. We had our own garden. I'd say my family values are very [chuckles] all about nature and being nature. It was until a couple of years ago that I realized how off-the-grid they were [chuckles], so it was a funny moment when I-- And they're like, "Why do you think--?" I knew they were always hippies, but I just-- They're like, "Why do you think we built our own house? Why do think we grew our own garden and we hunted and stuff. It was about self-sustainability." EG07 "I know so many people who would never understand the beauty of here, and not even so much of this beauty, but the beauty of the people. I know so many people having--been raised in the South and everything that would just dismiss the cultures and the people, and it just really hit me hard then." EG09
Value theory and memory theory	"Then I would go for long bike rides outside, looking at the trees, appreciating. Be grateful for the view, the colors, and the spirituality. God put them on this earth. And the water - just the beauty. And here, you want to be outside. You don't even want to

Theme	Relevant Quotes

be inside. I think being here, it's more important to have these conservation areas than I thought. " EG05

"Here, I think it's very clear, it's very easy to observe the actual relationship of the ecosystem and understand it, especially with the drought going on and everything, to understand that it is, in fact, very related to each other. If one resource is destroyed, it's going to have an effect on another resource." EG08

"So, there was fruit trees that-- I don't think he got his livelihood, it was more of a part of the home and came with the property and we managed it lightly. I think that influenced me growing up as a conservation mindset, being aware of your environment." EG12

"It was an area where migrant workers would come up. And my dad had a small community church in the country. And when the migrant workers finished, the farmers would - because they were his parishioners - they would say, "Now you and Ella" - my mother - "and the kids can come out at 4:00 in the morning and gleam the fields in a biblical sense." And we survived on that. It's amazing what was left. And my mother and my grandmother would spend the three months of the summer canning and preserving, and we lived off of that. " EG14

Paradoxical value systems

"And I'm trying to provide that importance to my kids, which they don't get it because they're entitled, they have everything. They've never been in an environment where they-- not really. The environment where you have to conserve those type of things." EG01

"If I ever think of things extrinsic, in terms of nature, it's usually in recognition of a negative effect, not ever in a, "Oh, we could use this for X, Y, and Z. It's the, "What a shame that we are using it for X, Y, and Z," is typically-- and that's usually the only point at which I think about or focus on, the extrinsic value of especially natural resources." EG09

"But seeing some of the ways of the Maasai and how in order to survive some have turned from their ancestral ways to provide for us [chuckles]. That bothered me. There is that-- I supposed in that case a little bit of guilt." EG13

Respondents remarked that personal values, perceptions, culture, intrinsic values, nostalgic memories, and the development of those value systems played a key role in establishing their personal consciousness about the intrinsic value of nature and its subsystems. Many respondents transferred their personal thoughts and experience regarding antecedents to environmental dissonance and perceptually guided consumptive behavior to the global community or society in general.

Questionnaire Findings for Research Question 1: What are the antecedents to the development of environmental dissonance and perceptually guided consumptive behavior?

It is important to emphasize that in this section, I introduce data collected from a different medium than presented in the previous section. In this section I provide only data collected from questionnaires. Data collected from interviews and questionnaires for each of the three research questions are presented in this format; first data from interviews (previous section) then data from questionnaires (current section).

The research questionnaire I used in this study was titled Personal Story Worksheet (see Appendix I). The open ended questionnaire consisted of three questions; one question corresponding to each of the three research questions. As part of the questionnaire exercise, each participant was asked to provide a digital photograph of an experience while on safari whether in the bush or at the lodge that visually represented an *ah-ha* moment or the substance of a response to one of the questions on the Personal Story Worksheet. Regarding the photographs, only five of the 14 participants contributed and the narratives provided were very minimal therefore I have omitted the photography element from consideration in the analysis of data.

Written comments from the participants regarding RQ #1 were consistent with interview responses. Participant EG01 stated, "I have always known and valued nature and its importance to me. The *ah ha* moments on the drive were the ability to be so close to nature. The wild animals were amazing. The fact that we were driving around in an open air vehicle and the animals did not bother us was awesome." making a connection between the themes of *interaction with the environment* and *intrinsic values*. EG03 wrote, "Besides the abundance of beauty, learning how animals adapt for survival i.e., the number of offspring protected during drought or elephants learning to not destroy trees by over consuming excessive bark/camber." which exemplifies a deep understanding of natural systems and the formation of profound personal values. EG13 acknowledged a new perspective the experience provided regarding basic belief systems regarding how ecosystems should be valued, "I believe seeing animals in their natural habitat transforms the way you see how they should live… It makes me want to see animals only in such a state. Why would one want to remove animals from their home?" All responses were supportive and descriptive how participants perceived the intrinsic value of nature and the role intrinsic values play in the manifestation of environmental dissonance.

Interview Findings for Research Question 2: How do individuals perceive and describe environmental dissonance?

The theme of the second research question, understanding the manifestation of environmental dissonance, was explored during the interviews using the following corresponding interview prompts:

P7. Often time's individuals experience a state of mental conflict when

contemplating or discerning between opposing sets information or data. Such

a state is called cognitive dissonance. Cognitive dissonance can even occur

without being conscious of it and should not be confused with as a state of

confusion or guilt. An example of environmental dissonance could be for

some people the mental conflict about using plastic bags provided by the

grocery store or use recycled ones. Tell me a story about an experience you

had when you either experienced or witnessed environmental dissonance.

Describe the emotional aspect of your response to the experience.

P8. Describe a daily routine that you have observed when another person did not

consider the environmental impact of their actions. Did their actions influence

your own thoughts about environmental impacts?

P9. Describe what being environmentally reckless means to you and tell me how

you feel when you observe others being reckless with the environment.

P10. How do you determine and describe excessive consumption?

P11. Describe a feeling environmental remorse you may have had either by an

activity you were involved in or one that was witnessed.

P12. Has your stay in the bush impacted how you think about the environment

and how it should be transformed or preserved?

Research Question #2 focused on elucidating factors that helped identify

experiences participants had that exemplified the manifestation of environmental

dissonance. Based on participant responses the predominant means used to describe

environmental dissonance included the influences of consumption, market forces, waste,

and generally a culture defined by learned consumptive behavior. Codes were developed

using a combination of summative and conventional content analysis relative to the

research question, interview prompts, and actual feedback. The following table represents

the frequency of statements made in relation to the interview prompts listed above.

Table 6

Frequency of factors influencing the manifestation of Environmental Dissonance

Phase of coding	RQ #2	Frequency	Percentage of Statements
Cycle #1 Codes	Consumption*	111	21%
	Market forces*	68	13%
	Waste*	58	11%
	Conservation*	52	10%
	Pollution	46	9%
	Social norms	40	7%
	Climate change*	29	5%
	Guilt	27	5%
	Public and private interests	26	5%
	Ecosystem interdependency	24	4%
	Health	20	4%
	Perceived control	18	3%
	Product shelf life	10	2%
	Supply and demand	9	2%
Cycle #2 Codes	Planned behavior	49	58%
	Conspicuous consumption	35	42%
Cycle #3 Codes	Pragmatic experience	133	N/A

Consumption was held as a strong example of how environmental dissonance is perceived and described by the participants in this study. In fact, consumption was the code with the highest rate of frequency during the first and second cycles of coding. Consumption was a dominant theme throughout the course of the interviews. Many examples of consumption were provided and included personal consumptive habits, consumption patterns of families, consumptive practices in the workplace, as well as perceptions of societal and global consumption. Consumptive behavior was generally equally credited between the participants own behavior and that of others. Participants were generally at ease with describing their own excessive consumptive habits. Most participants related stories of consumption providing experiences involving excessive purchasing of food items and excessive use of utilities such as electricity and water.

Market forces were often described by participants as an effective extrinsic force related to consumption. Marketing of products and services primarily to others, not the participants, was claimed to have a significant impact on consumption. Interestingly most of the respondents claimed they were not personally affected by marketing and advertising or market forces in general but others around them were including family members. Examples of the manifestation of environmental dissonance were the market pressures applied to support farmers by opting to purchase gasoline products that were infused with corn based ethanol when according to the participants the environmental benefits of using the more expensive fuel are in doubt. Several participants stated that market forces in concert with government agencies are responsible for many of the manmade environmental disasters that occur and that too often the government is corrupted by market interests and financial incentives expressing that governmental

attempts to enhance and preserve wilderness areas as well as their own communities was generally insufficient.

Waste was also articulated by participants as a strong example of the manifestation of environmental dissonance and consistent with excessive consumption previously described and the lack of appreciation for the intrinsic value of nature. The participants generally expressed the theme of waste in personal terms. Waste was a leading theme of personal responsibility and one that participants expressed a current desire to improve upon.

A consumptive society generally driven by economics was a major theme provided by participants throughout the interviews. Participants expressed that perceived control over their influence on personal consumptive habits and the social pressures to consume required constant vigilance but generally none of the participants acknowledged they were actively engaged in a personal strategy to monitor such influences on their daily consumptive behaviors. Contrarily, a few of the participants acknowledged that economics and convenience, such as making a choice between eco-friendlier fuel or less expensive and readily available standard fuel, drive consumptive decisions. Generally the data illustrated that participants were split on the long term perceptions of ecosystem health and degradation; some expressed optimism that nature would balance itself in the face of consumption and economic development while others expressed varied concern over the future of the planet considering the current global rate of consumption of natural resources and conversion of natural spaces to commercial uses. Generally the participants were unanimous regarding the influence of their wilderness experience acknowledging that such spaces in their opinions were disappearing to the extent some expressed concern

that their children may never have the same experience they have had which was consistent with statements made with regard to personal values and culture themes of Research Question #1.

The following table represents a sample of statements made by participants during the interviews that support the findings above. Excerpts were selected using codes that all participants responded to indicated in Table 1 and represent findings relative to Research Question #2, the manifestation of environmental dissonance in the theoretical constructs of conspicuous consumption and planned behavior theory, and lastly the manifestation of environmental dissonance in daily life.

Table 7

Interview statements aligned with the Manifestation (phenomenon) Phase of Environmental Dissonance Codes (RQ #2)

Theme	Relevant Quotes
Consumption, market forces, waste, conservation, and climate change	"For me, the excessive consumption that we have around our house is going to the grocery store. We buy a lot of things that end up rotting before we even eat them, so I feel guilty about that constantly. I'm like "Okay, you guys want all this stuff and I'm trying to buy organic stuff." But then on the other hand, it has a negative impact too because you've got to go to the grocery store more frequently." EG01
	"One that just simply comes to mind is when you drive a car that takes E85. You can use stuff that's made from corn or stuff that's using petroleum and there's some dollar changes there, and then the question is do you get the same gas mileage? It's a state of confusion not knowing whether to use a corn-burning cleaner truly or are you using more of it and you're not getting some miles per gallon. And so when you make those decisions you consciously think, "Well, what do I do here, because the science says it's better on the economy but is it really because I'm actually going to have to use more of it?" EG03
	"Yes, I think quite often that I don't want the environment affected by politics and commerce. Again, I live in a very similar pristine area where we try and keep it nicest to the reserve. When you have the economy and politicians that want to change and people that want to come in and cut down trees or kill rhinos or things for money, it's wrong and sickening." EG02
	"Environmental recklessness is the big corporations. They pollute, they pollute, they pollute, but it all generates money, so they're-- Detroit's a perfect example. The Love Canal is a perfect example. They allowed-- I think it was in Erie, Pennsylvania or Lake Erie. The corporations were allowed to do all this, and it killed a whole section of where people lived. They had to move out of there." EG06
	"But I do think about landfills and where does all our garbage go. We're in South Africa. What do they do? Do they burn it? Do they bury it? I mean, how long do we keep burying our garbage?" EG05
	"Disposing of all of a lot of those things as well as could we be doing a better job of it? When you think of something like throwing away a battery, for example. It's not just very easy to just go throw away battery. You got to

Theme	Relevant Quotes

find somewhere-- you know what I mean? To dispose of it properly and stuff." EG07

"But if that balance can be struck and the folks that get to visit here, it fosters more of an awareness of all of this, especially, like I say, with the idea that you can drive around for a day and literally, see everything and how they all relate to each other. Then, repurposing land for something like this-- the more that you can do it, the better off that probably most of us would be, especially when exposing younger folks to it." EG08

"The importance of the work that people who have made this possible, absolutely, I never would have thought about it before, but now, I realize the importance of it. I would support, I think, that with whatever resources I was able to support that with, for sure. Because this is the sort of thing-- again, it goes back that we would all be better people if we could experience this from whatever perspective, whether it's the-- whatever the thing that you connect with." EG09

Planned behavior theory

"I can tell you what I think about each of the potential truths, but I can't tell you what is true." So if we are causing climate change, we ought to be doing something quite damned quickly about it." EG09
We separate and recycle. But then when it comes to it, we have town dumps. So then, there's no trash removal from the house. So at the office, I have waste management that comes. But I separate things, and they're like, "Well, you have to put it all in the same thing." And I'm like, "Well, do you separate them?" EG01

"And she throws whatever, wherever, doesn't teach her friends, "This is recycling. This is not." It's a constant battle, and I'll go through it with her. She's 15, she knows." EG04

"And I think our world is changing too fast, and we're not taking care of the world. And I'm worrying about our young people growing up, not seeing the changes." EG06

Pragmatic experience

"Sometimes we don't really-- we think we're outside of that somehow, you know what I mean? We're coming over like-- and that's what I like about just coming and being here, is realizing we're a part of this. We're not removed from it. We are part of this whole ecosystem, and what we create and what we're doing, and our influence on it." EG07

"It's like mother nature tends to fix stuff in general, but being here and seeing the effects of the drought and the potential coming loss of animal life and plant life and all that sort of thing kind of harkened me back to that

(table continues)

Theme	Relevant Quotes
	whole idea that, "Well, yeah, it's all interrelated, but you know what, eh, it'll fix itself," so to speak. But when it's really kind of thrown at you in your face and it's very stark, then you kind of go, "Yeah, but there has got to be a tipping point at which it can't fix itself," EG08

Respondents remarked that consumption and in particular excessive consumption, the pressures of market forces, personal and commercial waste, waste disposal, conservation values, and to a lesser degree climate change all have an influence on how environmental dissonance is experienced in *real life*. Respondents also related perceived control over environmental matters and social norms as a significant influence on the manifestation of environmental dissonance. Finally, respondents generally felt confused about the role of environmental dissonance in their daily lives and in particular the lack of influence they have over it.

Questionnaire Findings for Research Question 2: How do individuals perceive and describe environmental dissonance?

Written comments from the participants regarding RQ #2 were consistent with interview responses and in particular the issue of environmental dissonance manifesting through consumptive habits. Participant EG02 stated, "The use of H2O back home make me think about how much I consume in excess. If each of us was more conscience about what we use then our water supply would go that much further. Use of AC in the bush made me feel guilty as well. I enjoy heat and would have been fine with no AC." Contrarily, EG04 described how wasteful habits are minimized in nature, "In nature there is no waste. At home we waste so much. The animals and insects eat every bit of an animal that has been killed. We throw out so much food. We could do better by buying

less, composting, and saving water better." Participant EG05 acknowledged how lifestyles need not be as complicated or complex and by extension the manifestation of environmental dissonance could be controlled by lifestyle modification, "I see how little I really need vs. want. Life doesn't have to be so complicated. In the wild, the animals just take care of their needs - eat, sleep, drink, shelter etc. I can realize that I don't need to consume as much of anything that I do now. Also, I can see that I don't need to eat as much as I do either. Just eat what you need when you are hungry - these are examples." Participant EG07 provided a millennial perspective, "I live very minimalistically already and have attempted to try and buy what I need and avoid buying things I don't! However, I am starting to wonder about my electronics and data consumption. At home I use data constantly I am starting to rethink the ways I can decrease my usage. I'm not sure how much impact that would have on the environment. I would probably purchase less items from Amazon."

Interview Findings for Research Question 3: How do individuals manage consumptive choices and mitigate environmental dissonance?

The theme of the third research question, understanding the mitigation or reduction of environmental dissonance, was explored during the interviews using the following corresponding interview prompts:

P13. How does your cultural background influence how you value environmental conservation?

P14. Describe a memory you have when a television, radio, or print commercial influenced you to consume beyond your current levels of consumption.

P15. Describe what sustainable use means to you in your daily life and how you achieve it. If you do not achieve it, describe the barriers.

P16. Has the safari experience changed your notion of sustainable use and if so how?

P17. Give me an example(s) when you recall an event where you evaluated whether or not to consume because you perceived it to be either wasteful or excessive in some way.

P18. How would you describe changes in *environmentalism* both personally and socially over the span of your life including examples of decisions you made to accommodate such change?

Research Question #3 focused on revealing the ways in which participants reduced or mitigated experiences with environmental dissonance. Based on participant responses the predominant means to mitigate environmental dissonance included the influences of personal interaction with nature, awareness of eco-friendly choices and choice-making, and understanding the impact they have on nature through consumptive habits and behavior in general. Codes were developed using a combination of summative and conventional content analysis relative to the research question, interview prompts, and actual feedback. The following table represents the frequency of statements made in relation to the interview prompts listed above.

Table 8

Frequency of factors influencing the reduction of Environmental Dissonance

Phase of coding	RQ #3	Frequency	Percentage of statements
Cycle #1 Codes	Interaction with nature*	80	21%
	Choice-making*	53	14%
	Impact*	48	13%
	Carbon footprint	37	10%
	Environmentalism	32	9%
	Government regulation or intervention	30	8%
	Repurpose	22	6%
	Recycle	21	6%
	Behavior	20	5%
	Partisan politics	15	4%
	Saving	8	2%
	Sacrifice	7	2%
Cycle #2 Codes	Sustainable consumption	88	51%
	Decision & Choice	62	36%
	Self determination	23	13%
Cycle #3 Codes	Perceptually guided behavior	112	N/A

Interaction with the environment had a significant impact on the study participants and ranked as the third highest referenced code during the first cycle of analysis. All participants commented during the interviews that being in the African wilderness either confirmed their perceptions of sub-Sahara ecosystem or they had gained a new respect for the fragility and vast awesomeness of it. Interaction with the environment included experiences that were complemented with sensory impacts such as sights, sounds, smells, and touch. Interaction with the African ecology and sensory involvement appeared to have a connection to how participants perceived pro-environmental choice-making. The more engaged participants were with the environment as a result of going on game drive safari's, the more participants gained an appreciation for the concept of responsible custodianship of the nature reserve and by extension wilderness areas in general.

Sustainable consumption and the process of choice-making also ranked high during the interviews in connection with mitigating environmental dissonance. Consciousness of ecosystems and how human interaction affects ecosystems appeared to influence the participant's sensitivity to consumption levels and long term potential impacts of unrestrained and unsustainable consumption. As a result of the wilderness experience, most participants claimed to being more sensitive to pro-environmental choice-making with an emphasis on sustainable behavior. Some participants acknowledged that social pressures to consume excessively were strong and that constant vigilance and commitment to making small sustainable changes in their daily consumptive habits was critical to long term behavior modification.

Based on the interview data, mitigating environmental dissonance in the daily routines of real life situations and circumstances was difficult for each participant in terms of their own consumptive behavior. Contrarily, respondents were generally able to articulate how others could or should manage consumptive choices or otherwise mitigate environmental dissonance on a cultural or societal level. Where people live, the size of their residence, the number of individuals in a household, the economics of the wage earners, lifestyle, perceived quality of life, commitments to activities whether work or recreation all seemed to influence how participants considered consumptive behavior and the process of pro-environmental choice-making.

The following table represents a sample of statements made by participants during the interviews that support the findings above. Excerpts were selected using codes that all participants responded to indicated in Table 1 and represent findings relative to Research Question #3, the mitigation of environmental dissonance, self determination theory, sustainable consumption, decision theory, and the propitiation of environmental dissonance in daily life.

Table 9

Interview statements aligned with the Reduction (propitiation) Phase of Environmental Dissonance Codes (RQ #3)

Theme	Relevant Quotes
Interaction with the environment, choice-making, and impact	"It definitely makes you aware of the struggles they have here, in preserving this for future generations. Yeah, I definitely think-- you think about one thing at home - it's all what's on TV and in the books and whatever - and you come in here and it's reality. You're like, "Wow, we have diminishing numbers and space." We only have one earth. We don't get any more land. And how we take care of it is going to affect it for future generations." EG01
	"Well, part of it was just seeing how the birds sit on the back, and seeing how they work together, and it was like, "They really do," and they warn the animals, and they're eating the bugs off the animals, and how they were working together so much. I just thought they happen to land on the animal before-- [laughter] and how the one sits out on the nose. That was, I thought, pretty incredible." EG04
	"We smelled the dead carcass just today, so I know what you're saying [chuckles]. We went to the lion park, and we're in cages. And I thought, "Wow, this is fantastic. You come here and it's all open air. Just don't stand up. There's a lion right there. Oh my God, it's... (an eye opener)" EG06
	"And so when you make those decisions you consciously think, well, what do I do here, because the science says it's better on the economy but is it really because I'm actually going to have to use more of it?" EG03
	"I would, personally, say that anything that we can do to reduce pollution and things like that is a good thing and certainly, burning a bunch of gasoline is probably not really great for the atmosphere, but if the measures to reduce it are harmful to people's economic situation or society's, then there needs to be compromise in those areas." EG08
	"You look at that, you look at the vultures and the carcass there and stuff. You think about removing one thing. Or even like the dung beetle, removing that and that playing a role. But I also - in the same sense, also think about that happens in nature, like something will happen and there's going to be an overpopulation or something but it-- I do believe that it would also correct itself in some way." EG07
	"And there's a sensitivity that so many people do not have. There's another thing, and it drives me crazy, is that the attitude of so many human beings that live in this world, with all the other creatures, and they give no thought towards anything below us." EG14

(table continues)

Theme	Relevant Quotes
Sustainable consumption, decision and choice-making	"Yeah, I love this. This needs to stay. Thank God, somebody took the initiative, bought the land years ago and put the fences up and said, "No. You can't build here, and you can't..." EG02
	"I don't know what they make out of it, but I think there's people out there that can find ways to break it down and make new things from the recyclables." EG05
	"I have not personally thought about-- when something comes up that speaks to sustainable use, I'm sure that this experience will have an impact in my decisions about that." EG09
	"Like my kids, I've now tried to get them to drink healthier or eat healthier. So now, I don't but any soda - I don't. But then my kids have been buying bottled water. I'm like, Look at all the plastic you're putting into the environment, where we're using that, but now this is a better thing for our health but worse for the environment. So now I bought a bubbler." EG01
	"I'm kind of in the middle of the road. So I think that there's probably is climate change happening, and I don't know for sure if it's man-made or not I hear both side and have some convincing the facts on each side I guess, but whatever I can do as a human being to not potentially worsen if it is man-made then I believe in that I try to recycle." EG03
Perceptually guided behavior	"And the pressure that we grow up in an agricultural environment there, and the pressure that the farmers you're helping them out, and stronger economy for that area, you know?" EG03
	"When we lived in New York City, we had an apartment that was smaller than this tree house here, and everything was expensive. We didn't have any room to store anything. So you went and got just what you needed for the day, and you come back, you cook it. You didn't clutter your house, because there's no room to put it. You had to go carry it." EG03
	"I've been a lot more careful about trying to recycle and trying to teach Luke and the kids to recycle. Because I do feel like we use too much, but we also have to be more giving back to nature." EG04
	"We have a house with some natural trees and watering holes in the back yard. That's why I bought it, because I can get out there and I can just look at nature. And I don't see the city." EG06
	"I'm very much a minimalist, so for me, I will get rid of something even though the thought comes in, "I could use this later, I could do that." But I also think that simple fine things create less waste. I'm really thinking about when I'm getting something or using something, either how I could use it multi-functionally versus-- there's a million people out there that are just getting by, and I certainly think about that." EG07

Respondents generally conveyed that environmental dissonance was mitigated or reduced by the respondents' physical interaction with the environment as well as learning more about the environment and ecosystem interdependencies. Participants also commented that the wilderness experience moderated their choice-making while on the reserve and many expected it to have a lasting influence on their personal environmental concerns and behavior. Similarly, most participants felt a connection between their behavior and impact on the environment whether such activity was while on the reserve or back in their communities.

Questionnaire Findings for Research Question 3: How do individuals manage consumptive choices and mitigate environmental dissonance?

Written comments from the participants regarding RQ #3 were consistent with interview responses and in particular perspectives on preserving the natural world. Participant EG06 stated, "Scenes where an elephant eats part of the tree bark but not the whole way around so the tree lives. This is natural life and beauty to keep life going. If we destroy something in the city - it is "done" nothing will "regrow" in its place." Participant EG08 provided a perspective regarding how environmental dissonance can be mitigated by the reversal of ecosystem degradation, "When I found out that Balule had been converted from farm/ranch land to a "natural" state, I realized that it is possible to restore a natural habitation on a large scale. I am much more optimistic about the possibility of reversing some of the damage done to natural areas around the world." Participant EG09 supported the notion that a multisensory experience in the wilderness impacted his/her processes of environmental choice-making, "Seeing the carcass of bull elephant Shoshangaan was not only unforgettable, it was an honor to witness one of the

most natural cycles in life. To deny that interconnectedness of all living things is impossible for me now." Similarly, Participant EG14 aptly stated summing up the general feeling expressed by all participants, "Just about everything I have seen so far confirms my thoughts on the sustainability of the natural world.

Field Observations

The field observation component of the data capture and analysis phase of this study yielded very different data compared to the interviews and questionnaires. The data I collected during the field observations while on safari game drives were generally expressions of excitement, anxiety, fear, and sometimes boredom. Comments made by participants were supportive of emotions generated by a completely new experience where scenario's involving life and death in the wilderness were very prominent and frequent. Physical displays of amazement of participants at the magnificence of animal and plant life in the bush would instantly be transformed to fear as an elephant, rhino, or leopard turned and approached the game drive vehicle. During an extremely close encounter with a leopard passing by the front of the game drive vehicle and within touching distance of the game tracker that sits on a seat attached to the front bumper of the vehicle, Participant EG06 was physically frozen with fear and later exclaimed how "real" the incident was. After such experiences, reactions of utter relief then followed by laughter typically preceded dialogue about how amazing the wilderness is and that participants had not perceived just how it would impact them emotionally. Participant EG04 asked to speak with me in private during a sundowner (an intermission halfway through the safari game drive where guests are allowed to disembark the game drive vehicle for a stretch and snack) and expressed his view of the "spirituality" of the bush

and his appreciation for the study that I was conducting. Often during the sundowners study participants would approach me to show me "amazing" pictures they had taken which added support to the code of *interaction with the environment* and the impact it had on their wilderness experience.

Generally participants expressed concern for the apparent health of animals as many had physical wounds or signs of drought related malnourishment. Such comments were often followed by dialogue about the fragility of the ecosystem and questions about how the system worked interdependently. For example, participants asked the rangers questions about what would happen to the balance of nature on the reserve if the lion or hyena species disappeared or how the system would be impacted by continued rhino poaching. Participant EG05 commented that the documentaries about the African bush did not compare well at all with his/her actual experience further stating that the actual experience was extremely more meaningful and impacting on previously held perceptions of the ecosystem.

Summary

The data collection for this case study took place at Ezulwini Game Lodges located in the Greater Kruger National Park in the Republic of South Africa. Fourteen participants were recruited on site at the lodges shortly after their arrival. Though I collected data from 14 participants, I reached data saturation with 12 and therefore only feedback from 12 participants was included in the analysis.

I organized the findings of this study thematically by research question and context of the research phenomenon. The findings were further more narrowly reported by findings relative to each instrument and method used in this case study. It was my

intent to present the findings of this study in such a way that provided a logical and methodical flow of answers to each research question as permitted by the data collected from interviews, field observations, and questionnaires.

Interview transcripts, post interview summaries, field observations notes, personal journal entries, and questionnaires provided relevant data supporting answers to first research question: What are the antecedents to the development of environmental dissonance and perceptually guided consumptive behavior? Participants generally expressed that antecedents were characterized by the development and expression of personal values toward the environment, the influence of cultural or familial background, and perceptions of ecosystem health.

Interview transcripts, post interview summaries, field observations notes, personal journal entries, and questionnaires provided relevant data supporting answers to second research question: How do individuals perceive and describe environmental dissonance? Participants strongly held that manifestations of environmental dissonance were related to unsustainable or excessive consumptive behavior, the influences of extrinsic forces such as market economics, and by the routine conduct of wasteful behavior.

Interview transcripts, post interview summaries, field observations notes, personal journal entries, and questionnaires provided relevant data supporting answers to third research question: How do individuals manage consumptive choices and mitigate environmental dissonance? Participants noted substantive change in how they will consider environmental dissonance in the future based on their sensory experience in the African bush wilderness. All participants indicated the wilderness experience impacted how they understand ecosystem sensitivities to human interaction and conflict therefore

were likely to consider pro-environmental choice-making as a higher priority with regard to managing consumptive behavior.

Chapter 4 of this study contained an overview of the research setting, participant demographic data, the data collection process used, an overview of the codes and themes that were developed to analyze the data including justification, an analysis of the data in such a way that provided a mosaic of the findings, evidence of trustworthiness, and finally my analysis of the data I captured.

Chapter 5 is a presentation of my interpretations of the findings, the limitations of this case study, my recommendations for further research, the implications of my study and findings to positive social change, and a conclusion to the study that provides the reader with a clear understanding of the essence of the study.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this qualitative case study was to understand the breadth and depth of environmental dissonance among visitors to the Kruger National Park. Further, the purpose of this study was to explore how environmental dissonance is impacted after participating in a multi sensory experience in a pristine African sub-Sahara bush environment. The overarching research inquiry to understand social processes that lead people to endorse responsible stewardship of the environment yet choose environmentally harmful consumptive behaviors, was well supported by the case study approach to inquiry.

Understanding the essence of a lived experience and contemporary phenomenon within a bounded study area is the foundation for the case study approach. My goal in this research was to understand the essence of how ecologically-based personal experiences influence planned or learned behaviors that later manifest in environmental dissonance for individuals visiting a pristine natural environment. Understanding the essence of individual's past cognitive norms may lead to an understanding of how to engage with those norms from the construct of ecological psychology. This case study approach provided me an opportunity to explore the nature of establishing behavioral norms relative to consumption. Such knowledge may lead to better understanding of how to positively manage awareness of norms and the personal fear of change that might prevent pro-environmental choice-making.

Interpretation of Findings

The following section regarding the interpretation of findings is organized by theme and research question. The theme and research question format is consistent with

my review of literature in Chapter 2 and presentation of research findings in Chapter 4. My interpretation of the findings in this case study reflects the data collected from interview transcripts, post-interview summaries, field observations, personal journal entries, questionnaires, and a synthesis of the relevant peer reviewed literature. The literature regarding environmental dissonance is scant, but much has been written about how cognitive dissonance generally influences behavior in the context of a paradox, which I thematically applied to matters of consumption.

The Development of Environmental Dissonance

To explore and answer the research question, "What are the antecedents to the development of environmental dissonance and perceptually guided consumptive behavior?" I sought a better understanding from prior research regarding how perceptions of intrinsic and extrinsic values affect environmental dissonance. I also explored how episodic or nostalgic memories influenced establishment of antecedent perceptions regarding consumption. Additionally, I sought to understand how episodic memories, from an ecological psychology perspective, promote or reconcile the paradox of environmental dissonance and perceptually guided behavior.

In this study, I viewed the formation of personal values toward stewardship of the environment and natural resources in general as the primary antecedent in the throughput of information leading to perception, attitude, and ultimately action or behavior regarding pro-environmental choice-making. Participants generally confirmed that antecedents were characterized by the development and expression of personal values regarding the environment, the influence of cultural or familial background, and perceptions of ecosystem health. I found that respondents generally had to pause and consider deeply the

notion of antecedents to behavior, indicating that the influence of antecedents on their behavior was likely subconscious.

Relative to understanding the antecedents, I was primarily interested in exploring the gaps in literature as to how individuals assign values to natural resources, and specifically to how the determination is made to assign an intrinsic value or an extrinsic value to flora and fauna. Haivas, Hofmans, and Pepermans (2014) stated that intrinsic values, more so than extrinsic values, can manifest in ways that cause behaviors that satisfy basic human needs of the self. They claimed that intrinsic values can lead to intrinsic motivations, behaviors based on self interest and needs rather than external interests and demands. I found this assertion to be true as respondents referred to the value of nature primarily in terms of their own physical and mental health. I noted numerous references in the study findings of how important interacting with nature was to the health and wellbeing of the participant. Similarly, Ims, Pedersen, and Zsolnai (2014) stated that dependence on extrinsic motivations (external interests) can result in the displacement of intrinsic motivations, implying that behavior can be influenced by external forces that ultimately may be in conflict with one's intrinsic values. I found this to be true as reported by the participants in cases of convenience and economics. Some respondents admitted that if making a pro-environmental choice was either too inconvenient or expensive, then they would likely relent to the extrinsic force. Similarly, Kim (2013) stated that in the context of construal theory, extrinsic value orientations can moderate low- versus high-level mental construals (constructs/paradigms). He further stated that extrinsic value orientations can cause individuals to focus on concrete thoughts associated with low-level construals which can result in the development of personal

values toward materialism and degrade higher-level construals associated with altruistic thoughts and self-control related to consumption. In this study, I did not find evidence of extrinsic forces stimulating low-level construals, but did find examples where intrinsic value considerations did appear to promote higher-level construals and deep meaningful dialogue. Consistent with my participant's feedback, Guest (2014) stated that Maslow's sixth element (transcendence) in his hierarchy of human needs indicated that people are motivated by such intrinsic values as "truth, goodness, beauty, perfection, excellence, simplicity, elegance" (Maslow, 1969, p.4). The development and influence of high-level construals based on the promotion of intrinsic value consideration or cognition is of great interest to me and is a subject for future research.

Brown and Bishop (2011) stated that a paradox can be characterized as a construct of complex conditions that produce conflict between motivation and behavior which generally are not easily resolvable. They further stated that some individuals may respond to such conflict with a propensity to retreat from the paradox or deny it exists. Albrecht, Brooke, Bennett, and Garnett (2013) noted that a major change in how humans respond to the effects of climate change and its impact on natural resources requires a movement away from individual or anthropocentric ethical considerations and a paradoxical "man versus nature" construct to one where intrinsically valuable living things and human interaction with the environment take on a much broader ethical role. In this study, I found that none of the participants denied the claim of climate change and global warming, but most did fall short of acknowledging their role in it. Further, participants acknowledged the impact of consumption from a global perspective as likely having a negative impact on climate change. I understand such considerations are

consistent with a retreat from acknowledging the paradox of consumptive behavior and ecosystem degradation. I hold that such a retreat could lead the development of a low-level construal by the consumer. The influence of extrinsic forces on the development of low-level construals regarding pro-environmental choice-making is also of great interest to me and the subject of future research.

To gain a deeper understanding of how environmental values are established, I recorded insights from the participants about how environmental entities and qualities are perceived in terms of value, and what participants understood about intrinsic and extrinsic values. I probed for answers to the following question: Did participants comingle the concepts of intrinsic and extrinsic value? I found that they did not routinely consciously engage in "both or either" value considerations. Did participants perceive that there is a different value, such as an ecological or mutualistic value, that would identify with a combination of intrinsic and extrinsic values? I found little evidence of deliberate considerations of ecological or mutualistic thought processes. Discovering such high-level construals should be the subject for a future study. Did participants consider or acknowledge differences between the intrinsic *values* an object may have and its intrinsic *properties*? Most participants did not acknowledge the difference between intrinsic values and properties of an object; rather they considered one as part of the other. For example, a healthy ecosystem (intrinsic property) was important to their health (intrinsic value). The literature is not clear as to how individuals perceive and distinguish *between* such values with respect to the consumption of natural resources, and is the subject for future research. My findings support the conclusion that pro-environmental

choices are enhanced when prior existing intrinsic values are brought to conscious consideration.

There is scant literature regarding memory and consumption in ecological psychology, especially regarding the role memories can play in shaping or reshaping behavior with respect to perceptions, attitudes, and exploitation of natural resources. I confirmed that memories are one of many environmental influences that can be used either consciously or subconsciously in the formation of perceptions as well as intrinsic and extrinsic values of natural resources leading to consumption. Kim (2013) stated that attitudes and beliefs held by individuals are not always at the fore of routine thoughts, but are often brought to the fore by certain cues in one's environment. Such cues can be stimulated by memories of events or circumstances. I found a strong relationship in the feedback provided by participants between memories and fondness for nature. As presented in Chapter 4, many respondents stated they believed early childhood experiences and memories are a primary factor in their love of nature and their *need* for its preservation. Similarly, people's stereotypes and cultural values can also be stimulated based on a situation or experience (Campbell & Mohr, 2011). I found this also to be true to the extent some participants had memories specifically related to the cultural or familial background and nature such as farming or otherwise *living off the land*. Baldwin, Biernat, and Landau (2015) stated that a better understanding of certain memories such as those considered nostalgic could lead to a better understanding of the intrinsic self and well being. I found this likely to be true from emotional expressions provided during the interviews. Further research is necessary to determine the degree by which understanding

memories and recalling them accurately has on the development of intrinsic values and the expression of pro-environmental choice-making.

Based on the findings of this study, I maintain that a better understanding of the antecedents that promote intrinsic and extrinsic value systems will promote responsible consumption; a person's ultimate behavior can be informed by self-awareness of specific value orientations (Han, 2015; McDonald, 2014). A longitudinal study on the long term effects on pro-environmental behavior based on a greater personal awareness of intrinsic values and extrinsic forces is warranted. I also found that the lack of environmental experiences, such as an extreme African wildlife encounter, is a limitation on the participant's general environmental concerns which suggests the lack of context for environmental concerns can limit the generation of both episodic or nostalgic memory and intrinsic values.

The Manifestation of Environmental Dissonance

Participants strongly held that manifestations of environmental dissonance were related to unsustainable or excessive consumptive behavior, the influences of extrinsic forces such as product marketing, and by the routine conduct of wasteful behavior i.e., relevant to the second research question: How do individuals perceive and describe environmental dissonance? Throughout this study as participants became more aware of the paradoxical relationships that contribute to the formation of environmental dissonance they also became more aware of how dissonant thoughts influenced their perceptions of the environment; participants provided me anecdotes of situations in their daily lives that described how they experienced environmental dissonance. Brown and Bishop (2011) stated that paradoxes can be stimulated by a convergence of personal control in the

decision process and societal or organizational pressures toward behavior which was supported in the findings of this study to the extent participants discussed with me their personal experience with deliberating and acting upon examples of environmental dissonance in daily life. To further expand on the knowledge of how environmental dissonance influences consumptive behavior, a thorough understanding of how the phenomenon occurs in daily life is necessary. Often times individuals are confronted with scenarios of environmental dissonance and choose one of two perspectives (Bonnett, 2012) Bonnett stated that from a Western perspective environmental problems are often thought of as an opportunity to seek technical solutions and modify personal behavior that result in the least amount of impact on what individuals perceive as *the good life* or they choose to see environmental problems as the need to comprehensively change current perceptions of *the good life*. Bonnett's assertion was confirmed in this study to the extent some participants established thresholds for the degree in which they would sacrifice *the good life* in favor of making pro-environmental choices. The threshold however, did seem to be related to the degree of understanding intrinsic values. Further supporting the notion of a threshold for pro-environmental choice-making by the participants in this study, ethical convictions that produce motivational forces that in themselves do not guarantee a specific behavior should be corrected based on the unattainable outcome which suggests that environmental dissonance can be self-managed (Boldt, 2013; Kasser, 2011). As stated in the previous section, based on the data participants provided in this study an opportunity may exist to modify consumptive behavior and the manifestation of environmental dissonance with greater exposure, awareness, and understanding of intrinsic values in nature. Most importantly, I

discovered that as participants considered their own thresholds they began to understand the implications of their environmental choice-making. My assertion is supported by Gawronski (2012) who stated that erroneous belief systems can undermine decision making indicating that cognitive consistencies (the absence of cognitive dissonance) are supportive of contextually correct actions. Said another way, the absence of environmental dissonance (and in particular erroneous errors in environmental belief systems) is therefore supportive of contextually correct environmental actions. Further research is necessary to determine if Gawronski's assertion applies in the specific context of pro-environmental behavior.

Excessive consumption was a substantial topic of interest in this study and one that all participants related to with either personal experience or anecdotes of social problems. Veblen's (1899; 1994) conspicuous consumption theory was an appropriate theoretical construct for use in this research as it considered specific variables of interest in this case study approach that related to perceptions and realities of daily life. Such variables included culture and sub-culture, social classes, reference groups (a social group that one aspires to), and groups of belonging, all aspects that potentially influence perceptions of daily life. The conspicuous consumption concept was used to examine influences on participant behavior regarding these participant's reactions to environmental dissonance. It provided an opportunity to understand how participants perceived and described their own experience with the origin, manifestation, and mitigation of environmental dissonance. However, that concept was not particularly helpful in confirming that respondent's reactions to dissonance vary as a function of their obtained social status since all respondents in this study varied little in their obtained

social status. Regarding the management of consumptive choices, Wisman (2011) stated that as capitalism matures conspicuous consumption would be democratized making it vital in attempts to achieve social respectability or social status and it would be so powerful over consumers that it would have devastating consequences on the environment. Though the development of social status was not directly pertinent to this study, it was important to recognize through the data that social and economic status of the respondents played a role in their overall wilderness experience and perceptions of the environment. To reiterate, social status was not significant in this study, however, relative to conspicuous consumption in general, I have confirmed that materialism stems from an extrinsic value orientation and participants did not understand well how strong extrinsic forces *crowd out* intrinsic values and manipulate subsequent behavior (Kim, 2013; Sheldon, Gunz, Nichols, & Ferguson, 2010).

The theory of planned behavior (TPB; Ajzen, 2012) is generally referred to in the context of a model that predicts behavior based on an individual's intent to perform an act moderated by their attitude, perceived behavioral control and subjective norms (Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009; Ajzen & Sheikh, 2013). Researchers commonly use TPB to explain pro-environmental behavior making it a relevant theoretical construct to explore in this study Botetzagias, Dima, and Malesios (2015). I used TPB as a means to explore the connection between the elements of the theory with the manifestation of environmental dissonance. Further, Michaelidou and Hassan (2014) stated that qualitative interviews can indicate the deeper role subjective norms have on planned behavior which was reported in Chapter 4 of this study.

Little research was found establishing a relationship between environmental dissonance or conspicuous consumption and planned behavior, but I found awareness of one's planned behavior or cognitive habits can lead to a broader self-awareness that includes how one interacts with the environment and specifically how one perceives consumptive behavior. Further I found that an awareness of individual's cumulative intentions to perform can define one's behavior and is an important element in understanding how the participant's perceptions of environmental dissonance ultimately evolve from working memory to perceptions, to actions. Similarly, Zimmerman (2013) stated research shows behavior is not reducible in a deterministic fashion to a collective of individual decisions rather that decisions are built on cumulative inputs that create momentum and that the result is more accurately described as an assimilation of patterns rather than choices. I did not find from the participant's evidence of influence for the cumulative effect pro-environmental decisions or actions had, but such research is warranted to determine if such cumulative effects moderate intrinsic value systems for nature. To reaffirm, I sought to use the theory of planned behavior to explore how perceived behavioral control contributed to awareness of environmental dissonance leading to responsible mitigation of it. What was not known based on my literature review was how a better understanding or self-awareness of planned behavior can influence perceptions of environmental dissonance and ultimately the mitigation of it however, based on the field research I conclude that highly emotional responses or non rational influences stimulated by the wilderness experience did have a substantial impact on perceptions of environmental dissonance which the theory of planned behavior might not adequately address.

De Leeuw et al. (2015) stated that intentions to act environmentally responsible and perceived behavioral control are the two most immediate antecedents to pro-environmental behavior indicating alignment with the essence of understanding how individuals perceive and describe their own experience with environmental dissonance. Dill, Mohr, and Ma (2014) stated that the environment in which the behavior occurs is also influential to the extent it influences attitude and perceived behavioral control suggesting that conducting this study in a pristine wildlife environment could and did help to produce rich and deep narratives about participant's views on pro-environmental behavior.

The Reduction of Environmental Dissonance

To address the third research question: How do individuals manage consumptive choices and mitigate environmental dissonance? I used such theories as self determination, sustainable consumption, and decision theory to understand the process of dissonance reduction. I then probed participants with an exploration of research specific to decision processes that help to understand their final expression of how they manage consumptive choices and mitigate environmental dissonance.

According to Festinger (1957) experiencing a condition of cognitive dissonance gives rise to the need to reduce or eliminate it; moreover, the complexity of the reduction or reconciliation process is a function of the magnitude of the dissonance. Festinger further stated there are three ways to achieve dissonance reduction which participants in this study confirmed, (a) changing a behavioral cognitive element or how the participant felt or acted upon something, (b) by changing an environmental cognitive element or the participants social or physical environment, or (c) by adding a new cognitive element that

changed either the social environment or physical environment in a way that changed the participants behavior.

Sustainable consumption refers to consumer behavior evidenced by thoughtful consideration and action toward pro-environmental choice-making to consume fewer natural resources. Dermody, Hanmer-Lloyd, Koenig-Lewis, and Zhao (2015) framed the concept of sustainable consumption as an imperative to change consumptive behavior to more sustainable choice-making in order to address a fundamental ecological crisis. Lorek and Fuchs (2013) stated that sustainable consumption is a construct that pertains to behavior and that a strong commitment to such pro-environmental behavior is paramount to long term behavioral change in favor of responsible consumption indicating an emphasis on the influence of cognitive processes and perceptions. Most participants in this study indicated they had a strong commitment to pro-environmental behavior, but did not express an experience with long term behavioral change regarding sustainable consumption. Generally participants expressed that their general attitude and behavior toward the environment and consumption were representative of a consistent lifetime value orientation of nature. I assert one explanation is that the participants perceive themselves to have a stronger commitment to the environment than they actually do. This assertion is supported with the participant's acknowledgment of pro-environmental choice-making thresholds previously discussed.

Participants noted the influence of extrinsic values derived primarily from market forces and social status pressures played a dominant role in the formation of consumptive habits. Relative to the formation of long term consumptive habits Dermody et al. (2015) stated that with deeper commitments to sustainable consumption choice-making that pro-

environmental behavior is seen as a threat to the *dominant social paradigm* which provides an explanation for the link between the power of market forces and need to pursue materialistic social status described as conspicuous consumption. Similarly, Hoque (2013) stated suppliers of goods tend to ignore or minimize the issue of consumption reduction because it does not fit with the traditional economic growth paradigm; instead marketing and sales strategies have shifted to *green consumption*. Generally however, participants did not disclose that they were guided by consumptive social paradigms. Hoque (2013) stated that for there to be shift in social policy toward sustainable consumption a new lifestyle paradigm would be needed and generally the participants in this study agreed.

Zimmerman (2013) stated the construct of human decision making is characterized as clusters of cognitions triggered mutually by a single cue. I sought to understand from study participants if this can be exemplified through a narrative of their lived experiences before and during their safari experience. According to Zimmerman (2013) "Cognitive habits accordingly permit learning. They are building blocks that can be assembled in a variety of ways to create different structures, and it is these structures that constituted our thought and our behavior" (p. 48). Participants indicated frequently that what they had experienced while on safari definitely permitted learning and new knowledge of ecosystems and their intrinsic value. Knox, Otto, Stone, and Love (2012) stated effective dynamical decision making paradigms include a mindful balance of exploratory and exploitive human behavior coupled with reflective and reflexive thought processes. Participants provided some evidence of this during the game drives and interviews, but more targeted research on dynamical decision making is necessary as it

was beyond the scope of this case study. Contrarily, Gherasim and Gherasim (2013) stated that making *good* choices is often not the result of a particular decision process rather one achieved in response to external stimuli that controls behavior. The setting of this study provided strong external stimuli that initiated strong pro-environmental responses from the participants, but confirmation of the assertion will require further research using different methodologies to determine if the stimuli controls behavior or simply moderates it. Likewise, Hoque (2013) stated that cognitive dissonance increases as the magnitude of importance and impact of a decision increases. Again, such an assertion is subject to the notion of achieving a perceived pro-environmental threshold according to the participants in this study. Such divergent explanations indicate a gap in the literature with respect to the material question regarding how individuals mitigate environmental dissonance. Much has been written on decision making and theories abound that describe how individuals arrive at conclusions and choice, but little is known about the reconciliation process of mitigating antecedent paradox.

In conclusion, I found that the participants in this study noted substantive change in how they will consider environmental dissonance in the future based on their sensory experience in the African bush wilderness. All participants indicated the wilderness experience impacted how they understand ecosystem sensitivities to human interaction and conflict therefore were likely to consider pro-environmental choice-making as a higher priority with regard to managing consumptive behavior.

Limitations of the Study

Perhaps the most critical limitation was in choice of sampling strategies. I gave careful consideration to the appropriateness of the sample strategy relative to the purpose

of this study. I understood that the use of purposeful theory based construct sampling in this case study renders the findings potentially generalizable only to other eco-tourism experiences and samples (Yin, 2014).

The findings are also limited to the extent that the participant pool was exclusively English speaking U.S. citizens and participants provide data that was biased or was interpreted through a possibly biased lens of the researcher. Further, the wilderness environment of sub Sahara Africa was vastly different than any other prior wilderness experience the respondents reported, including where they live and recreate, that the research setting may have seemed surreal making it difficult to retain long lasting impressions or changes in perceptually guided behavior toward the environment. Other limitations of the study included factors that potentially influenced responses such as emotion, physical disorder, recall limitation, political perspective, or lack of understanding the survey or interview question(s). I mitigated such limitations by allowing participants to confirm the accuracy of transcriptions.

The primary means to minimize threats to quality and internal validity in the data collection, management, and analysis will be accomplished by methods of triangulation (Patton, 2002). The data collection and analysis model I used in this case study included the triangulation of data using a variety of sources; triangulation of data collection methods such as interviews, documentation review including artifacts, and observations; and triangulation of multiple theory based constructs using multiple contexts to analyze a single data set to reveal potential *consistencies of inconsistencies*.

To help mitigate the limitations of this study and to insure the quality of data, I attempted to minimize bias and misunderstandings. I articulated to participants a clear

understanding of the tenets of phenomenology and the phenomenon I was researching as well as methods I employed. In terms of researcher discipline, I maintained constant vigilance over personal bias, data management integrity, participant care, and reflexivity. I realized by conducting a qualitative naturalistic form of inquiry coupled with content analysis that my personal experiences, values, and perceptions can potentially influence how I see, hear, and interpret forms of input; the rigorous research design in this research proposal was strengthened by triangulation to minimize bias and impartiality while maximizing accuracy of the findings and analysis.

Recommendations

This case study was telling in all the ways anticipated however, the inquiry as designed produced more unanswered questions than it was intended to address. As a case study the scope of the research was intentionally confined to a group of participants in a bounded geographic area inside the Kruger National Park, South Africa in order to explore and understand the essence of the stated research problem. Though I knew a bounded study would have its limitations, I also knew that it was an effective step in developing further research designs and studies. Based on the strengths and limitations of this study and the literature review I conducted on the topic of the research phenomenon, the following sections are a compilation of areas of future study that are of particular interest to me and will likely be pursued if not by me, perhaps researchers that follow me.

Future Research Regarding the Development of Environmental Dissonance

The literature is not clear as to how individuals perceive and distinguish between intrinsic and extrinsic values with respect to the consumption of natural resources and is the subject of future research. Similarly, research regarding the development and

influence of high-level construals on the promotion of intrinsic value consideration is needed in order to understand cognitive antecedents on pro-environmental behavior. Likewise more research is warranted regarding the influence of extrinsic forces on the development of low-level construals and the influence low construals have on pro-environmental choice-making. A longitudinal study of the long term effects on pro-environmental behavior based on a greater personal awareness of intrinsic values and extrinsic forces is warranted.

The findings in this study support further research regarding the role of memories, whether nostalgic or episodic, have on consumption. Research is also warranted on the role memories have in shaping or reshaping behavior with respect to perceptions, attitudes, and exploitation of natural resources. Further research is necessary to determine the degree by which understanding memories and recalling them accurately has on the development of intrinsic values and the expression of pro-environmental choice-making.

Future Research Regarding Environmental Dissonance in Daily Life

Gawronski (2012) stated that erroneous belief systems can undermine decision making indicating that cognitive consistencies (the absence of cognitive dissonance) are supportive of contextually correct actions. Further research is necessary to determine if Gawronski's assertion applies in the specific context of pro-environmental behavior. Further research is needed to determine if the cumulative effect of pro-environmental decisions or actions determine or moderate intrinsic value systems for nature. Lastly, further research is needed to determine how a better understanding of self awareness and planned behavior can influence perception of environmental dissonance and ultimately the mitigation of it in daily life.

Future Research Regarding Reduction of Environmental Dissonance

Regarding the mitigation of environmental dissonance, targeted research on dynamical decision making (exploratory and exploitive) with respect to environmental behavior is necessary to better understand how individuals determine the magnitude of dissonance. Much has been written on decision making and theories abound that describe how individuals arrive at conclusions and choice, but little is known about the reconciliation process of mitigating paradox between values and perceptually guided behavior toward the environment. Further research is needed to examine how individuals draw upon and act upon dissonant environmental data. The setting of this study provided strong external stimuli that provided dissonant environmental data for the participants; the strong external stimuli initiated strong pro-environmental responses from the participants, but confirmation is needed using different research methodologies to determine if the stimuli controls behavior or simply moderates it. Likewise, further research is necessary to determine if the wilderness experience and setting was so strong and completely foreign to the participants that it insulated existing perceptions from ecological realities, pro-environmental choice-making, and long term behavioral change.

Finally, with respect to understanding (a) the antecedents to perceptually guided consumptive behavior, (b) how individuals perceive and describe environmental dissonance and, (c) how individuals manage consumptive ethical considerations, the literature provided no clear conclusion. Further, understanding the nexus between the assignment of intrinsic values of living and non-living things with intrinsic motives is also not well established in the literature, but can be explored in a future study through the lens of self-determination theory (SDT). Such a lens can provide the basis for an

understanding of how individuals propitiate their conscious thoughts with their actions. In other words, SDT can provide insight as to how individuals perform environmental dissonance reduction. SDT further provides a behavioral construct that can be used to examine intrinsic and extrinsic motivations of people and how such motivations can manifest into certain behaviors. In this study I intended to divulge the perceptions people have as they relate to the interconnectedness of self-determined intrinsic values and the influence external factors may have on participant responses. Further study is necessary to understand how individuals perceive the need to self regulate one's behavior as a consequence of cognitive environmental dissonance based on environmental pressures and primarily social pressures. I acknowledge that an exploration of SDT in the context of this study was only tangential and not a primary focus of this research. The influence of SDT on pro-environmental behavior was beyond the scope of this study and a logical *next step* in my life long research goals and objectives. SDT was presented in this study primarily as a means to establish a reference or connection between this study and future research I plan to conduct.

Implications

The significance of this study was driven from my personal and professional interests and subsequent analysis of an extensive literature review and field work. The design of this study provided me the means to addresses the identified gaps in the literature pertaining to the research objective of exploring cognitive dissonance between consumption of natural resources and degradation of ecosystems. This study was designed in part to provide conclusive evidence toward advancing the discipline of environmental leadership, practice, and theory, as well as promote positive social change.

Significance to Practice

Beyond reconciling the research gaps identified to influence alternative outcomes in favor of alleviating the research problem, other more macro level yet practical implications were considered; one such example was with the implementation of an environmental policy known as Cap and Trade which was established to reduce the financial cost of abating environmental damage attributed to the emission of sulfur dioxide. The policy has in fact had the reverse impact and in some areas increased environmental damage and mortality rates within the United States (Henry, Muller, & Mendelsohn, 2011). Similarly in this study some participants indicated they were confronted with the choice to either purchase expensive clean burning fuel for their vehicles, but then wondered when considering the entire process of its production and distribution whether or not it was a wise environmental choice. Though the findings of this research are not generalizable beyond the bounds of this study, the practical implications of my findings offer global managers of natural resources and public policy developers an alternate understanding of sustainable consumption paradigms; one that capitalizes on understanding how individuals develop, experience, and behave when confronted with environmental choice-making.

Pellissier (2011) stated business organizations and management responsibilities have become increasingly more complex, leadership and management styles that are built on linear and/or mechanistic foundations are becoming more irrelevant and less effective in the global market place. Similarly in the discipline of environmental leadership the issue of *human and wildlife conflict* has become increasingly complex and conflicted as competition between rural land use and natural habitats have resulted in the need for

holistic management approaches to avoid ecosystem failure. The findings of this study can serve as the foundation for resource managers toward a more eco-friendly and holistic approach to resource utilization that bridges the lack of understanding environmental dissonance between such conflicts thus decreasing ecosystem degradation.

The findings of this study provides the reader with a better understanding of social influences over human engagement with the environment and equips business and community leaders to more effectively respond to resource concerns thus establishing a new construct of consumptive vs. non-consumptive resource utilization. Cock (2007) suggested that a central challenge to conservation of natural resources is to address them in the context of their impacts on energy consumption and job creation which many participants in this study addressed. Moreover, through the significance of this research, I demonstrated that participant's recognition of intrinsic values for ecological sub-systems is supportive of a sustainable natural environment and, according to the participants, generally reduce environmental dissonance.

Significance to Theory

Again I acknowledge that the results of this qualitative study are not statistically generalizable, they are however analytically generalizable (Yin, 2014) therefore, the significance to theory was achieved in this study by adding to the body of leadership and management knowledge pertaining to resource management from the perspective of the consumer or end user (participants in this study). Much is written about decision making based on cultural norms or economics, but little research has been conducted on exploring cognitive processes to uncover what most individuals may come to regard as responsible and sustainable natural resource stewardship. This study included an

interdisciplinary approach to understanding the research phenomenon and a multi-theory based construct of examining three distinct contexts of the phenomenon. The implication to theory may be an awakening of the conscious toward pro-environmental choice-making and eco-friendly consumption based on a systemic application of value theory, memory theory, planned behavior theory, conspicuous consumption theory, sustainable use theory and decision theory.

Significance to Social Change

Through this study, I aimed to provide consumers, managers, and leaders an alternative paradigm to wasteful and unsustainable consumption by adding to the body of knowledge an awareness of personal environmental dissonance. By publishing and advocating this research, positive social change will manifest in greater metacognition by individuals of consumptive uses for natural resources. It is my expectation that such use of this research will promote a new consumer construct of stewardship toward all natural resources resulting in the potential for healthy and sustainable ecosystems.

A new environmental ethos requires a new way of thinking and processing that embraces complex adaptive change, dynamical decision making, and environmental systems thinking with the goal of creating positive environmental change. In order for this to occur, it is my belief that a new environmental leadership paradigm must be born. I hold that although a new environmental leadership ethos can be a central feature of an environmental leadership paradigm that is conducive to understanding the social influences over human engagement and consumption of natural resources, such environmental leadership can fill a gap that exists in understanding causal relationships linked to strengthening the durability of species and habitat. Filling this gap with a new

environmental paradigm, ethos, and commitment to a new corporate social responsibility paradigm will provide significant change opportunities for individuals and organizations. Corporations will benefit through the development of new eco sensitive product markets, management of stakeholder risks and potential conflicts, wise use of resources in the production of goods and services limiting wastage, creation of new customer loyalties, and the ability to attract and retain talented employees with a broad concern for social issues and corporate externalities (Sharma and Mehta, 2012).

Conclusions

As the corporate world, societal networks, and communities become more and more globalized and the flow of natural resources and information about stewardship becomes increasingly available to citizens of the world, a new emphasis on the discipline of environmental leadership including a new pragmatic environmental ethos is needed to meet certain basic human needs of future generations. Since 1970 the species population of over 10,000 species measured in the Living Planet Index has declined by 52% (McLellan, Iyengar, Jeffries, & Oerlemans, 2014). Regardless of the cause for such decline, like global warming, it will be infinitely argued however, the trend of such decline is alarming. Global ecosystem degradation, including the extinction of species, coupled with a trend indicated by Twenge, Campbell, and Freeman (2012) that younger people are becoming less engaged in civic affairs, have less concern for others, and are less concerned about the environment is also alarming at best. I posit that not knowing how environmental dissonance develops or how it affects resource consumption is fundamental to the findings of Twenge, Campbell, and Freeman and therefore in this study I aimed to paint a mosaic to better understand that fundamental gap in knowledge.

In this case study, I analytically presented the process for determining such gaps in knowledge as well as the methods to uncover and understand antecedents to perceptually guided behavior toward the environment.

Within the limitations of a case study analysis, the dominant findings suggested that awareness of personal values; personal culture and personal perceptions toward the environment were responsible for how participants developed basic attitudes toward the environment and consumption. I also found that wasteful habits, excessive consumption, and market influences were considered extrinsic forces that participants juxtaposed with nostalgic memories of environmentally friendly and often familial activities which conjured up reflective moments and deep thoughts about their personal consumptive habits. Finally and perhaps most revealing about this study was the acknowledgment of all participants that their multi-sensory experience in the pristine and wild African Savannah and personal interaction with the environment changed their perception and values toward ecosystems and ecosystem preservation.

The essence of this research and its potential impact on the discipline of environmental leadership may be profound to the extent a new environmental paradigm will facilitate a better understanding among all suppliers and consumers of the need to transform consumptive behaviors that lead to ecosystem degradation. I expect that my findings will lead global environmental, social, and economic policy makers to consider enhanced ecological dissonance experiences as a means to preserve the utilization of all natural resources beginning with endangered and threatened species and/or habitat.

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Appendix A: Interdisciplinary Dissertation Literature Matrix

The following dissertation source matrix is a comprehensive listing of all material references used in this study. Also included is a breakdown indicating the percentage of historical references versus current (sources within five years old) as well as the number and type of source used per subject matter and literature review sub-section. Please note that this study reviews applicability of numerous theoretical constructs therefore a considerable number of historical references were required and the matrix below provides evidence of meeting Walden University's requirement for currency of references.

Dissertation Source Material Matrix (including literature review section)

Searched categories by discipline	Scholarly journals	Dissertations	Books	Government reports	Other articles	Total
Psychology / Sociology	40		3			**43**
Environment / Ecology	20		3		2	**25**
Leadership / Management / Ed / Philosophy	34		6		2	**42**
Total	**94**		**12**		**4**	**110**
Historical	20		6			**26**
Current (2010 – 2015)	74		6		4	**84 (76%)**
Total	**94**		**12**		**4**	**110**

Literature Review Section Source Material Matrix

Searched categories by sub-topic	Scholarly journals	Dissertations	Books	Government reports	Other articles	Total
Paradox	9		3		2	**14**
Phenomenon	15		2		1	**18**
Propitiation	26					**26**
Total	**50**		**5**		**3**	**<u>58</u>**
Historical	1		4			**5**
Current (2010 – 2015)	49		1		3	**53 (91%)**
Total	**50**		**5**		**3**	**<u>58</u>**

Appendix B: Literature Review Sample Citation Catalogue

Literature Review Citation Catalogue

Full APA reference citation	Type of Source; Scholarly/ Peer-Reviewed	Brief Description of the Topic	Major Concepts or Theories	Research Method/Design/ Instrumentation	Variables, Phenomenon, Population, and Setting	Major Findings	Conclusions
Browne, A. L., & Bishop, B. J. (2011). Chasing our tails: Psychological, institutional and societal paradoxes in natural resource management, sustainability, and climate change in Australia. *American Journal of Community Psychology*, *47*(3-4), 354–61. doi:http://dx.doi.org.ezp.waldenulibrary.org/10.1007/s10464-010-9390-1	Peer reviewed journal article	Examination of psychological, institutional, and societal paradox between resource management objectives and consumer demand.	Stratified paradox, community psychology, contextual-ism. (paradox)	Meta review.	Individual, institutional, and societal paradoxes regarding climate change in Australia.	Solutions to environmental paradox includes identifying multiple scales of paradox and how the context of each scale influences economy, nature, and democracy.	
Gawronski, B. (2012). Back to the future of	Peer reviewed	Examination of cognitive	Reaffirmation of	Phenomenological review;	Variable influences	None provided.	The need for cognitive

dissonance theory: Cognitive consistency as a core motive. *Social Cognition*, *30*(6), 652–668. http://doi.org/10.1521/soco.2012.30.6.652	journal article	consistencies as a core motive underlying thinking and reasoning.	Festinger's theory of cognitive dissonance. (phenomenon)	identification of cognitive consistencies and what influences them.	included consistency, ambivalence, fluency regarding beliefs.		consistencies is strong and a core motive; alternatively, inconsistencies can signal errors in one's belief system.
Zimmerman, M. J. (2015). Intrinsic vs. extrinsic value. *The Stanford Encyclopedia of Philosophy* (Spring 2015 Edition). Edward N. Zalta (ed.). URL = <http://plato.stanford.edu/archives/spr2015/entries/value-intrinsic-extrinsic/>	Peer reviewed online journal article	Historical review of intrinsic value of classical and modern day philosophers.	Theories of intrinsic value have been debated in terms of whether or not there is truly an intrinsic nature; value for "it's" own sake and not for the sake of something else.	Meta review.	Various interpretation of value. Certain factors lead intrinsic value to ultimately be classified as extrinsic. Moral interpretation are also a significant attribute in many discussions.	Intrinsic value does likely exist but the evaluator must fully understand/ define what is meant by intrinsic.	The evaluator must be clear when using intrinsic values and not confuse intrinsic with other values such as instrumental or other derivative forms of value. Intrinsic value is generally non-derivative.

Botetzagias, I., Dima, A.-F., & Malesios, C. (2015). Extending the Theory of Planned Behavior in the context of recycling: The role of moral norms and of demographic predictors. *Resources, Conservation and Recycling*, 95, 58–67. http://doi.org/10.1016/j.resconrec.2014.12.004	Peer reviewed journal article	Research on the effectiveness of planned behavior theory in predicting recycling behavior in Greece.	Evaluation of traditional TPB components; attitude, social norms, and perceived behavioral control	Quantitative analysis of Greek citizens of their intent to utilize recycling programs	The inclusion of moral norms and demographics as additional moderators of the intent to recycle.	Study found PBC was most effective component of TPB and that demographics were statistically non-significant as a predictor of the intent to recycle.	Confirmation that PBC was effective in predicting intent and that moral norms also play a role in modeling predictive behavior.

Appendix C: Informed Consent Form

CONSENT FORM

You are invited to take part in a research study about understanding three phases of mental conflict (environmental dissonance) individuals may experience between wanting to preserve the environment and utilizing or consuming it. The researcher is inviting all adult English speaking guests during their safari vacation at Ezulwini Game Lodges to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Thomas L Tochterman, who is a doctoral student at Walden University.

Background Information:
The purpose of this study is to explore environmental dissonance of individuals and how such conflict relates to consumptive behavior of consumers. The leadership and management problem this study is addresses stems from a lack of knowledge concerning how environmental dissonance influences consumption which may lead to inefficient natural resource utilization and ecosystem degradation.

Procedures:
If you agree to be in this study, you will be asked to:
- Participate in a one on one interview with the researcher.
    - Interview should take between 45 and 60 minutes.
    - The audio portion of the interview will be recorded for transcription.
    - Interview will consist of approximately 18 questions.
    - Interview will be conducted at the lodge where the guest is located.
    - Interview will be conducted during time between game drives.
- Allow the researcher to film (audio/visual) physical and emotional reactions while on a safari game drive.
    - Filming will be unobtrusive using small GoPro equipment and not interfere with the game drive experience.
- Provide a short written account of an ah-ha moment while on safari.
- Asked to provide further clarification or additions to your interview responses after you return home from your African safari.

Here are some sample questions:
- Describe a memory(s) you have that specifically shaped your thoughts on ecosystem values.
- Describe a memory that was triggered while on a game drive that made you question a previously held perception of the environment.

Voluntary Nature of the Study:
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one concerning your safari experience will treat you

differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study:
Being in this study will not pose risk to your safety or wellbeing.

Your participation in this study will benefit you by stimulating a greater personal awareness of the research problem. The unique study setting will provide you a great opportunity to reflect on the subject matter that would likely be difficult to replicate during your daily life and routine when you return home.

Payment:
There is no financial or other compensation for your participation in this study.

Privacy:
Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by using encrypted storage devices with password protection. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone at xxx.xxx.xxxx or by email at Thomas.Tochterman@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 612-312-1210. If dialing from outside the United States please dial +1-612-312-1210. Walden University's approval number for this study is **02-16-16-0275695** and it expires on **February 15, 2017.** The researcher will give you a copy of this form to keep.

Obtaining Your Consent
If you feel you understand the study well enough to make a decision about it, please indicate your consent by signing below.

Printed Name of Participant

Date of consent

_____

Participant's Signature

_____

Researcher's Signature

_____

Appendix D: Interview Guide

Research Question #1: What are the antecedents
to the development of environmental dissonance and perceptually guided
consumptive behavior?

Interviewee:

- *Make sure person is at ease.*
- *Make sure person understands the informed consent document.*
- *Confirm the use of audio recording.*
- *Ask for any initial questions from the person prior to starting my questions.*
- *Ask probing questions, no judgmental frameworks.*
- *At conclusion describe how the data will be transcribed and analyzed.*

Descriptive Observations	Reflective Notes
P1: There are many ways to establish value for *goods and services* and two higher level ways of considering value is the value something provides by its mere existence (intrinsic value) and another consideration is the value something provides for the benefit of something else (extrinsic value). How do you consider the role of establishing intrinsic/extrinsic values in nature? **A:** **P2:** Sometimes I think about things like the popular debate of climate change and claims of how the planet is responding leading me to also think about my perspective on value of the environment. I question if my view is realistic and how it might be	

influenced or informed. Do you think about

potential differences and if so how often and under

what kinds of circumstances?

A:

P3: Do you experience times when you are worried

or concerned about the consumption of natural

resources (things such as waste, abuse, depletion)?

If so, can you describe sources/experiences of

conflict that you have had around thoughts of

environmental values (social, economic, political,

cultural, educational…).

A:

P4: Describe a memory(s) you have that

specifically shaped your thoughts on ecosystem

values.

A:

P5: Describe a memory that was triggered while on a game drive that made you question a previously held perception about the environment.

A:

P6: Did the experience of interacting *with* nature in a protected pristine game reserve change your perspective on environmental values and if so how?

A:

Pre-codes:
Pre-categories:

Appendix D Continued: Interview Guide

Research Question #2: How do individuals perceive and describe environmental dissonance?

Interviewee:

- *Make sure person is at ease.*
- *Make sure person understands the informed consent document.*
- *Confirm the use of audio recording.*
- *Ask for any initial questions from the person prior to starting my questions.*
- *Ask probing questions, no judgmental frameworks.*
- *At conclusion describe how the data will be transcribed and analyzed.*

Descriptive Observations	Reflective Notes
P7: Often times individuals experience a state of mental conflict when contemplating or discerning between opposing sets information or data. Such a state is called cognitive dissonance. Cognitive dissonance can even occur without being conscious of it and should not be confused with as a state of confusion or guilt. An example of environmental dissonance could be for some people the mental conflict about using plastic bags provided by the grocery store or using recycled ones. Tell me a story about an experience you had when you either experienced or witnessed environmental dissonance. Describe the emotional aspect of your response to the experience. **A:**	

P8: Describe a daily routine that you have observed when another person did not consider the environmental impact of their actions. Did their actions influence your own thoughts about environmental impacts?

A:

P9: Describe what being environmentally reckless means to you and tell me how you feel when you observe others being reckless with the environment.

A:

P10: How do you determine and describe excessive consumption?

A:

P11: Describe a feeling environmental remorse you

may have had either by an activity you were

involved in or one that was witnessed.

A:

P12: How would you say that your stay in the bush

impacted how you think about the environment and

how it should be transformed or preserved?

A:

Pre-codes:
Pre-categories:

Appendix D Continued: Interview Guide

Research Question #3: How do individuals manage consumptive choices and mitigate environmental dissonance?

Interviewee:

- *Make sure person is at ease.*
- *Make sure person understands the informed consent document.*
- *Confirm the use of audio recording.*
- *Ask for any initial questions from the person prior to starting my questions.*
- *Ask probing questions, no judgmental frameworks.*
- *At conclusion describe how the data will be transcribed and analyzed.*

Descriptive Observations	Reflective Notes
P13: How does your cultural background influence how you value environmental conservation? **A:** **P14:** Describe a memory you have when a television, radio, or print commercial influenced you to consume beyond your then current levels of consumption. **A:** **P15:** Describe what sustainable use means to you in your daily life and how you achieve it. If you do not achieve it, describe the barriers. **A:**	

P16: Has the safari experience changed your notion of sustainable use and if so how?

A:

P17: Give me an example(s) when you recall an event where you evaluated whether or not to consume because you perceived it to be either wasteful or excessive in some way.

A:

P18: How would you describe changes in *environmentalism* both personally and socially over the span of your life including examples of decisions you made to accommodate such change?

A:

Pre-codes:
Pre-categories:

Appendix D Continued: Interview Guide

Post-Interview Comment Sheet

Interviewee Name:

Date of Interview:

Length of Interview:

1. Interviewee's general attitude about subject matter:

2. Overall quality of the interview data received from interviewee:

Little Rich	Some Rich	Very Rich

3. Highlights of noteworthy comments from interviewee: (reference question to comment)

4. Questions/responses that warrant follow up or amendment of interview prompts:

Appendix E: Interview Question Framework

Interview Question Framework

Research Problem	Lack of knowledge concerning how environmental dissonance develops, manifests, and influences consumptive behavior which relates to inefficient resource utilization and ecosystem degradation.			
Context of environmental dissonance		Paradox of Values	Phenomenon of Consumption	Propitiation of Conflict
Theory based construct		Intrinsic/Extrinsic Value Theory; Memory Theory	Conspicuous Consumption Theory; Planned Behavior Theory	Self Determination Theory; Sustainable Use Theory; Decision Theory
Research question #1	What are the antecedents to the development of environmental dissonance and perceptually guided consumptive behavior?	Interview questions *(Preface with an explanation of cognitive and environmental dissonance; intrinsic and extrinsic values.)*	1. There are many ways to establish value for *goods and services* and two higher level ways of considering value is the value something provides by its mere existence (intrinsic value) and another consideration is the value something provides for the benefit of something else (extrinsic value). How do you consider the role of establishing intrinsic/extrinsic values in	

nature?

2. Sometimes I think about things like the popular debate of climate change and claims of how the planet is responding leading me to also think about my perspective on value of the environment. I question if my view is realistic and how it might be influenced or informed. Do you think about potential differences and if so how often and under what kinds of circumstances?

3. Do you experience times when you are worried or concerned about the consumption of natural resources (things such as waste, abuse, depletion)? If so, can you describe sources/experiences of conflict that you have had around thoughts of environmental values (social, economic, political, cultural, educational…).

4. Describe a memory(s)

			you have that specifically shaped your thoughts on ecosystem values. 5. Describe a memory that was triggered while on a game drive that made you question a previously held perception about the environment. 6. Did the experience of interacting *with* nature in a protected pristine game reserve change your perspective on environmental values and if so how?	
Research question #2	How do individuals perceive and describe environmental dissonance?	Interview questions *(Preface with I am seeking a narrative of their personal experiences with dissonance.)*		7. Often times individuals experience a state of mental conflict when we contemplating or discerning between opposing sets information or data. Such a state is called cognitive dissonance. Cognitive dissonance can even occur without being conscious of it and should not be confused with as a state of confusion or guilt. An

example of environmental dissonance could be for some people the mental conflict about using plastic bags provided by the grocery store or using recycled ones. Tell me a story about an experience you had when you either experienced or witnessed environmental dissonance. Describe the emotional aspect of your response to the experience.

8. Describe a daily routine that you have observed when another person did not consider the environmental impact of their actions. Did their actions influence your own thoughts about environmental impacts?

9. Describe what being environmentally reckless means to you and tell me how you feel when you observe others being reckless with the environment.

10. How do you determine

				and describe excessive consumption?
				11. Describe a feeling environmental remorse you may have had either by an activity you were involved in or one that was witnessed.
				12. How would you say that your stay in the bush impacted how you think about the environment and how it should be transformed or preserved?
Research question #3	When individuals experience cognitive dissonance a natural response is to remove the state of conflict which typically results in a decision process to accept one set of information and discard the other. **How do individuals**	Interview questions *(Preface with I am seeking scenarios of how they or others resolve or reduce their cognitive conflict.)*		13. How does your cultural background influence how you value environmental conservation? 14. Describe a memory you have when a television, radio, or print commercial influenced you to consume beyond your then current levels of consumption. 15. Describe what sustainable use means to you in your daily life and how you achieve it. If you do not achieve it, describe the barriers.

manage consumptive choices and mitigate environmental dissonance?			16. Has the safari experience changed your notion of sustainable use and if so how? 17. Give me an example(s) when you recall an event where you evaluated whether or not to consume because you perceived it to be either wasteful or excessive in some way. 18. How would you describe changes in *environmentalism* both personally and socially over the span of your life including examples of decisions you made to accommodate such change?

Appendix F: Sample Confidentiality Agreement

CONFIDENTIALITY AGREEMENT

Name of Signer (Print):

During the course of my activity in collecting data for this research: "Environmental Leadership: Exploring Environmental Dissonance Regarding Natural Resource Consumption and Ecosystem Degradation" I will have access to information, which is confidential and should not be disclosed. I acknowledge that the information must remain confidential, and that improper disclosure of confidential information can be damaging to the participant.

By signing this Confidentiality Agreement I acknowledge and agree that:

1. I will not disclose or discuss any confidential information with others, including friends or family.
2. I will not in any way divulge, copy, release, sell, loan, alter or destroy any confidential information except as properly authorized.
3. I will not discuss confidential information where others can overhear the conversation. I understand that it is not acceptable to discuss confidential information even if the participant's name is not used.
4. I will not make any unauthorized transmissions, inquiries, modification or purging of confidential information.
5. I agree that my obligations under this agreement will continue after termination of the job that I will perform.
6. I understand that violation of this agreement will have legal implications.
7. I will only access or use systems or devices I'm officially authorized to access and I will not demonstrate the operation or function of systems or devices to unauthorized individuals.

Signing this document, I acknowledge that I have read the agreement and I agree

to comply with all the terms and conditions stated above.

Signature: **Date:**

Appendix G: Letter of Cooperation from Ezulwini Game Lodges

Date

Dear Thomas L Tochterman,

Based on my review of your research proposal, I give permission for you to conduct the study entitled "Environmental Leadership: Exploring Environmental Dissonance Regarding Natural Resource Consumption and Ecosystem Degradation" within the Ezulwini Game Lodges facilities and game drives. As part of this study, I authorize you to recruit participants for your study as guests arrive at our lodges, interview guests, use audio and visual recording devices necessary for data capture during interviews and game drives, participate on game drives with guests, use lodge facilities to conduct onsite interviews, and disseminate findings to the Ezulwini and participants as appropriate. Individuals' participation will be voluntary and at their own discretion.

We understand that Ezulwini's responsibilities include: Providing access to lodge guests as potential participants in the study, access to game drives as space in the game drive vehicle permits, and a private room where interviews can be conducted. We provide no supervision of research activities and reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the Ezulwini's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Signature _____

Contact Information _____

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

Appendix H: Field Observation Journal

Date:
Field Observation Participants:

Descriptive Observations	Reflective Notes

Appendix I: Personal Story Worksheet

Describe a time while on a game drive you recalled a memory from your past that challenged or confirmed what you thought you knew about the value of nature. Describe the significance of that challenge or "ah ha" moment. If possible please provide a photo that visually represents that moment. Digital photo can be emailed to Thomas.tochterman@waldenu.edu

Describe a moment on the game drive or at the lodge when you reconsidered any aspect of your daily routine back home as it relates to consumption and the impact on the environment.

Describe an event or thought you had during your stay in the bush that made you think about sustainability of the natural world.