# THE RELATIONSHIP OF RELIGIOUS AND EXISTENTIAL VARIABLES TO SCORES ON THE ANIMAL-HUMAN CONTINUITY SCALE AND PERCEPTION OF BELIEFS ABOUT ANIMALS AND EQUALITY OF MANKIND

by

### FRANK LYLE KING

Liberty University

A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree

Doctor of Philosophy

Liberty University

April, 2011

© FRANK LYLE KING, APRIL, 2011 All Rights Reserved A Dissertation Proposal
Submitted to the
Faculty of Liberty University
in partial fulfillment of
the requirements for the degree of
Doctor of Philosophy

by

Frank Lyle King

© APRIL, 2011

 $Liberty\ University, Lynchburg,\ Virginia$ 

April, 2011

Dissertation Committee Approval:

JOHN C. THOMAS, Ph.D., Ph.D., Chair	Date
GARY R. HABERMAS, Ph.D. Reader	Date
DONALD I. TEMPLER, Ph.D. Reader	Date

#### **ABSTRACT**

# THE RELATIONSHIP OF RELIGIOUS AND EXISTENTIAL VARIABLES TO SCORES ON THE ANIMAL-HUMAN CONTINUITY SCALE AND PERCEPTION OF BELIEFS ABOUT ANIMALS AND EQUALITY OF MANKIND

# Frank Lyle King Center for Counseling and Family Studies Liberty University, Lynchburg, Virginia

Doctor of Philosophy in Counseling

The purpose of the present study is to determine the relationship between religious and existential variables and the Animal-Human Continuity Scale (Templer et al., 2006). The AHCS measures the extent that the respondent views animals and humans in a dichotomous versus a continuous perspective. Ninety nine (99) students at an evangelical southern university scored in the dichotomous direction as compared to the ninety six (96) students at a southern secular university. Likewise the more religious students, both those at the evangelical southern university and at a secular southern university, scored more in the dichotomous direction than the less religious students. Participants who scored higher on the Choice/Responsibilities Scale of the Life Attitude Profile-Revised

had a more dichotomous orientation. Thus, religious students are more likely to view animals as being created separately.

#### **ACKNOWLEDGEMENTS**

I wish to express special thanks and appreciation to my parents, Ellen I. King and Leonard R. King, who taught me the value of education. I love you both for what you have given me throughout the years.

To my very special and best friend, Mary Jo Atkinson, thank you for all of your prayers, encouragement and support. Your friendship and love is dear to my heart.

Without your support while I pursued this degree, this dissertation may never have come to fruition.

To Dr. John C. Thomas, associate professor at Liberty University, I say thank you for all your hard work, guidance, and leadership throughout this endeavor. I have appreciated your friendship as well as your willingness to chair this dissertation process.

I'd like to express my sincerest gratitude to my friend and mentor, Dr. Donald I. Templer, who graciously took time away from his family, and research, to encourage me. You have been a close and personal friend for thirty three years. Your encouragement was so well appreciated while pursuing this degree. You encouraged me to pursue my dreams no matter what the obstacles, and I deeply appreciate you and your kindness. I'll always cherish our fishing trips together, our visitations to the local rescue missions and volunteering our time and counseling skills to those who could not afford it or would not pursue it. You are what a Psychologist is supposed to be. Thanks for being my friend and thanks for being on my committee.

Deep gratitude is warmly expressed to Dr. Gary Habermas who encouraged me to continue on with my education in counseling. Without your encouragement I might have settled for less. I'll always remember our teaching assignments together and watching the NHL playoffs, the 60's song singing and the huge pancake breakfast's together. You are truly a man of God whom I deeply respect. Thanks for being on my committee.

A special thanks to Dr. Kimberly Tangen. Your statistical expertise and knowledge, and your willingness to work with me in computing the statistical results for this dissertation is deeply appreciated.

For your hard work in editing and typing this dissertation I give my sincerest appreciation and deepest thanks to Denise Thomas.

To Margie Schneider, a special thank you for your assistance, friendship and prayers in the early stages of this work.

A heart felt thank you to Richard Garman. By taking the time, to go over all of my calculations, and tables, you on more than one occasion, suggested a correction for me. Your thirty five years as an educator is apparent. Many, to include myself, have benefited from your devotion to education.

A special and loving dedication to: Stephen Richard Thompson.

# TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION	1
Problem Background	1
Purpose of the Study	4
Research Question	4
Delimitations and Limitations	5
Definition of Terms	6
Importance of the Study	7
Conclusion	9
Organization of the Remaining Chapters	10
CHAPTER TWO: LITERATURE REVIEW	12
Introduction	12
Historical Views on Animals	12
Entertainment for Man	16
Farming Costs	18
Research and Therapeutic Animals	20
Theological and Philosophical Perspective	24
Cognitive Abilities of Animals	34
Animal Rights	39
Discussion	42
Concluding Thoughts	45

CHAPTER THREE: METHODS	47
General Investigative Design	47
Instruments	48
Animal Human Continuity Scale (ANCS)	48
Life-Attitude Profile – Revised (LAP-R)	49
Measures of Religiosity	52
Demographic Questionnaire	53
Procedure	53
Research Questions and Hypotheses	54
Ethical Considerations	55
Summary	56
CHAPTER FOUR: RESULTS	57
Demographics	57
Table 4.1	58
Table 4.2	60
Table 4.3	61
Overall Results of Research Instruments	61
Means and Standard Deviation	62
Table 4.4	62
Statistical Analytical Findings of the Research Questions	63
Table 4.5	65
Table 4.6	66

Table 4.7	67
Table 4.8	69
Table 4.9	70
Table 4.10	71
Summary of the Results	71
CHAPTER FIVE: RESULTS, CONCLUSIONS AND RECOMMENDATIONS	73
Summary	73
Summary of Purpose, Design and Research Questions	73
Summary of Participants	75
Summary of Findings	75
Limitations, Implications and Recommendations	78
Limitations of the Study	79
Implications for Counseling	79
Recommendations for Future Research	80
Summary	80
REFERENCES	83
APPENDIXES	102
Appendix A: Demographics	102
Appendix B: Animal Human Continuity Scale (AHCS)	. 103
Appendix C: Life Attitude Profile – Revised (LAP-R)	. 104
Appendix D: Religious/Spiritual Inventory	.108
Appendix E: Informed Consent Form	109

#### **CHAPTER ONE: INTRODUCTION**

Today, in America, there is a tremendous split in the philosophical, religious, and scientific worldviews of modern man (Newman, 1987). One aspect of the split is between those whose worldview is that animals and humans are dichotomous in nature and those who hold that modern human beings and animals are two parts of a continuum. Creationists hold the dichotomous view that God created animals first and then created man in His own image, on separate days, in a literal week (Genesis 1:20-27). A second view, evolutionist theory, holds that man evolved from the lowest cell into modern human beings, a continuum that took hundreds of millions of years to develop. These constitute two distinct world views, Creationism and Naturalistic Evolution. This difference in these worldviews may determine how we treat animals and each other.

#### **Background of the Problem**

A person's world view may lead to differences in their treatment and attitudes toward animals, their view of the world and how they treat others. Mahatma Ghandi said that "the greatness of a nation and its moral progress can be measured by how it treats its animals" (Gandhi, 2006). By correlating one's church attendance, strength of belief, and existential life attitudes with the Animal Human Continuity Scale (Templer et al., 2006) would provide a telling indication of that person's beliefs about animals and others that may have good applications in the therapeutic world of pastoral and professional

counseling. Over half of our population has at least some college education (www.census.gov/press-release/archives/education /007660.htm:). It would seem that the attitudes that one has in college may be an indication of what one carries throughout the lifespan (Goethals & Reckman, 1973; Newcome, 1963). Therefore a survey of college students from a conservative evangelical university, where it may be assumed that most of the students would support a creationist worldview, compared with students from a secular university, where it might be assumed that there would be more students holding a naturalistic or evolutionist worldview, could be beneficial in understanding attitudes toward animals and one another, and how that might relate in pastoral and professional counseling.

The creationist tends to view man as having a mandate of stewardship over the animals, to care for and treat them with kindness as is mandated in the biblical book of Genesis (Lecky, 1869). In recent centuries, animals have become big business in today's American economy, representing one tenth of the total Gross National Product (http://www.scaruff.com/politis/gnp.htm:). The selling of animal food, hides, services, the use of animals in medical experiments, the illegal trade in animal furs, the legal trade of hunting and fishing, the growing phenomenon of zoo's, aquariums and service animals have all contributed to the American economy.

The creation account is found in the biblical book of Genesis. This account explains how God created the earth, animals and man as separate and distinct entities, presenting a dichotomous accounting of the origin of life of animals and to man. The naturalistic or evolutionist account was popularized in the book "Origin of Species",

written by Charles Darwin in 1859. This book represents a continuum theory of how mankind evolved from the lowest form of amoeba to present humanoid status.

Naturalists believe in the evolutionary process whereby man is the highest form of animal, but is an evolved animal nonetheless (Beard, 2009). There is a wide variation of attitudes towards animals among naturalists with some viewing them as genetic cousins (Royal Society of Britain, 2009) while others see them as inferior species (Darwin, 1859).

A history of the use and abuse of animals is documented throughout different cultures and historical records. The famous philosopher Jean Paul Sartre believed that animals were not aware of any feelings, did not experience any pain or pleasure, and were merely mechanistic (Harrison, 1992). Other noted philosophers and theologians such as Saint Francis Assisi, Richard Bauckhan, John Calvin, Andrew Linzey, Martin Luther, Albert Schweitzer, Pope John Paul II, Jack Van Impe, John Wesley, and Harold Willmington, argued that animals do have feelings, do experience pain and pleasure and even believed that animals have souls (htpp://www.ourchurch.com/member/w/w lasalle/). Recent psychological research on animal cognition documents that animals have feelings, thoughts, and the ability to communicate with humans by using sign language (Seidenberg & Petitto, 1987).

The relationship between animal abuse and human abuse is also documented in the psychological literature (Felthous, 1980; Felthous & Kellert, 1987; Kellert & Felthous, 1985). There is a positive correlation between cruelty and violence towards animals and violence toward human beings (Baenninger, 1991; Mead, 1964; Menninger, 1951). Violence and cruelty to animals is a strong predictor of cruelty and violence

toward human beings (Flynn, 1988). Ascione (1993) was able to show a link between childhood cruelty to animals and later aggressive anti-social behavior.

# **Purpose of the Study**

The primary purpose of the present research is to discover the relationship between a person's beliefs about animals, religiosity, and existential beliefs. The study correlates religious and existential variables with the Animal Human Continuity Scale. The secondary purpose of the present research is to investigate possible differences in the responses of students in a conservative evangelical university and students in a secular university and apply the findings to practical pastoral and clinical settings.

# **Research Questions**

In order to accomplish the stated purpose of the study several conceptual research questions have been developed. Their answers will allow for interpretation of the results in relationship to the stated purpose and goal of the study.

1. Do conservative evangelical university students score in the dichotomy direction on the Animal-Human Continuity Scale in comparison to secular university students?

(That is, will tend to have lower scores, which indicate a dichotomous orientation, in contrast to secular university students who may have more of a continuous orientation toward the relationship between humans and animals?).

- 2. Do conservative evangelical university students who report greater religiosity have a tendency toward a more dichotomous orientation than secular students?
- 3. Do secular university students who report greater religiosity have a tendency toward a dichotomous orientation?
- 4. For both the conservative evangelical university students and the secular students who report greater religiosity, will they have more of a dichotomous orientation?
- 5. Do conservative evangelical and secular university students combined who conceptualize humans and animals in a continuity fashion tend to score higher on the Animal-Human Continuity Scale?

# **Delimitations and Limitations**

There is a limitation in which the students from the secular university are in the state of Florida, which is known to be in the conservative religious south (Tweedie, 1978). It may have been better to compare the conservative evangelical students to a west coast secular university where attitudes could be assumed to be somewhat more naturalistic. There is potential for another study in the future, comparing different regions of the country.

There are also limitations with the measurement tool, how it is administered and how participants are chosen. The Animal Human Continuity Scale has the limitation of all paper and pencil instruments in that it assesses what the respondent is consciously aware of and willing to acknowledge. It is possible that some participants believe it is more socially desirable to appear more scientific. Other respondents may believe it is

more desirable to appear more traditionally religious. Beliefs such as these may influence the choices of the respondents.

#### **Definitions**

The Animal-Human Continuity Scale (Templer et a1., 2006) measures the extent to which a respondent views humans and animals in a dichotomous fashion versus a continuum. The continuum orientation represents the belief that humans evolved whereas the dichotomous view represents those who see a clear distinction between primates and humans.

A conservative evangelical university is one where life's philosophical and theological questions are answered from a Biblical or Christian worldview, a philosophy and theology based in Evangelicalism. This theological movement is based from the Greek term *euaggelion*, which means "good news". It is based on the death, burial and resurrection of Jesus Christ, and is strongly associated philosophically and theologically with Biblical authority and its answers to questions on life, death, salvation and sanctification. These questions include "Who am I?", "Where did I come from?", "Is there life after death?", "Is there a God?" (Erdman, 1983; MaGrath, 1977; Thay1er 1976).

For purposes of this study, a secular university is a publically funded non-sectarian institution, of higher education, that does not necessarily indoctrinate its students with religious beliefs.

# **Significance of the Study**

It is anticipated that there will be practical implications from the findings. Pastoral staff members may counsel their congregations on animal issues within the philosophical frame of reference of their religion. It is hoped that although the conceptual constructs may vary as a function of religion or denomination, the bottom line in all cases would be the humane treatment of animals.

Counselors are often confronted with children and adolescents who have abused animals or are at risk for cruelty to animals. This behavior is clearly associated with cruelty to others to include family members, spouses and other human beings as well as their pets (Flynn, 1988; Schiff, Louw & Ascione, 1999). The psychological literature contains numerous studies that indicate that persons who have been convicted of serious crimes as adults admit to abusing animals as children (Arluke, Levin, & Luke, 1999; Ascione, 1993; Ascione, Thompson, & Black, 1997; Beirne, 1997; 1985; Miller & Knutson, 1997; Tingle & Robbins, 1986).

Clergy and counselors or religions that have a dichotomous conceptualization may say that more fortunate intellectual and spiritual endowment means that humans have an obligation to help living creatures that are less gifted (Regenstein, 2008). There may be many ways in which this can be accomplished. They may point out the inhumane treatment of caged animals and that these animals often display signs of anxiety and aggression. They may point out that many medical research animals are left sickly to suffer and die when they could be treated and retired to an animal safety refuge. They

may point out that in the Bible, God mandates that man have dominion over and take care of the animals and treat them with respect.

The creationist counselor may counsel those clients who have lost a companion animal by having him or her focus on the pleasant memories of the pet. The client may be reminded that the animal was well treated and had a good life and that spiritual growth of the client may have been fostered by the relationship. If the animal had been ill the client may obtain comfort by knowing that the animal is no longer suffering. It is recognized that not all clients are going to have a strict creationist dichotomous conceptualization. Therefore, some clients may obtain comfort by the thought that they will eventually be reunited in heaven with the companion animal.

Clinicians, pastoral staff, and congregational members with a continuous conceptualization may stress empathy as a function of similarity of experience and feelings, and emotions may then be discussed (Grover & Brockner, 1989; Post, 1980). Recent studies have shown that animals are very similar to human beings in areas that were not previously considered. Human beings share ninety-eight and one half percent (98.5%) of the genes that chimpanzees have (King & Wilson, 1975; Luke & Verma, 2005) and many animals have humanlike traits. It may be pointed out that mankind is obligated to treat them with respect as they are near kin. Counseling would be beneficial for the nurturing and awareness of their relationships with animals as well as with human relationships.

Not only are there implications for the counseling of persons with tendencies toward animal cruelty, but there are also implications in the counseling of family

members whose pet and companion animal has died. The death of a family pet often brings sadness and grief to the family members, and counseling these family members from their conceptualized worldview is important (Carmack, 1985).

When one loses a pet, there is sadness and grief over the loss (Fuden & Cohen, 1988). Both older people and younger people can and often do suffer depression and a deep sense of loss over the death of a beloved pet (Levinson, 1969; Levinson 1984).

People go through stages of grief as they would with the death of a human being (Walshaw, 1981). The intensity of grief experienced over the loss of a pet is a function of the degree of attachment between the owner and the pet (Clowes, 1980; Thomas, 1982).

Children often have more difficulty than adults do after the loss of a pet (Fuden & Cohen, 1988; Link, 1984; Levinson, 1984; Stevenson, 1988). When children lose a beloved pet, the child often asks his or her parent if the pet will go to heaven and the parent often comforts the child by reassuring the child that the pet has indeed gone to heaven (Behrikis, 2002; Van Impe, 2005). Pastors and counselors can be very helpful, especially those who believe that animals have souls and can reassure the child the pet has gone to heaven. Many times the parents will conduct a funeral for the pet and bury it in their backyard.

#### Conclusion

The purpose of the present research is to discover the relationship between a person's beliefs about animals, religiosity, and existential beliefs. This study correlates

religious and existential variables with the Animal-Human Continuity Scale. The secondary purpose of the present research is to investigate possible differences in the responses of students in a conservative evangelical university and students in a secular university and apply the findings to practical pastoral and clinical settings. The study has implications for pastoral and clinical counselors in the treatment of their patients. Patients who hold a dichotomous frame of reference and those with a continuous frame of reference would be able to better understand and counsel their patients in regard to animal issues.

The study has scientific merit in that it addresses the relationship beliefs and attitudes towards animals. It is not only in the realm of religion and psychology but in the area of social psychology in that it studies attitude differences in different groups. It can also be viewed as in the area of personality psychology.

#### **Organization of the Remainder of the Study**

A five-chapter dissertation format was used in this study. Chapter One has provided an overview of the research problem, has discussed the need for and significance of the study, and has defined the key concepts. Chapter Two presents a review of the literature on animals and their significance on mankind. Chapter Three describes the methodology used in the present study. The research design, description of the participants, procedures, and measures detailed. Chapter Four details the collection of data that was obtained through the study and subsequent analysis of the data using

appropriate statistical procedures. Finally, Chapter Five presents the results of the study, derived conclusions, and recommendations based upon the findings.

#### CHAPTER TWO: LITERATURE REVIEW

#### Introduction

This chapter reviews the extensive literature relevant to this present study to determine the relationship between religious and existential variables and the score on the Animal-Human Continuity Scale (Templer, Connelly, Bassman, & Hart, 2006), which measures the extent to which the respondent views animals and humans in a dichotomous versus a continuous perspective. The objective of this particular literature review is to bring together existing knowledge of animal and human relationship and attitudes.

First, the chapter reviews the pertinent literature pertaining to animal-human relationships and the history of animal relationships with humans. Next, this chapter captures the relevant literature in animal-human relationships and the attitudes of individuals towards animals. Finally, the chapter looks at animal cognition, intelligence and emotions, and its implications in the way humans view animals.

# **Historical Views on Animals**

To fully understand all of the implications of a single person's life attitude towards animals and the relationship of this attitude to society, a discussion of past and present societal views is necessary. Chapter two is a brief overview of the use of animals, and animal-human relationships, both in contemporary society, and in an historical perspective. The issues being addressed are the amounts of money that are

being spent on animals, including the training of service animals, food for animals, hunting, farm subsidies, insecticides, medical research, illegal trade in animals, and companion animals.

# **Significance**

It has already been established that how a person views life and the world can affect his or her behavior; therefore, if an individual views an object as valuable, or significant, he or she will treat it with respect and care (Singer, 2002; 2003). However, if he or she views an object as expendable or insignificant, he or she most likely will not treat it with respect or care. Therefore, people's attitudes regarding animals can vary in many respects, beginning with their religious upbringings and beliefs and extending to their worldviews and life attitudes (Waldau, 2002, 2005, 2006).

Throughout history, such worldviews and life attitudes are seen in the various ways animals have been utilized. They have been employed for food, the objects of hunting, as beasts of burden and as companion pets (All & Loving, 1999; Netting, Wilson, & New, 1987). More recently they have and are currently being used in medical research (Lasker, 2000), for the betterment of mankind, and in zoos and circuses for the enjoyment of humans (Singer, 2006).

#### **Deity**

Historically, some animals have been placed in positions of deity (Waldau, 2002, 2005, 2006). In some parts of the world, especially the Eastern hemisphere, animals have

been seen as divine, and even as gods. In ancient Egyptian culture, the cat and other animals were seen as divine creatures and were not to be harmed (Baines, 1987, 1994; Frankfort, 2000; Kemp, 1995; Morenz, 1992). In India, the cow is seen as holy, and some who are associated with Hindu Temples worship cows (Harris, 1971; Korom, 2000; Shivaram 2009). These Hindus believe that cows cannot be mistreated or eaten, even if one is starving to death (Azzi, 1974; Mishra, 1979; Yang, 1980). This belief stems from the religions regard for animals as reincarnated creatures; therefore, they must not be killed or mistreated as bad karma will follow anyone who does so (Heston, 1971). On the other hand, Jews and Muslims will not eat pork as they consider pigs to be unclean animals. Devout Jews and Muslims would rather starve than eat pork (Waldau, 2006). Though it is a common practice in some Asian countries, Americans and Europeans will not eat cats and dogs, because they regard these animals as companion pets, and often treat them as family members (Podberscek, 2009). Native Americans killed and ate animals out of necessity and never primarily for sport or entertainment (Hultkrantz, 1987; Sherrer & Murphy, 2006). They used every part of the animal for food, clothing, tools, medicine, and shelter (Densmore, 1979) and would give thanks and pray to the animal spirit for giving up its life for their benefit. This attitude stems from the fact that Native Americans believe that both animals and humans have spirits, and that they may interchange bodies with these spirits (Sherrer et al., 2006; Sullivan, 2003). Therefore, their attitude is one of reverence.

#### Sacrifice

In many cultures and religions, animals were sacrificed to appease the gods. In ancient Greece, priests would sprinkle water on an animal's head and, when the animal would shake its head, it would thus be signifying that it gave its consent to be sacrificed (Burket, 1983). In the Old Testament, Hebrew culture viewed certain clean animals as a sin offering to God (Genesis 4:4; 7:2-8; 8:20), until Christ came and became human sacrifice for mankind's sin, nullifying the need for animal sacrifice (Hebrews 7:27; 10:4).

Nevertheless, as recently as 1992, the United States Supreme Court debated over whether it was legal to sacrifice animals for religious reasons or purposes in the City of Hialeah, Florida (O'Brien, 2004; Scheiner, 2001; Tribe, 1994). This resulted in a decision that the City of Hialeah had the right to establish ordinances to prevent such sacrifices. However, this ruling was later overturned as some of the judges felt that such ordinances violated the First Amendment's free exercise of religion. This is a clear example that there remains an ongoing controversy as to how each individual human does, or should view animals, and the way they should be treated. While some consider them as food objects, sacrificial entities, and big business, there are those who still believe that they are deity or a creation that is meant to be cherished and looked after with respect.

#### **Business**

In the United States, the care, feeding, housing, and sale of animals to pet stores, circuses, zoos, and to consumers as meat for food consumption, as well as animal related

by-products, has become a trillion dollar a year business (Regan, 2004; Zasloff, 1995). Animals that are raised for their fur and skin, such as chinchillas, foxes, beaver, and muskrats, sell for premium prices, and earn tens of millions of dollars a year in business for animal breeders. This comes at a huge cost to the animals. According to the International Society for Animal Rights (Schwartz, 2009), the production of one fur coat requires the killing of 400 squirrels; 200 chinchillas; 120 muskrats; 80 sables; 30 raccoons; 22 bobcats; 12 lynx; or 5 wolves. In fact, animals and their related industries represent one tenth of the entire Gross National Product of the United States. For example, in the year 2000 the GNP report stated that animals and their care represented 10.5 trillion dollars of expense per year (Scaruffi, 2000).

#### **Entertainment for Man**

In order to consider the many aspects of animal care, which includes companion pets that are kept in the home as well as exotic animals that are kept on display for viewing in zoos and aquariums, it is paramount to provide a few examples to demonstrate how large the animal industry has become.

#### **Zoos and Aquariums**

The American Zoo and Aquarium Association spends 90 million dollars a year on animal-related conservation issues. (AZA, 2009). In the last five years alone, they have funded nearly 4,000 conservation projects in more than 100 countries to help improve the conditions for animals. A prime example is the state of the art Monterey Bay Aquarium

in Monterey, California, that cost fifty-five million dollars to build in 1984. From its opening, it had an annual budget of over tens of millions of dollars and attracts over two million visitors per year (Monterey Bay Aquarium, 2005).

# **Petting Zoos**

The growing popularity of petting zoos has had a positive influence in reducing the fear of animals in children and has been a great tool in teaching them to respect and understand animals in a more positive way (Heimlich, 2001; Hines & Fredrickson, 1998). Perhaps this trend will aid in influencing their worldview as they grow into adulthood, regarding the humane treatment and respect of all animals.

#### Circuses

There are dozens of circuses that use and train exotic animals for entertainment (Wong, 2010). The cost of training aside, any circus additionally faces the cost of food for the animals, as well as shelter, lodging, and transportation costs as the circus moves from city to city. It is clear that the care of and attitudes towards animals have become increasingly costly and important to the daily and economic lives of Americans, either as consumers or as care persons for such animals (PETA, 2010).

#### Hunting

Game animals, such as elk, deer, quail, ducks, turkeys and fish (both salt and fresh water) are hunted for their meat or for sport from the nation's streams, lakes, and

oceans. The hunting of animals for sport is big business in the United States. According to the U.S. Fish and Wildlife Service (2006), almost thirteen million hunters spent over 22 billion dollars on their hunting during the reported year.

# **Illegal Trade**

The illegal trade in animal skins and body parts represents a six billion dollar-a-year global industry, much of which is being produced through the illegal trade of animals (Bennett, 2006). These include alligator belts, boots, and hats, baby seal skins for coats and other garments, ivory tusks of elephants and the body parts of lions, tigers, and hippopotamuses for aphrodisiacs, and other folklore medicinal purposes.

# **Farming Costs**

#### Food for Man

To satisfy the American appetite, each year 35 million beef cattle, one million baby male calves for veal, 100 million pigs, 10 billion chickens, a half billion turkeys, and 100 million tons of fish are consumed as food for human beings (Farm Sanctuary, 2008). In addition, 300 million egg laying hens each produce an average of 250 eggs per year. Millions of dairy cows produce 100 pounds of milk per day, per dairy cow, for human usage.

The United States Department of Agriculture reported that in the year 2000 more than nine billion animals were slaughtered for food in the United States (Hoffman &

Hoffman, 2001). In cattle, hogs, and sheep this amounts to over 74 billion dollars in one year in the production of meat products for human consumption.

#### **Food for Animals**

In the United States, there are vast farming and ranching concerns for growing animal feed. According to Farm Sanctuary (2008), the majority of grain that is harvested in the United States is fed to farm animals. These animals are slaughtered and processed for human food consumption. While 75% of grain is used to feed animals in the United States, only 33% of the grain harvested worldwide is used to feed animals for human consumption. As a result, 90% of the grains' proteins, 100% of its carbohydrates, and 96% of its calories are wasted when the grain is converted from a human source of food to animal food (Mercola, 2010). Ironically, world hunger is now estimated to affect over one half billion people a year, and millions are dying each year from starvation (Animal Rights, 2009).

#### **Insecticides**

In the year 2002, the American consumer bought over 200 million dollars' worth of mosquito-fighting products, such as repellants and biodegradable insecticides, to ward off dangerous and annoying insects that can possibly affect humans, animals, and crops (Grant & McCarthy, 2008).

#### **Research and Therapeutic Animals**

#### Health for Man

The importance of animals in people's lives has been acknowledged for hundreds of years (All & Loving, 1999; Netting, Wilson, & New, 1987). Their contribution grows more important every day as animals are being used as beasts of burden for work and hunting, for food consumption, and as companion pets (Beck & Katcher, 1993; Levinson, 1968, 1969a, 1972, 1984). In more recent years, they have been utilized as therapists. Animal Assisted Therapy, more commonly known as "pet therapy", has become more popular among mental health practitioners, nursing home staff members, long-term care facility staff, and hospital staff members (Barba, 1995, Levinson, 1969a, 1984). A number of scholarly journal articles and books have also validated their therapeutic usefulness with disturbed and retarded children (Fine, 2006; Heimlich, 2001), young children who are grieving (Fudin & Cohen, 1988; Post, 1980; Stevenson, 1988), adult psychiatric patients, the elderly, prison populations, and those who are physically handicapped (All & Loving, 1999; Corson, Corson, & Gwynne, 1975; Corson, Corson, Gwynne & Arnold, 1977; Hines & Fredrickson, 1998; Katcher, 1981; Mallon, 1992; Messent, 1983; Netting, et al., 1987).

Dogs, in particular, have proven to be excellent therapeutic intercessors for hospitalized patients as they are non-rejecting and affectionate animals that can promote good mental health. This can promote physical well-being within populations that find themselves in such situations (Corson, Corson, & Gwynne, 1975; Corson, Corson,

Gwynne, & Arnold, 1977; Levinson, 1968, 1969a, 1972; Mallon, 1994; Melson, 1989; Mugford & M'Comisky, 1975; Mallon, 1994; Parshall, 2003; Siegel, 1962).

Among cardiac patients it has been found that a patient's ability to relate affectionately to a dog can be viewed as a good prognotic sign. It has been document that there are higher survival rates and quicker recovery rates for those patients who have pets in their own homes (Friedman, Katcher, Lynch, & Thomas, 1980; Jennings et al., 1998; Levinson, 1969a). However, it does seem ironic that animals are helpful in recovery after a heart attack, it has been estimated that the eating of animal flesh has cost more than 100 billion dollars a year, in medical costs, for complications from heart disease, obesity, and diabetes, all associated with eating meat (PETA, 2010).

Studies have also proven that interacting with animals by playing with a dog, stroking a cat's head, or simply by watching fish swimming in an aquarium, in the home or office, has the ability to lower blood pressure and reduce stress in human beings (Allen, 2003; Anderson, Reid, & Jennings, 1992; Corson et al., 1975; Corson et al., 1977; Levinson, 1968, 1969a, 1969b 1972; Messent, 1983; Serpell, 1990; Siegel, 1962). A direct result of these findings is evident in the increased popularity of fish tanks in homes, business offices, and doctors' waiting rooms.

Service animals, such as guide dogs for the blind and disabled, K-9 dogs for police and military, as well as hunting dogs for hunters, and breeding of special breeds of cats and dogs for show and sale, represents tens of millions of dollars a year in business (Konrad, 2009). The annual cost of raising and training just one of these dogs can run from \$15,000 to \$50,000 a year (PETA, 2010).

#### **Medical Research**

In addition to the many animals, such as dogs, cats and birds, that are being used in a positive, loving, and non-threatening way to intercede with the mental and physical recovery of patients, there are at least 25 million research animals that are being utilized by medical and pharmaceutical corporations for the development of new cures for human diseases and disorders (FBR, 2005; HSUS, 2009). According to the USDA Animal Care Report (2000), forty-five billion dollars was spent on bio-medical research in the United States alone.

# **Companion Animals**

A survey conducted in 2004, by the American Pet Product Manufacturing Association (APPMA), found that 63% of U.S. households had pets, and 45% had more than one pet in their home. These pets were comprised of: 186 million fresh water fish in 13.9 million homes, 77.7 million cats in 37.7 million homes, 65 million dogs in 43.5 million homes, 17.3 million birds in 6.4 million homes, 16.8 million rabbits, gerbils in 5.7 million homes, 8.8 million reptiles in 4.4 homes, and seven million salt water fish in .8 million homes. In fact, in spite of the recession, pet owners spent over 45 billion dollars in pet related products in the year 2009 (Woestendiek, 2010).

Some people suppose that an emotional attachment to animals is a more recent phenomenon. This is not the case. In at least one incidence found in the Old Testament, whether it is a story or a parable, the prophet Nathan tells King David about a poor man who had a little lamb "who shared his food, drank from his cup and even slept in his

arms. It was like a daughter to him" (2 Samuel 12:3). After hearing the story, King David was so angry that he said the man who had stolen the poor man's precious pet deserved to die. In the New Testament, there are several stories or parables in which Jesus includes animals and the kind treatment of them. One example is where the Good Shepherd goes out to find the one lost sheep (Luke 15:4). How forceful would these stories or parables be if the Jewish culture did not appreciate animals?

Additionally, in today's world, seventy to ninety-three percent of pet owners love and cherish their pets. They view their pets as actual family members, taking them on vacations with the family, allowing their pets to sleep on their beds, and buying special presents and treats for them on specific occasions such as their birthday and on holidays like Christmas (Cain, 1983; Carmack, 1985; Voith, 1985). Each year, more hotels and resorts are allowing pet owners to bring their pets with them when they travel on holidays and vacations. Airlines offer travel compartments for pets as more resort areas are offering entrance to pets. These are just a few examples of how the general view toward pets has grown stronger over time. Although there may be more than one opinion as to why this is occurring (Schaffer, 2009), regardless, it is obvious that it is a phenomenon that has grown in profit. For example, the American Pet Products Association, a pet industry that includes a wide array of products, stated that profits in 2008 alone grew by \$2 billion and are expected to continue to grow. Therefore, it is an issue that is certainly worthy of further investigation.

# Theological and Philosophical Perspective

As stated earlier, Chapter 2 has two parts. The first part is concerned with religious beliefs and practices, and the opinions of religious leaders, theologians, and philosophers; and the second part of Chapter 2 pertains to research on animal cognition. Animal human continuity can also be viewed from two perspectives, as one can be from a theological and philosophical standpoint (Colburn & Henriques, 2006) and the other can be naturalistic and evolutionary, or it can be viewed by some where both perspectives are taken into consideration (Scott, 1999). When viewing through the eyes of strict evolutionists, such as Darwin (1984), there is the consensus that over millions of years, animals evolved from the smallest one-cell amebas into complex and diverse animals that, through evolution and natural selection, developed and evolved into primates and then to modern humanoids. At the opposite end of the spectrum, there are the strict creationists who believe that the animals were created on the fifth day along with the fishes and birds, that on the sixth day He created the beasts and the cattle of the field, and then finally God created man after his own image (Genesis 1:27). Animals and mankind were created as separate, distinct creations (Genesis 1:21-27). It is clear that a person's true attitude towards animals is shaped by his or her own personal worldview, and whether the animals and man was created by God, or whether man evolved over millions of years, through the evolutionary process of natural selection (Newport, 2009).

# **Major World Religions**

All the major religions of the world teach creation, compassion, and love of all living creatures (HSUS, 2009). Animal equality is taught in Islam. As Mohammed had believed, it is necessary for individuals to treat the animals gently (Swarup, 2002; Eaton & Thomas, 2008). He went one step further by indicating that a good deed that is done to an animal is as laudable as a good deed done for a human being. At the same time, an act of cruelty to an animal is just as unprincipled as an act of cruelty to a human being.

According to the Bhagavad Gita, the Holy book of the Hindu religion, cruelty and violence against animals should be condemned (Schweig, 2007). The belief is that a self-realized soul is able to understand the equality of all living beings. To a Hindu, animal souls are considered to be the same as human souls that move to higher means of conscious expression in each life. The teachings of Hinduism also emphasize that each soul takes on a life for a particular reason, and to kill an animal can stop the progression of the soul and cause great suffering (Morgan, 1987; Majupuria, 1991). Mahatma Gandi (2006), once a political and spiritual leader in India, believed that the greatness of a nation and its moral progress can be judged by the way its animals are treated. Judaism mandates in Genesis 9:9-10 and Hosea 2:22, (NKJV), that humans must prevent the "sorrow of living creatures", and teaches that God made a covenant with the animals, as well as with man.

#### **Judeo-Christian Creation Account**

Biblical references of the creation account in the book of Genesis, reads that God created the animals and it was good (Genesis 1:24; 2:19; Jeremiah 27:5). To provide a few examples, Genesis 1:24-25 states that on the fifth day God had created fish and sea creatures, and great sea monsters, and the fowl that may fly above the earth, and on the sixth day God created the beasts and the cattle. God created animals to be companions to Adam, before He had created Eve, the first woman. Adam was to name each of the animals and the animals were to multiply after their own kind (Genesis 1:20). Adam was to be responsible for, have dominion over and take care of the animals (Genesis 1:28).

It is written that God created all the animals (Psalm 104), and all animals belong to God. "All the animals in the forest are mine and the cattle on a thousand hills. All the wild birds are mine, and all living things in the fields" (Psalm 24:1, NKJV).

It is obvious that God cares for the animals He created (Genesis 9:9, 10; Deuteronomy 25:4; Job 38:41; Psalm 36:6; 14:11, 21; 147:9; John 4:11; Matthew 6:26; 10:29; Luke 12:6, 24; 1 Corinthians 9:9; 1 John 4:16). It is written in Matthew 6:26, (NKJV), that Jesus said, "look at the birds flying around; your Father in Heaven takes care of them". Psalm 147:9 reads that "He gives animals their food and feeds the young ravens when they call". In the beginning all animals were vegetarians (Genesis 1:29), which is considered the first dietary law (Kaufman & Braun, 2002).

## **God Spares the Animals**

When God decided to destroy the whole world with a great flood, He showed his great love for the animals by saving them along with Noah's family (Genesis 6:19, 20; 7:2, 3, 5, 9, 11; 18:19). Noah spent a hundred years building the ark so that it was large enough to spare two of every kind of animal along with his family (Genesis 5:32; 7:6). After the Flood, God made a covenant with man and with the animals (Genesis 9:9-19; Hosea 2:20). In the book of Jonah, it is recorded that God spared Nineveh because of 120,000 children and the great many animals and cattle in that city (Jonah 3:8, 4:11). God loves all of His creation.

#### **God Mandates Kindness to Animals**

Moses cared for animals and wrote that we are to be kind to animals and treat them with respect (Deuteronomy 25:4). The Bible even records an occasion when God spoke through an animal (Numbers 22:28-33). In this account, Balaam's donkey showed greater spiritual perception and discernment than the prophet Balaam himself did. This scriptural reference is also an example of God's displeasure with cruelty to animals (Numbers 22:22-23; 2 Samuel 8:4; 1 Chronicles 18:4). There are many references in Genesis to kindness shown to animals, such as Jacob erecting shelters for his cattle (33:17) as well as the people of Gerar erecting tents for their cattle (2 Chronicles 14:15). In the New Testament, Jesus is questioned about doing good deeds on the Sabbath and responds that it is right to rescue a little sheep from a pit on the Sabbath (Matthew 12:11-

12). God holds us accountable for how we treat animals "The Godly are concerned for the welfare of their animals" (Proverbs 20:10, NKJV).

Because of such Biblical proof, many denominations now have special services where they will bless, marry, conduct funerals and have cemetery space in holy ground set aside for animals. Episcopal churches, such as the Cathedral Church of Saint John the Divine located in New York City, have a day each year in which they bless animals (HSUS, 2009). At Duke University Chapel, a Blessing for Animals is conducted every October, and speakers from diverse religious backgrounds give testimony to their beliefs, attitudes, and love for animals (Feldmeyer, 2009; Majupuria, 1991). In mid-evil times, animals, such as oxen and cattle, lived in the home with their owners and these animals were blessed along with the family (Waldau, 2005).

### Animals to Bring Judgment upon Man

In the Bible, animals were used by God to send judgment upon man (Leviticus 26:22; Numbers 21:6-7; Deuteronomy 8:15; 26-28; Ezekiel 5:17; 14-15; 32:4; Revelations 6:8). Animals were created by God and belong to God (Psalm 50: 10-12). Animals were instruments of God's will (Exodus 8; 9; 10:1-20; Numbers 21:6; 22:28; Joshua 24:12; Jeremiah 8:17; Joel 1:4) and will be used by God in the end times to bring about His will. In the End Time Christ will ride on a white horse, as will all of His saints (Revelation 4; 6:8).

#### Animals in Heaven

Over the years, there has been much discussion as to whether animals will indeed go to heaven, and if they have the ability to wish to go (Alcorn, 2004; Beane, 2003). Many wonder if there is any possibility that animals really do go to heaven. Some Christians maintain that the answer may be yes. Biblical scholars, such as Jack Van Impe, Billy Graham, Ed Hinson, J. Vernon McGee, John Walvoord, and W. Criswell believe that they do, and this continues to be a question of interest to this day (Woodhaven Labs, 2010). Through such discussions, various scholars have taken a stand that the answers to these questions could be yes. To defend their stance, they highlight particular Biblical verses, which they feel give support to their claims. They quote verses such as animals suffered under the curse of Adam and Eve's sin (Genesis 3:14; 6:7, 17), and look to their day of redemption (Romans 8:21-23). After the flood, permission was given to eat meat, but only with many restrictions (Kosher laws), and with a sense of reverence for life, with a goal of eventually returning God's people and animals to vegetarian diets in the millennium reign of Christ (Isaiah 11:6-9).

The book of Revelation speaks of Heaven being a place with animals, fish and horses (Revelation 19:11). According to Jack Van Impe (2005) in his message on Isaiah 11:6, the Kingdom of God was "just saturated with animal life of every type and description, and Christ will return on a white horse, because there are beasts in heaven". There is an indication in Job 12:7-10 that animals may in fact have souls, and as it has been indicated, many well respected theologians believe that animals do go to heaven.

In his commentary on Revelation 4:6-9, John Walvoord (1989) indicated that the translation of "beasts" is quite inaccurate and should be changed to "living ones". In the Greek, the word used is *zoon*, which means living ones. An entirely different word, *theiron*, meaning a beast, such as a wild animal, is used in Revelation 13 to speak of the beast coming out of the sea. The emphasis here is on the quality of life and the various attributes that relate to it (Hoffman & Hoffman, 2001, 1-2).

Romans 8:21-23 is a primary source document for many of those who believe that animals have souls and will go to heaven (Alcorn, 2004; Van Impe, 2005). The Book of Proverbs is replete with examples of the wisdom of animals. These examples can be offered to those individuals who wish to follow and emulate them in order to gain wisdom, or could provide a balance for people who may think differently.

Theologians throughout the ages have debated this issue. Popular theologians, such as John Calvin, Martin Luther, Matthew Henry and John Wesley, all have commented that animals would be in heaven (Buckner, 1903; Shanahan, 2008). Contemporary theologians, such as the late Pope John Paul the 2<sup>nd</sup> (1990), and popular writers such as John R. Rice (1975), and Jack Van Impe (2005) have stated that they believe that animals will be in heaven. A United Methodist theologian, Jay McDaniel (1988), suggested that Christ's redemption extends to animals, and that life and fulfillment beyond bodily death may not be limited to humans.

If one believes that his or her pet goes to heaven after he or she dies, will this belief affect how they treat and view animals on earth? Is there a continuum between animals and people? What are the implications of this continuum? Or is this an

indication that there is a dichotomy between animals and humans, and only humans have an eternal soul that can go to Heaven.

#### **Do Animals Have Souls?**

But ask now the beasts and they shall teach thee; and the fowls of the air, and they shall tell thee: Or speak to the earth, and it shall teach thee; and the fishes of the sea shall declare unto thee. Who knoweth not in all these that the hand of the Lord hath wrought this? In whose hand is the soul of every living thing and the breath of mankind? (Job 12:8, NKJV).

The original Hebrew word translated as "soul" is "nephesh." The original Hebrew word translated as "of every living thing" is "chay," which means "every living thing, man and animal." Nephesh translated "soul," "beast," and "creature," is translated "soul" 428 times in the Old Testament (Willmington, 1993, p.260). But on two occasions it is rendered "beast," and in nine other passages we find the word "creature" being used.

St. Francis of Assisi, the Catholic patron saint to the animals, shared Thomas Aquinas' belief that animals did not have rational souls, but he did believe that they would be in heaven (Baird, 2008). The Bible, on occasion, also describes animals as possessing souls (Genesis 1:21-24; Genesis 7:15, Numbers 31:28, Romans 8:18-25, Revelation 16:3). However, as man is different than animals and is created in the image of God, he must, therefore, be a higher being. God created man with a spirit and Scripture never mentions that animals possess a spirit (Willmington, 1993). Consequently, since animals are not created in God's image, they are not equal to humans nor have human souls; therefore, it is likely that they do have animal souls (Thompson & Estabrook, 1999). The Hebrew and Greek words *nephesh* and *psyche*, are often

translated "soul" when referring to humans. The fact that these words are often used of animals is compelling evidence that they have non-human souls. Most Christians in the past have believed this fact. It was not until the seventeenth century that the existence of animal souls was even questioned. The classic understanding throughout the history of the church was that living things had souls, animals as well as humans. It was the enlightenment that changed this view for many people (Habermas & Moreland, 2000).

### **Relationship to Counseling**

Clinical as well as pastoral counseling are involved in the study and modification of human cognition and behavior in individuals. It has been found that there is a positive correlation between cruelty and violence towards animals and violence towards human beings (Arluke, Levin, Luke, & Ascione, 1999; Ascione, 1993, 2001; Baenninger, 1991, 2000; Miller, 2001; Miller & Knutson, 1997; Perez-Merz & Heide, 2004; Ponder & Lockwood, 2000; Tingle, Bernard, Robbins, Newman, & Hutchinson, 1998). Fromm (1992) was able to distinguish "malignant" aggression from "defensive" aggression towards animals. Ascione (1993) was able to show a link between childhood cruelty to animals and later aggressive anti-social behavior. He described the aggressiveness as beginning in childhood and then continuing throughout the lifespan into adulthood. The strong association between empathy and aggression demonstrates that children who have been abused by their fathers lack empathy toward animals, which is associated with antisocial aggressiveness (Feshbach, 1989; Flynn, 1999a, 1999b, 2000a, 2000b; Strauss, 1991). Individuals who physically harm others begin this aggression with an earlier

history of physical aggression made towards animals (Beirne, 2004; Felthous, 1980; Felthous & Kellert, 1986, 1987; Kellert & Felthous, 1985; Fleming, Jory, & Burton, 2002; Gleyzer, Felthous, & Holzer, 2000; Schiff, Louw, & Ascione, 1999; Slavin, 2001).

The majority of animal abusers are male (Flynn, 1999a; 2001). Strauss (1991) found that there was a positive correlation between boys who were punished harshly and were corporally punished by their fathers and these boys subsequently abusing animals. Cruelty to animals is becoming recognized as a psychological dysfunction that is associated with domestic violence (Ascione, 1998; Ascione, Weber, & Wood, 1997; Duncan & Miller, 2002; Lockwood & Hodge, 1998; Luk, Staiger, Wong, & Mathai, 1999). Flynn (1999a) found in a study of 267 undergraduate college students that 35% of males and 9% of females had admitted animal abuse. He also found that those students who had admitted to animal abuse also endorsed corporal punishment of children and approved of a husband striking or slapping his spouse. In a follow-up study, with the same students, Flynn (1999b) had discovered that the men who had abused animals were more severely and more often punished by their fathers and that frequency of corporal punishment was positively associated with animal abuse. DeViney, Dickert and Lockwood (1983) had found that 60% of child abuse and neglect in families cited in 53 New Jersey homes also had pets were abused. Child abuse was 88% higher when pets were abused. Therefore, there seemed to be a correlation between domestic violence and animal abuse.

Ascione (1998) reported that 58% of 38 women who sought shelter from a battering spouse had children and 74% had pets. Seventy-one percent reported that their

spouses had hurt or killed one or more of their pets. In a study by Baldry (2003), of 1,296 students that attended school in Rome, it was found that 82% had pets in their home and that 50% had self-reported abusing animals. The percentage was 66.5% for boys and 33.5% for girls (p. 270). As a result, these studies were able to conclude that animal abuse was more frequent in children who have been physically abused themselves and that it was more common in boys than girls. A cross-cultural study found no overall differences between children of Australia, Japan, and Malaysia in the abuse of animals, and found that boys were more apt to abuse animals than girls (Mellor, Hapidzal, & Yamamoto, 2009).

## **Cognitive Abilities of Animals**

Older research on cognitive psychology and animals showed that they are able to think abstractly, that relationships between black and grey objects can be abstractly thought through, and psychologists could train animals to distinguish lighter from grey to white. This, therefore, is an indication that animals have some abstract ability (Thomas, 1996). Descartes (1993) was probably wrong in thinking that animals do not have feelings or do not think. A more reasonable inference is that animals do have cognitive abilities resembling that of humans, although this does not constitute strong evidence they have a soul (Harrison, 1992; Hatfield, 2008), as spirituality and cognitive ability are not synonymous.

There have been many empirical studies regarding the cognitive abilities of animals particularly regarding the capacity of gorillas, and other primates, to learn American Sign Language (Fouts, 1974; Howell, 2003; Patterson, 1978; Patterson & Linden, 1981; Terrace, 1985), and then spontaneously sign to one another (Gardner & Gardner, 1978). There is an ability to understand hundreds of signs of the American Sign Language by these primates, as well as put together coherent phrases with independent coherent meaning. Gorillas have also demonstrated the ability to transfer this to their offspring without specific human training, as Washoe was able to do with its adopted infant Louis (Fouts, Hirsch, & Fouts, 1982). Primates were not only able to carry out simple commands, but they could recall the commands, travel to another room, locate an object and are able to carry out the command being given to them (Savage-Rumbaugh, & Boysen, 1978; Savage-Rumbaugh, McDonald, Sevcik, Hopkins, & Rupert, 1986; Savage-Rumbaugh, Pate, Lawson, Smith, & Rosenbaum, 1983).

Seidenberg and Petitto's (1987) apes, Kanzi and Mulika, were taught symbol usage and found that they shared many properties of word usage with that seen in young children. Rather than concentrating on food as previous research had indicated that primates favored, Kanzi and Mulika's favorite topic was social play, the same as young children (Rumbaugh & Savage-Rumbaugh, 1996; Savage-Rumbaugh, 1987).

Fishes cognitive powers matched or exceeded those of higher vertebrates, including non-human primates (Bshary, Wicker, & Fricke, 2004). Theresa Burt de Perera (2004, 2005), a researcher at Oxford University, had reported that they have found that fish were very capable of learning and remembering; and that they possessed a range of cognitive skills that would surprise many people. There were other Oxford studies that

have indicated that fish can complete mental tasks which would baffle brighter pets, such as hamsters and dogs (Perera & Braithwaite, 2005; Brown & Braithwaite, 2005).

Animal continuity can range from those who say that animals have no feelings, are instinctual and, as such, have no cognitive abilities, such as Descartes, the father of modern philosophy believed, to Darwin (1984, 2008) who contended that animals are in fact evolutionary forerunners of the human race, and as a result, a continuity of the animal species to the human species is natural. Creationists believed that God created the animals separately from the creation of human beings (Genesis 1:26). Many hold the position somewhere in between these polarized views (Scott, 2008).

When the history of animal-human relationships in psychology was once traced by Schultz and Schultz (2007), they were able to establish that Descartes did, in fact, maintain that humans have souls but that animals do not have rational souls, thus they cannot feel pain. This is also congruent with the majority of modern western philosophical thought of today. Descartes went one step further by reasoning that because animals do not have souls, they do not have feelings and they cannot have pleasure or pain, and they grow without even knowing it. He also stated that they want nor fear nothing nor are capable of knowing anything (Descartes, 1993, 2008). He summarized that animals were mere machines, incapable of thought or feeling. Descartes dissected live animals and appeared to be amused by their cries and yelps as he had maintained that it was nothing but the yelps and vibrations of machines. Descartes had contended that animals do not possess free will, thought processes, or immorality.

Animals in Descartes' view were non-sentient automata (Harrison, 1992; Hatfield, 2008).

Aristotle believed that there was a distinction between vegetative (plant) souls, sensitive (animal) souls, and rational (human) souls (Burghardt, 1985, 1984). The activities of living animals, such as their sense perceptions, were functions of a non-corporeal soul. This was the prevailing doctrine of biology in France, in the seventeenth century, which must have influenced Descartes' attributing philosophy on animal motion and sensation to mechanism and not something that takes place in the soul (Descartes, 1993; Harrison, 1992).

According to Ekman (2004), Darwin had maintained that there was no sharp line of distinction between humans and animals, with respect to their mental faculties, as the lower animals could experience pleasure and pain, happiness, and sadness, and have vivid dreams and even some degree of imagination. Asch (1974) proposed that they can form impressions of personality. Even worms could show pleasure from eating and demonstrated sexual passion and social feeling, all pointing to some type of animal mind (Darwin, 1984, 2008). Schultz and Schultz (2007) said that a scientist by the name of Watson held that his program grew out of animal psychology and attempted to demonstrate the existence of a mind in lower animals, and in the continuity of human and animal minds.

The research of the Gestalt psychologist Wolfgang Kohler (1967, 2001) highlighted that in problem-solving; chimpanzees could grasp whole situations and were able to understand the relationships among the various stimuli. Schultz and Schultz (2007) were able to describe how the cognitive revolution in psychology restored consciousness not only to humans but to animals as well.

Beginning in the 1970's, animal psychologists attempted to demonstrate how animals in code, transferred on, computed, and manipulated symbolic representations of the real world's spatial, temporal, and visual features for the purpose of adaptively organizing their behaviors (Cook, 1993). In other words, the computer-like system of information processing that occurs in humans was now being studied in animals.

Waldau (2005) had introduced the concept of "speciesism", which is being prejudice against the species in terms of "inclusion" or "exclusion" with respect to one's own species. He challenged the common opinion that the Buddhist religion has less speciesism than Christianity. He had maintained that both religions hold to a discontinuity between humans and other species.

In a recent article in *Animals in Print: the On-Line Newsletter* (2003), Beane, the author, stated that although men like Thomas Aquinas had maintained that animals did not have rational souls that humans possessed, Catholic, Protestant and Jewish scholars are increasingly questioning traditional teaching on the subject. It is being suggested that God giving humans "dominion" over animals may mean giving human responsibility to care for them rather than to treat them in any way they wish. This growing emphasis on animal "spirituality" is attributed by some to the animal rights movements. Others attribute this to more people returning to their religious roots. The blessing of the animals, a celebration once marked by Roman Catholics on the feast day of St. Francis of Assisi (October 4), is now celebrated by many Lutherans, Episcopalians, Anglicans, Methodists, and the United Church of Christ, and are stated as examples of proof of this return to the grass roots of religion (Iliff, 2002, Holak, 2008).

For the first time in history, the American Academy of Religion (2009) has organized a panel of scholars who have discussed, the roles of animals in religion at its annual convention on November 22-25, 2003, and continue to discuss the topic.

Ministers of many denominations now offer their services for pet funerals, weddings, and blessings. Some churches have established pet cemeteries for their parishioner's pets.

### **Animal Rights**

Animal rights activists are now reaching out to religious groups as allies. And, as such, more people are becoming vegetarians and vegans because of their deep religious convictions and attitudes regarding their care and love of animals (Stepaniak, 2000). They now look at the moral issue as not whether animals can reason or talk, but, rather, are they capable of suffering? Jeremy Bentham, the 18<sup>th</sup> century utilitarian philosopher once wrote that after the freeing of the slaves in the French colonies, the day will come when animals will be given basic rights (Bentham, 2005). This idea is contrary to Kant's idea that only a human being is capable of understanding the concept of rights, so suffering has replaced reasoning as the criteria for animal rights (Engel, 2000; Murphy, 1972; Skidmore, 2001). Suffering is more than just feeling pain but it is pain intensified by human emotions like, sadness, regret, worry, loss and dread.

Books by Christian, Jewish, and other scholars and thinkers are now being published by mainstream publishers, and are branching out from the traditional religious publishing houses (Brown, 2009). Many of these books cite research that indicates that animals do feel pain and can suffer, have cognitive abilities, dream, are self-conscious

and can think in abstract terms (Panksepp, 1998; Roitblat, 2004; Thomas, 1996). This research further maintains that they can use American Sign Language to convey thoughts about spirituality, therefore advocating that animals have souls and can go to heaven (Howell, 2003).

Another question that has been asked is whether animals possess self-consciousness? Historically, Western philosophers, theologians, and scientists have not taken this question seriously and many have dismissed it outright (Allen, 2010; Hookway, 1986). Behavioral studies of animals by Watson and Skinner dismissed the idea that animals had minds. They maintained that they could not do anything beyond learning to instinctually respond to stimuli for food (Burghardt, 1985; Griffin, 1994).

Donald Griffin (2001) made it popular to speak of animal minds again. Bekoff (2002) asserted that there were a variety of good reasons for attributing consciousness to many animals, especially vertebrates with a centralized nervous system. He also maintained that all animals have value and worth equal to that of human beings, and that putting human self-interests above animals is a form of "racism" against their species, is "chauvinistic", and is tantamount of "humans being heartless slaveholders" (p. 133).

Books by Matthew Scully (2003) such as *Dominion: The Power of Man, The Suffering of Animals*, and the *Call to Mercy*, as well as *On God and Dogs: A Christian Theology of Compassion for Animals*, by Stephen H. Webb (2002), advocates the abolition of zoos, circuses, companion pets, animal experimentation, hunting, and the eating of animal flesh, including fish. The spirituality of animals and have also made it into mainstream culture with the popularity of movies such as *Seabiscut*, *My Dog Skip*,

and *All Dogs go to Heaven*. Hallmark greeting cards (2010) now sell pet sympathy cards, some with religious themes. These writings and subsequent popular movies may be responsible for the present changing of attitudes towards animal spirituality and immortality in the absence of any new or other evidence to the contrary.

Malamud (1998) described the Mesoamerican beliefs regarding the spiritual nature of nonhuman animals. Mesoamericans believe that animals do have souls and that a person's soul is connected to an animal counterpart. The Mesoamericans' view of the universe is not just a central human one. It is rather a matter of humans, animals, and nature having parity and deserving equal respect. Malamud gave examples of poetry in which such concepts are expressed.

Animal cruelty is something that we frequently read about in the newspapers, as well as view on television. A dog is beaten or used in a dog fighting scandal, a horse is starved or a cat has its tail set on fire by some hurting juvenile. If these acts of cruelty and malice have predictable behaviors or attitudes associated with them, they would be worthy of investigation.

Schultz and Schultz (2007) were able to trace the philosophical and empirical foundations of animal-human relationships in the history of psychology. For example, they had discovered that Descartes had maintained, in congruence with Christian thought, that humans have souls, but that animals do not have souls. He reasoned that because animals do not have souls, they were not able to have feelings. He often dissected live animals and he was amused by their cries and yelps, as he was convinced that these yelps

were just vibrations of machines. Descartes further contended that animals did not possess free will, thought processes, or immorality.

However, Schultz and Schultz were also able to highlight the fact that Darwin had deducted that there was no sharp line of distinction between human and animals with respect to their mental faculties, as he was convinced that lower animals were able to experience pleasure and pain, happiness and sadness, and could have vivid dreams and even possess an imagination. According to Darwin, even worms could show pleasure when eating and could demonstrate sexual passion and social feeling; and he believed that this was some sort of animal mind.

#### Discussion

When discussing what has been learned thus far regarding the use of animals in the United States, as compared with other parts of the world, it is clear that the mindset is one of domineering and subduing the animal for profit. The attitudes and belief about the Genesis creation account seems to give license to treating animals in any way humans want to, but that is a misinterpretation of the scriptures (Regenstein, 2008; Loftus, 2010). A correct scriptural reading would be that man is to be responsible for the animals by being good stewards and not mistreating them (Genesis 1:26).

Looking at the existential variables and the religious variables regarding animals could provide a better idea about how animals and humans are alike, from an existentialist and a fundamental religious point of view. Wasserman (1997) reminds the reader that the study of animal cognition is deeply rooted in the philosophy of the mind

and in Darwin's theory of evolution. In the past, being human meant having the capacity to conceptualize, reason, use language, have conscious mental states, and, additionally, create social and cultural structures. Animals did not possess these qualities (Penn & Povinelli, 2007).

As stated earlier, Descartes (1993) had also held that animals had none of the above qualities; and Darwin believed that animals possessed more and more of these attributes as they grew in brain size and as their central nervous systems developed into more complex systems. For the past fifty years, behavioral psychology focused on human behavior as it related to socialization, intelligence and mental illness. Animal research was thought to be the domain of Watson, Pavlov and Skinner as they worked with stimulus response behaviors that were thought to be strictly instinctual and not by thought process (Catania & Laties, 1999). Recent studies have allowed for drastic changes in this philosophy as animals are taught sign language and have demonstrated the ability to conceptualize and form sentences by using the sign language they have learned, and then to pass this on to their offspring, without any prompting by humans. Additionally, as researchers have found that many of the primates' brain structures were very similar to human brain structure ideas about animal-human continuity have come to the forefront once again (Templer et al., 2006).

One of the purposes of the present study has been to demonstrate that in order to truly understand human behavior, it is essential to understand and study animal behavior and learning as well. As was indicated in the Bible, God had created man a little lower than the angels (Psalms 8:5) creating man last (Genesis 1:26, in His image (Genesis

1:27), and breathing his spirit into man, God created animals a little lower than man, and gave man dominion over animals (Genesis 1:26).

Throughout this study, it has been documented that it is possible that animals do possess a rational soul, that they may go to heaven after death, and that they have demonstrated abilities that far exceed humans in the areas of sight, hearing, and smell. It has also been learned that they have personalities, can use tools and language via American Sign Language that they can think in coherent sentences, conceptualize ideas, and are saddened by the death of a loved one. However, it has also become clear that most conservative theologians believe that animals do not have an eternal soul and that animals do not go to heaven after death. Erickson (1985) and Willmington (1993) write that trichotomism is the most popular view in conservative protestant circles. According to Willmington, the trichotomous view is that "man is composed of three elements, body, soul and spirit" (p. 261). There are those who feel that the physical body is similar to animals and plants, the only difference being in degree, in that man is more complex (Erickson, 1985), as he possesses a soul. This psychological element is the basis of reason, emotion, intellect, sensibility, conscience, and will. Animals are thought to have a rudimentary soul, not an eternal soul, similar to man's soul though less complex. However, "what distinguishes a man's soul from the animal's soul, is a third element, the spirit" (Willmington, 1993, p. 260). The spirit allows mankind to distinguish spiritual matters and respond to spiritual stimuli (Erickson, 1985). Possession of a soul is what distinguishes humans and animals from plants and possession of a spirit is what distinguishes man from animal.

There is no mention anywhere in the Bible of an animal possessing a spirit. In fact, there are two distinct Scriptures that amplify the point that a soul and a spirit are distinctive. "And the very God of peace sanctify you wholly; and I pray God your whole spirit and soul and body be preserved blameless unto the coming of our Lord" (1 Thessalonians 5:23), "For the word of God is quick, and powerful, and sharper than any two-edged sword, piercing even to the dividing asunder of soul and spirit, and the joints and marrow, and is a discerner of the thoughts and intents of the heart" (Hebrew 4:12).

The two terms, soul and spirit, are often used interchangeably; however, soul and spirit are not always synonymous (Unger, 1957, p. 1043). An example can be found in Luke 1:46-47, "And Mary said, my soul doth magnify the Lord, and my spirit hath rejoiced in God my Savior". The soul is said to be lost, but not the spirit. When there are no technical distinctions employed, the Bible is dichotomous in its description of animal creation; otherwise it is trichotomous.

## **Concluding Thoughts**

Mankind's relationship with animals is historically significant. Many see animals as here on earth to serve mankind, to feed mankind, and to entertain mankind. Others see animals as having the right to coexist in harmony and peace with mankind. This study has shown that the differences in a person's belief and attitudes about animals may be a reflection of his or her personal worldview. The Animal-Human Continuity scale (Templer et al., 2006) correlated with their religious beliefs, along with the Life Attitude Scale-revised (Reker, 1992), provide a good basis towards a better understanding of the

beliefs and attitudes various humans might have towards animals and how this can help a professional or pastoral counselor further comprehend and treat, his or her patients pertaining to animal issues.

CHAPTER THREE: METHODS

#### Introduction

The first two chapters of this study have described the different views and beliefs that man has regarding animals. There is a division between worldviews which may determine how one treats animals and his fellow human beings. This division is between the evolutionists and creationists. Thus, it would be relevant to study man's beliefs about animals as to whether he holds a dichotomous worldview or a continuous worldview.

This study was implemented to view these positions and how they correlate with man's belief system and attitudes about animals. This chapter provides a review of the methods used in the study. It delineates the research design, sample, hypothesis, procedures, data collection measures, and the specific tests used in the present study.

## **General Investigative Design**

The design is a non-experimental, descriptive correlation study. The study uses a variety of methods to assess students' attitudes and beliefs about animals, whether differences about their beliefs and attitudes can be attributed to their particular worldview as either an evolutionist or creationists, and how this may relate to their treatment of animals and their fellow human beings.

To insure a mixture of class rankings, and majors, one hundred students from a southeastern conservative evangelical university who were taking a required Bible survey

course voluntarily took the Animal Human Continuity Scale (Templer et al., 2006). Questions on the test pertained to religious belief and activity (Harville, Shelly, Templer, and Rienzi, 2004) and the Life Attitude Profile-Revised Scale (Reker, 1992). Ninety-nine undergraduate students from two secular schools located in Florida also voluntarily took the same scales. All participants filled out a brief demographic profile, inquiring about each participant's age, whether they lived or grew up in the city or a rural area, if they had any pets or animals and if the pet or animal stayed indoors or outdoors (see Appendix A).

For the purpose of this study, The Animal Human Continuity Scale (Templer et al., 2006), the measures of religiosity questionnaire (Harville et al., 2004), and the Life Attitude Profile Revised (Reker, 1992) were administered. Scores were tabulated and a factor analysis was performed on the Animal Human Continuity Scale. The AHCS score and the AHCS factors were then correlated with the religious items and the Life Attitude Profile-Revised scales. In the following sections, there will be a discussion of the nature, validity, and reliability of each instrument.

#### **Instruments**

## **Animal Human Continuity Scale (AHCS)**

The Animal Human Continuity Scale (AHCS) is a 12-item scale that was constructed to measure the extent to which the respondent views humans and animals in a dichotomous fashion versus as a continuum. Items were generated on a rational basis.

Item selection was based on ratings of content validity followed by item total score correlations with graduate students, faculty, and university staff participants. The scales contained such items as "humans can think but animals cannot", "people evolved from lower animals", and "people have a spiritual nature but animals do not".

The Animal Human Continuity Scale has good psychometric properties. It has good internal consistency as gauged by Chronbach's Alpha (.69). Its construct validity is good (Templer et al., 2006). It has reasonable correlations with religion, gender, and theoretical orientation variables. It has good criterion-oriented validity in so far as members of a fundamental religion scored on the dichotomous direction in comparison to a Unitarian group (Templer et al., 2006). More traditional religious participants tended to respond in the dichotomous direction. The instrument yielded a meaningful factor analysis. The scale yielded three factors, "Rational Capacity", "Superiority versus Equality", and "Evolutionary Continuum". Although factors and factor loadings differ from population to population, for any individual group of participants, one can use factor scores in addition to total score. The Animal Human Continuity Scale takes about ten minutes to complete, regardless of whether or not factor scores are employed (see Appendix B).

### **Life Attitude Profile-Revised (LAP-R)**

The Life Attitude Profile-Revised (LAP-R) is a 48-item questionnaire developed from the original 156 item Life Attitude Profile (Reker & Peacock, 1981). The manual indicates that it can be used with participants ranging from adolescence to older

adulthood and only requires a fifth grade reading level. Each item is scored on a seven point Likert scale, ranging from seven representing strongly agree, to one representing strongly disagree. The profile produces six factor scores titled, Purpose (PU), Coherence (CO), Choice/Responsibility (CR), Death Acceptance (DA), Existential Vacuum (EV), and Goal Seeking (GS), and two composite scores entitled the Personal Meaning Index (PMI) and Existential Transcendence (ET). Each of the six factor scales has eight items, producing the total 48 items. A high score on the scale indicates a high degree of that attribute.

Reker (1992) reported that the LAP-R was constructed to empirically measure Frankl's concepts of will to meaning, existential vacuum, personal choice, and responsibleness, realities and potentialities, and death acceptance, as developed in his logotherapy.

According to the manual, the first scale of the LAP-R, Purpose, refers to having life goals, a sense of direction, and a notion of worthiness (Reker, 1992). The second scale, Coherence, refers to having an ordered, logical, and consistent understanding of self, others, and of life in general. The third scale, Choice/Responsibleness, refers to one's sense of freedom to make choices and decisions, and have a sense of control over the direction that an individual's life takes. The fourth scale, Death Acceptance, refers to an absence of fear and anxiety about death and the acceptance of death as a natural part of life. The fifth scale, Existential Vacuum, refers to a lack of meaning, goals, and direction, and results in feelings of boredom, apathy, and indifference. The sixth scale, Goal Seeking, refers to the desire to avoid the routine of life by seeking out new

experiences and challenges. The first composite score, the Personal Meaning Index, is a more focused measure of personal meaning and is derived by adding the Purpose and Coherence scales. The second composite score, Existential Transcendence, is a global measure of meaning and purpose, that includes the degree to which meaning and purpose has been discovered, as well as a person's further motivation to find meaning and purpose. It is derived by summing the Purpose, Coherence, Choice Responsibleness, and Death Acceptance scales, and then subtracting the Existential Vacuum and Goal Seeking scales.

The LAP-R manual (Reker, 1992) reports sufficient internal consistency with alpha coefficients on the six factor scales ranging from .79 to .86, and the two composite scores being .90 and .91. Test-retest reliability coefficients were reported to range from .77 to .90. The LAP-R has a meaningful internal structure. Factor analysis revealed five factors and a factor loading criterion of .40 was chosen for items. All but one item of the PU and CO scales loaded on Factor 1. All but one of the items of the EV scale loaded on Factor 2; and the manual further indicates that all but one of the CR scales loaded on Factor 3. All of the items loaded on Factor 4 and all of the GS items loaded on Factor 5. It should be noted that all of the items that did not meet criteria for a factor were all close to qualifying and did not load higher on any other of the factors. The LAP-R also appears to have sufficient concurrent validity as most of the scales significantly correlate with the Purpose of Life Test (Reker, 1992), the Life Regard Index-Framework, Ryff's Integrity Scale, Depression Inventory, Perceived Well-Being Scale, the Life Satisfaction Index-z, and the Social Desirability Scale (see Appendix C).

### **Measures of Religiosity**

The measures of religiosity are on a four item questionnaire, a good measure (Harville et al., 2004) of a person's religious beliefs about life after death, the strength of this belief and its correlation with degree of religious service attendance (Appendix D). The instructions ask the participant to "circle the response that best expresses your current religious/spiritual beliefs and practices".

The first question asks about the participants' current religious/spiritual belief system. It is directed by the contention of individuals such as H. Koenig (1988), and Neimeyer, Wittkowski, and Moser (2004) who believe that attitudes towards death may be influenced more by the certainty of religious beliefs than the content of religious beliefs. The second question asks about the participants' level of certainty in their beliefs about God and the third question asks about their level of certainty in their beliefs in life after death.

Questions 2 and 3, as devised by Donald Templer and colleagues (Harville et al., 2004), were given two scores. The first score, belief, was reverse scored and ranged from 1 to 5, with 1 indicating no belief. The second score, strength of certainty, ranged from 1 to 3, with responses 1 and 5 receiving a score of 3. Responses 2 and 4 received a score of 2 and responses 3 received a score of 1, indicating the least certainty. Response 4 rates the importance to the participants of the possibility of life after death within a religious/spiritual belief system that question 4 asks in the religious inventory, two scores are employed. The first score is for strength of belief with the number circled being the

same as number scored. The second score shows degree of certainty. Participants, who circled 1 or 5, will receive a score of 3 for greatest certainty. The circling of 2 or 4 provides a score of 2, the circling of 3, shows least degree of certainty and is scored 1.

# **Demographic Questionnaire**

Demographic variables were gathered to better understand the sample of participants being examined, and to further explore the correlations of these variables (see Appendix A), Age, gender, rural or city upbringing, whether or not they had a pet, and if the pet stayed indoors or outdoors were included as descriptors of the sample. It was later decided to eliminate all variables except gender and age (see Appendix A).

#### **Procedure**

Participants were given a stapled packet that included a consent form (see Appendix E), a short demographic questionnaire, the brief religious inventory, the Life Attitude-Profile-Revised, LAP-R (1992), as well as the Animal-Human Continuity Scale, AHCS (2006). Participants were instructed to read and sign the consent form and then continue on with the questionnaires, if they chose to do so. They were instructed to read all the instructions and respond honestly to each question.

When they had completed the questionnaires, the participants were instructed to return the entire packet with the signed consent form to the author. The entire procedure took less than 75 minutes, with most of the participants finishing within an hour.

A correlation of total score of the Animal Human Continuity Scale and its factors with the religious items, and each of the scales of the Life Attitude Profile-Revised was calculated.

# **Research Questions and Hypotheses**

For this present study the following hypotheses were developed:

Hypothesis 1: The conservative evangelical students will tend to score in the dichotomy direction on the Animal-Human Continuity Scale in comparison to secular university students. That is, they will tend to have lower scores which indicate a dichotomous orientation in contrast to secular university students who will have more of a continuous orientation towards the relationship of humans and animals.

Hypothesis 2: For the conservative evangelical students, there will be a tendency for the participants who report great religiosity to have a dichotomous orientation.

Hypothesis 3: For the secular university students, there will be a tendency for the participants who report greater religiosity to have more of a dichotomous orientation towards the relationship between humans and animals, and, thus, will tend to score higher on the Purpose, Coherence, Choice/Responsibility, Death Acceptance, Personal Meaning, and Existential Transcendence scales of the Life Attitude Profile-Revised.

Hypothesis 4: For both the conservative evangelical university and the secular university students, the participants who conceptualize humans and animals in a continuous fashion will tend to score higher on the Existential Vacuum and Goal Seeking scales of the Life Attitude Profile-Revised.

#### **Ethical Considerations**

It is critical in any study involving human participants to be cognizant of ethical issues. To insure the ethical soundness of the study, several safeguards were employed to protect the participants. In accordance with Liberty University's research requirements, application was made to Liberty University's Internal Review Board (IRB), in order to obtain permission to conduct the study as outlined. Consistent with the American Counseling Association's Ethical Standards (ACA, 2005) for research, the following ethical practices were implemented.

The present study is not a high risk one, with respect to ethical issues. First, the research objectives were presented to inform participants of the nature of the research. Second, no deception was used in the study. Third, non-noxious stimuli, such as electric shock were not employed. Fourth, no extremely personal information was asked for. Fifth, the participants were all adults. Sixth, all participants remained fully clothed. Seventh, no drugs were employed. A reasonable ethics question is whether or not there was sufficient scientific and/or practical merit to warrant the participants' time. On the basis of the literature reviewed, the answer seemed to be yes. A related question is whether or not the participants would gain something for giving their time. Again, the answer appeared to be yes. They learned about the process of research and about psychometric instruments. Furthermore, they were given the opportunity to discover and read about the findings of the research.

# **Summary**

This study is based on religious, philosophical, and theoretical concept utilization, in which there is disagreement about whether the differences between humans and animals can be understood in quantitative differences versus the position that there are absolute qualitative differences. Evolutionists represent the former opinion and creationists represent the second alternative. The research design was to administer the Animal-Human Continuity Scale as well as the Life Attitude Profile-Revised Scale. The plan included correlating the two scales, determining the relationship of religious variables to scores on these instruments and to determine group differences.

#### CHAPTER FOUR: RESULTS

The primary purpose of this research was to determine the relationships between religious variables and the Animal Human Continuity Scale (Templer et al., 2006), which assesses the degree to which one views humans and animals on a continuum versus having a dichotomous relationship. Evangelical Christians view humans as created by God rather than being the product of evolution. It was anticipated that (1) evangelical university students would score more in the dichotomous direction than secular university students and that (2) within both the evangelical and secular university students, those that were more religious, would score more in the dichotomous direction. It is anticipated that the correlations will be higher for the combined groups because of the greater variance.

In this chapter, age and sex variables will be analyzed so that the demographics of the students will be understood and compared. The factor analysis of the AHCS with the Religiosity Scale and the Life Attitude Profile–Revised results will be demonstrated in table form so as to be readily available and understood.

### **Demographics**

A total of one hundred and ninety five students (195), from two southern universities agreed to participate in this present research. One group of ninety nine (99) students was enrolled at a conservative evangelical university and the other ninety six (96) students were enrolled in a secular university.

The conservative evangelical university students ranged in age from seventeen (17) to twenty six (26) years in age, with fifty one (51) males and forty eight (48) females participating in the study. The mode was nineteen (19) with thirty seven (37) students.

The mean age was nineteen point four nine (19.39) years of age (see Table 4.1).

Table 4.1 Evangelical conservative university student's demographics, sex and age.

Male	Female	Age				
0	2	17	f	2	=	34
15	13	18	f	28	=	504
13	24	19	f	37	=	703
12	4	20	$\mathbf{f}$	16	=	320
3	3	21	f	6	=	126
3	1	22	f	4	=	88
1	1	23	f	2	=	46
2	0	24	f	2	=	48
1	0	25	f	1	=	25
1	0	26	f	1	=	26
51	48	10				1920
99						1920/99 = 19.39 Mean

Male = 51

Female = 48

Total = 99 Range = 17-26

Mode = 19 (37 students)

Mean = 19.39

Table 4.2 shows the demographics of the secular university students who ranged in age from seventeen (17) to forty two years in age, with forty seven (47) males and forty nine (49) females participating in this present study. The mode was nineteen (19) with fifteen (15) students. The mean age was twenty three point seven (23.7) years of age.

Table 4.2 Secular university student's sex and age.

Age	Male	Female	Freq	uency	
17	0	1	f	1	17
18	4	4	f	8	144
19	10	5	f	15	285
20	8	5	f	13	260
21	5	6	f	11	231
22	7	5	f	12	264
23	2	7	f	9	207
24	2	1	f	3	72
25	4	3	f	7	175
26	0	1	f	1	26
27	0	2	f	2	54
28	0	0	f	0	00
29	1	1	f	2	58
30	0	1	f	1	30
31	1	0	f	1	31
32	0	0	f	0	0
33	0	0	f	0	0
34	1	1	f	2	68
35	0	3	f	3	105
36	0	0	f	0	0
37	1	1	f	2	74
38	0	0	f	0	0
39	0	1	f	1	39
40	0	0	f	0	0
41	0	0	f	0	0
42	1	1	f	2	84
Total	Male $\overline{47}$	Female 49		96	2224/96
Combined Total Mal Total Fem Total Subj Range Mode Mean Standard I	nales jects	= 96 = 47 = 49 = 96 = 17 - 42 = 19 (15 students) = 23.17 = 4.48			

For the combined groups of students there were ninety-eight (98) total male participants and ninety-seven (97) total female participants. The combined mode was 19 (52 students). The combined mean age of all students was twenty one point two five(21.25) years of age (see Table 4.3).

Table 4.3 Combined evangelical conservative students with secular students age and sex.

Male	=	51	+	47	=	98		
Female	=	48	+	49	=	97		
Total combined students 2224 + 1920 Combined Mode Combined mean					= =	195 4144/195 19 (52 stude 21.25	= ents)	21.25

## **Overall Results of the Research Instruments**

Both groups of students were administered a questionnaire that asked their age, and sex (see Appendix A). Along with this questionnaire they were administered the Animal Human Continuity Scale (see Appendix B), the Life Attitude Profile- Revised scale (see Appendix C), and a Religiosity questionnaire (see Appendix D).

In this section, the means and standard deviations for all continuous variables are presented.

## **Means and Standard Deviation**

Table 4.4 contains the means and standard deviations for all continuous variables for the evangelical university students, the secular universities students, and the combined groups. These continuous variables are age, Animal-Human Continuity Scale, the religious inventory variables, and the nine Life Attitude Profile-Revised scales. The secular university Animal-Human Continuity Scale mean of 23.16 is obviously much higher (in the continuity direction), than the secular university mean of 14.41.

Table 4.4 Means and Standard Deviations for all continuous variables.

Variable	_	gelical	Secular <u>University</u>		Combined
		<u>ersity</u>			<u>Universities</u>
	X	SD	X	SD	X SD
Age	19.39	1.06	23.17	5.38	21.26 4.48
Religious variables					
Strength of belief in God	1.61	.00	1.20	.49	1.10 .37
Certainty about belief in God	2.99	.10	2.80	.49	2.89 .37
Strength of belief in life after death	1.13	.44	1.58	.99	1.35 .79
Certainty about belief in God	2.87	.44	2.56	.74	2.71 .62
Frequency of service attendance	3.72	.65	2.18	1.21	2.96 1.24
Animal-Human Continuity Scale	33.50	10.03	52.68	13.54	42.94 15.26
Life Attitude Profile- Revise	d				
	X	SD	X	SD	X SD
Purpose	22.93	7.10	17.81	6.01	20.41 7.06
Coherence	19.44	6.66	20.17	6.47	19.80 6.56
Choice/Responsibility	28.71	8.90	16.79	6.98	22.84 9.98
Death Acceptance	25.40	9.89	25.06	9.53	25.23 9.69
Existential Vacuum	35.82	8.17	38.34	8.87	37.06 8.59
Goal Seeking	20.00	6.98	20.27	6.02	20.13 6.51
Personal Meaning	42.38	12.23	37.98	11.34	40.22 11.97
Existential Transcendence	57.06	16.19	39.39	15.97	48.36 18.32

## **Statistical Analysis Findings of the Research Questions**

The first research question asked was "Do conservative evangelical university students score in the dichotomy direction on the Animal Human Continuity Scale in comparison with secular university students? (That is, will they tend to have lower scores which indicate a dichotomous orientation, in contrast to secular university students who have a more continuous orientation toward the relationship between humans and animals?)

To investigate this and the other four research questions, an orthogonal factor analysis with varimax rotation was implemented. As illustrated in Table 4.5, results of evangelical university participants were found for the Animal Human Continuity Scale. The four factors indicated an eigenvalue over 1.0 Factor 1 had an eigenvalue of 3.27 and accounted for 27.3% of the variance. The highest factor loadings were with item 4, "Animals are people." Factor 1 was labeled "animal humanness." Factor 2 had an eigenvalue of 1.49 and accounted for 12.4% of the variance. Its highest factor loading was with item 12, "It is crazy to think of an animal as a member of your family." Factor 2 was labeled "animal family membership." Factor 3 had an eigenvalue of 1.24 and accounted for 10.4% of the variance. Its highest factor loadings were with item 5, "Animals are afraid of death"; and item 8, "Animals can fall in love." Factor 4 had an eigenvalue of 1.10 and accounted for 9.2% of the variance. Its highest factor loadings were with item 6, "People have evolved from lower animals"; and item 4, "People are animals." It was labeled "animal nature of people."

For the secular universities participants four factors were extracted. Table 4.6 contains the factor loadings. Factor 1 had an eigenvalue of 4.00 and accounted for 33.3% of the variance. Its highest factor loadings were with items 7, "People are superior to animals"; item 10, "The needs of people should always come before the needs of animals"; item 9, "Humans have a spiritual nature but animals do not"; item 11, "It's okay to use animals to carry out tasks for humans"; and item 3, "People have a life after death but animals do not."

For the combined group, two factors were extracted. Table 4.7 contains the factor loadings for the combine group. Factor 1 had an eigenvalue of 4.66 and accounted for 38.9% of the variance. The highest factor loadings were with item 1, "Humans have a soul but animals do not" item 10, "The needs of people should come before the needs of animals"; item 3, "People have a life after death but animals do not"; item 7, "People are superior to animals"; and item 11, "It's okay to use animals to carry out tasks for animals". Factor 1 was labeled "animal spirituality." Factor 2 had an eigenvalue of 1.30 and accounted for 16.84% of the variance. Its highest factor loadings were with item 5, "Animals are afraid of death"; item 6, "People evolved from lower animals"; item 8, "Animals can fall in love;" and item 12, "It's crazy to think of an animal as a member of your family." Factor 2 was labeled "animal-human similarity."

Table 4.5 Factor loadings for Animal-Human Continuity Scale with Evangelical University students.

Item	Factor							
	1	2	3	4				
Humans have a soul but animals do not.	.30	08	13	.07				
2. Humans can think but animals cannot.	01	.45	15	.03				
3. People have a life after death but animals do not.	.18	.07	02	.21				
4. People are animals	52	.02	18	.53				
5. Animals are afraid of death.	06	12	.57	11				
6. People evolved from lower animals.	07	18	.19	.63				
7. People are superior to animals.	.12	.23	12	.02				
8. Animals can fall in love.	.06	04	.52	.09				
9. Humans have a spiritual nature but animals do not.	.15	.17	.10	18				
10. The needs of people should always come before the needs of animals	.31	01	.11	18				
11. It's okay to use animals to carry out tasks for humans.	.37	34	.12	23				
12. It's crazy to think of an animal as a member of your family.	12	.50	.11	16				

Table 4.6 Factor loadings for Animal-Human Continuity Scale with secular university students.

Item	Factor			
	1	2	3	4
1. Humans have a soul but animals do not.	.51	.38	.64	.17
2. Humans can think but animals cannot.	.10	.09	.86	.17
3. People have a life after death but animals do not.	.54	.38	.50	.04
4. People are animals	.20	.00	.13	.80
5. Animals are afraid of death.	16	.60	29	.37
6. People evolved from lower animals.	04	.16	.10	.76
7. People are superior to animals.	.76	.03	01	.30
8. Animals can fall in love.	.66	.74	.22	03
9. Humans have a spiritual nature but animals do not.	.70	.49	05	.04
10. The needs of people should always come before the needs of animals.	.72	.04	.24	06
11. It's okay to use animals to carry out tasks for humans.	.61	.01	.18	02
12. It's crazy to think of an animal as a member of your family.	12	.54	.19	.01

Table 4.7 Factor loadings for Animal-Human Continuity Scale with combined university students.

Item		tor
	1	2
1. Humans have a soul but animals do not.	.79	.37
2. Humans can think but animals cannot.	.43	.33
3. People have a life after death but animals do not.	.74	.43
4. People are animals	.33	.52
5. Animals are afraid of death.	32	.64
6. People evolved from lower animals.	.21	.62
7. People are superior to animals.	.65	.25
8. Animals can fall in love.	.30	.60
9. Humans have a spiritual nature but animals do not.	.63	41
10. The needs of people should always come before	.78	.15
the needs of animals.	~ <del>-</del>	1.5
11. It's okay to use animals to carry out tasks for humans.	.65	15
12. It's crazy to think of an animal as a member of your family.	.20	.50

Table 4.8 contains the product-moment correlation coefficients of the religious and life attitude variables with the Animal-Human Continuity Scale with evangelical students scores and factor scores. It is to be noted that all significant correlations are negative. The correlation of the religious and life attitude variables with the Animal Human Continuity Scale score with the factor score of the secular university students. Again, all significant correlations are negative.

Table 4.9 shows the correlations between the religious and life attitude variables with Animal Human Continuity total score and factor scores for the secular university

students. The more traditional religious respondents would tend to score more in the dichotomous direction.

The negative correlation of the Animal Continuity Scale with the religious variables for the evangelical and secular students and the combined group is congruent with the group difference. That is, more traditionally religious persons perceive less continuity between humans and animals (see Table 4:10). The fact that the correlation tended to be higher for the combined group can be attributed to greater variability (in the present study, the combination of more religions evangelical and less religious secular students) ordinarily yielding higher correlations.

Table 4.8 Correlations of animal-human continuity variables with religious and life attitude variables with evangelical university students.

Independent variable		Animal/H	uman Co	ntinuity Sc	ale
1	Total	Factor	Factor	Factor	Factor
	Score	1	2	3	4
Religious variable					
Strength of belief in God	01	02	03	.09	.00
Certainty of belief in God	.01	.02	.03	09	.00
Strength of belief in life after death	.01	.10	02	.20*	.21*
Certainty of belief of belief in life after	18	10	.02	20*	26*
death					
Frequency of attendance	26*	10	08	26*	25*
Life Attitude Profile-Revised					
Purpose	03	01	02	.01	05
Coherence	.12	.14	.05	03	.17
Choice/Responsibilities	14	06	04	06	22*
Death Acceptance	.13	.13	.07	06	03
Existential Vacuum	28*	23*	02	26**	07
Goal Seeking	06	.01	05	17	04
Personal Meaning Index	.05	.07	.02	01	02
Existential Transcendence	.02	.04	.04	.00	15
*p < .05					
**p <.01					
<del>-</del>					

Table 4.9 Correlations of animal-human continuity variables with religious and life attitude variables for secular university students.

Independent variable		Animal/H	Human Co	ontinuity	Scale
•	Total	Factor	Factor	Factor	Factor
	Score	1	2	3	4
Religious variable					
Strength of belief in God	.10	12	.02	.07	40***
Certainty of belief in God	.10	.12	02	07	22*
Strength of belief in life after death	06	07	12	05	08
Certainty of belief of belief in life after	06	08	.02	07	08
death					
Frequency of attendance	40**	*22*	08	18	44***
Life Attitude Profile-Revised					
Purpose	11	12	32***	.12	.19
Coherence	02	06	18	.02	.16
Choice/Responsibilities	39**	*18	35***	12	18
Death Acceptance	.18	.13	.07	.16	02
Existential Vacuum	.16	.06	.14	03	04
Goal Seeking	.06	02	.25	01	19
Personal Meaning Index	07	10	28**	08	.20
Existential Transcendence	13	04	.32***	.10	.06
*p < .05					

Table 4.10 Correlations of animal-human continuity variables with religious and life attitude variables with all participants.

Independent variable	Animal Hu	Human Continuity Scale				
	Total	Factor	Factor			
	Score	1	2			
Religious variable						
Strength of belief in God	.22	.04	.30***			
Certainty of belief in God	22***	.04	30***			
Strength of belief in life after death	.18	.09	.19**			
Certainty of belief in life after death	23**	.00	26***			
Frequency of attendance	61***	10	48***			
Life Attitude Profile-Revised						
Purpose	28***	19**	22*			
Coherence	.07	.07	.00			
Choice/Responsibilities	54***	36***	43***			
Death Acceptance	.11	.14	00			
Existential Vacuum	.05	.02	.03			
Goal Seeking	.02	.03	04			
Personal Meaning Index	13	07	.13			
Existential Transcendence	35***	28**	30***			
* $p < 0.5$ ** $p < .01$ *** $p < .001$						

# **Summary of the Results**

The lower scores of the evangelical university students on the Animal-Human Continuity Scale in comparison to those of secular university students are consistent with the traditional Christian religious teaching that humans and animals are qualitatively different. Furthermore, the evangelical university teaches the literal interpretation of the Bible in which humans were created by God rather than the product of evolution.

The negative correlation of the Animal Human Continuity Scale with that of the religious variables for the evangelical and secular students and the combined group is congruent with the group differences. That is, more traditionally religious persons perceive less continuity between humans and animals. The fact the correlations tend to be higher for the combined group can be attributed to greater variability (in the present study, the combination of more religious evangelical and less religious secular students) ordinarily yielding higher correlations.

The religious variable that yielded the highest and greatest number of significant negative correlations with the Animal Human Continuity Scale was frequency of attendance.

## Overview

This chapter advances the summary, conclusions, recommendations, and implications from the present study. The chapter will contain a summary of the purpose of the study, as well as an overview of the results. Finally, the conclusions, recommendations, and suggestions for further research will be described.

### Summary

This section will briefly summarize the purpose of the study, the research design and methods, participants, and the general findings from the statistical analysis of the surveys.

## Summary of Purpose, Design, and Research Questions

The researcher's focus of attention was to examine the relationship between religious and existential variables to scores on the Animal Human Continuity Scale (Templer, 2006) and perception of beliefs about animals and their equality with mankind. The primary purpose of the present research is to discover the relationship between a person's beliefs about animals, religiosity, and existential beliefs. The study correlates religious and existential variables with the Animal Human Continuity Scale.

The secondary purpose of the present research is to investigate possible differences in the responses of students in a conservative evangelical university and students in a secular university and apply the findings to practical and clinical settings.

Accordingly, this research study surveyed ninety nine students enrolled in a Southern Evangelical Christian University, and ninety six students enrolled in a Southern Secular University using the Animal Human Continuity Scale (Templer et al., 2006), the Life Attitude Profile (Reker, 1992), and the Religiosity Scale, (Harville, 1992). In keeping with the intended research purpose, the reader is reminded of the following five relevant questions and commitment hypothesis that guided this study.

- 1. Do conservative university students score in the dichotomy direction on the Animal-Human Continuity Scale in comparison to secular university students? (That is, will tend to have lower scores which indicate a dichotomous orientation, in contrast to secular university students who have a more continuum orientation toward the relationship between humans and animals.)
- 2. Do conservative evangelical university students who report greater religiosity have a tendency toward a more dichotomous orientation than secular students?
- 3. Do secular university students who report greater religiosity have a tendency toward a dichotomous orientation?
- 4. For both the conservative evangelical university students and the secular students who report greater religiosity, will they have more of a dichotomous orientation?
  - 5. Do conservative evangelical and secular university students combined, tend

to have a higher standard deviation on the Animal Human Continuity Scale than the two groups considered separately?

## **Summary of Participants**

This study surveyed two hundred university students across two university settings, one a southern evangelical Christian university and the other a southern secular university. From this population, ninety nine usable returned surveys were returned by the conservative southern evangelical students and ninety six usable returned surveys were returned by the southern secular university students.

## **Summary of Findings**

In summary, this study has been an attempt to examine the relationship of religious and existential variables to scores on the animal human continuity scale and perception of beliefs about animals and equality of mankind.

The lower scores of the evangelical university students on the Animal-Human Continuity Scale in comparison to those of secular university students are consistent with the traditional Christian religious teaching that humans and animals are qualitatively different. Furthermore, the evangelical university stands for the literal interpretation of the Bible in which humans were created by God rather than the product of evolution.

The negative correlation of the Animal Human Continuity Scale with that of the religious variables for the evangelical and secular students and the combined group is

congruent with the group differences. That is, more traditionally religious persons perceive less continuity between humans and animals. The fact that the correlations tend to be higher for the combined group can be attributed to greater variability (in the present study the combination of more religious evangelical and less religious secular students) ordinarily yielding higher correlations.

The religious variable that yielded the highest and greatest number of significant negative correlations with the Animal Human Continuity Scale was frequency of church attendance. It could be argued by some that greater continuity represents external rather internal (Alport, 1970) religiosity. A more parsimonious explanation, however, is that frequency of attendance is more behavioral objective and quantitative than belief. It is difficult to quantify subjective experiences such as strength of belief and certainty of belief.

The perspective permitted by the composite of the three sets of Animal Human Continuity Scale correlations with life values is that these correlations tend to be low and non-significant. This can probably be best understood by religion not being the only variable that contributes to life values. There are other determinates such as family influences. To give an example from another existential variable, Templer, Ruff, and Franks (1971) found family resemblance on the Templer (1970) Death Anxiety Scale. The death anxiety scores correlated with those of their parents with the correlations being higher for the same sex dyad. The highest correlations were between the score of their two parents.

Nevertheless, most of the significant correlations between the Animal Human Continuity Scale and the Life Attitude Profile- Revised do show that persons with higher existential attitudes such as Purpose, Choice Meaning, and Transcendence tend to believe that there are qualitative differences between humans and animals. This seems reasonable. If a person views human nature as having more than biological determination he or she views humans as having attitudes distinct from animal attitudes.

It is apparent that Choice/Responsibility of the Life Attitude Profile-Revised (Reker, 1992) yields the highest and most significant (negative) correlations across the evangelical and secular and combined groups. This is understandable in view of Choice/Responsibility assessing the degree that the respondent believes that he or she has responsibility and control of one's life. Low scores on the Animal Human Continuity Scale imply a free will in contrast to a continuity of perspective in which humans are animals whose behavior is entirely determined by the same principles that govern animal behavior.

It is apparent that Existential Vacuum has negative significant correlations with the Animal Human Continuity Scale with the Evangelical university participants but that the correlations are not significant with the secular university participants. It was not anticipated that the correlations would be negative. A plausible, albeit speculative explanation, of the unexpected finding is based on the fact that the nature of the items seem to tap depression, e.g., I feel like withdrawing from life with an "I don't care attitude." It is here suggested that highly religious Christians, when they become depressed, do not relinquish their convictions that they have a highly spiritual nature.

The composite of the findings converge to a perspective in which stronger traditional Christian beliefs are associated with perceiving greater qualitative differentiation between humans and animals. Evangelical university students score more in the dichotomous direction on the Animal Human Continuity Scale than the secular university students. Within the evangelical and secular and combined groups those students who were more religious endorsed a dichotomous distinction between humans and animals. Furthermore, more existential attitude frames of reference were associated with dichotomous as opposed to a continuous perceived relationship between humans and animals.

# **Limitations, Implications, and Recommendations**

The focus of this section is to discuss the limitations, implications and recommendation for counseling, and recommendations for future research in light of the results described in chapter four. Prior to this response, a brief summary of the research results that were presented in the preceding chapter will be reviewed. This chapter section will first describe the research participants (i.e., demographics) and then review the study findings.

The composite of the findings converge to a perspective in which stronger traditional Christian beliefs are associated with perceiving greater qualitative differentiation between humans and animals. Evangelical university students score more in the dichotomous direction on the Animal Human Continuity Scale than the secular university students. Within the Evangelical and secular and combined groups those

students who were more religious endorsed a dichotomous distinction between humans and animals. Furthermore, more existential attitude frames of reference were associated with dichotomous as opposed to a continuous perceived relationship between humans and animals.

## **Limitations of the Study**

The scales and questionnaires administered were all paper and pencil instruments. With all paper and pencil instruments one must be aware of such instruments and their inherent limitations. For example (1) the person may have some sort of response bias, and want to answer in a social acceptable or desirable manner, (2) the person may respond all true or all false, (3) there may be unconscious factors that the person is not aware of, and he or she may not be aware of any unconscious responses, (4) a person may be tired, or (5) not motivated to answer the questions seriously.

## **Implications for Counseling**

The more varied with respect to religiosity that you are dealing with, the greater the differences of opinion in the population one is counseling. Thus it would be very beneficial to know something about the counselee's religious background, i.e., denomination, beliefs, and their strength of religious convictions. Knowing this will help the counselor to better understand the client and therefore be more helpful and efficient in relieving the client's distress.

A large discrepancy between one's religion and score on the Animal Human Continuity Scale may indicate a wavering in faith and/or religious confusion. For example, if a strongly religious evangelical Christian scores in the continuity direction, exploration of all aspects of his or her faith may be indicated in counseling.

#### **Recommendations for Future Research**

This present research incorporated two southern universities. One university was a conservative evangelical university and the other a southern secular university. The locations of these universities are in the Bible belt of the south. Future research may gleam interesting results and perhaps different findings if additional universities from the far west, (as the far west is known to be more liberal in its culture), were incorporated in a future study.

Research with Jewish and with Muslim participants is recommended. Since these two monotheistic religions also believe in common scripture or in parts of the Bible. It would be expected that more religious participants would have a more dichotomous orientation.

Such a prediction would not necessarily be made with Eastern or Native

American religions since both incorporate animals in the spiritual realm. In the Hindu
religion one may be human in one life and an animal in another.

#### Summary

This present research asked five research questions to determine the relationships between religious variables and the Animal Human Continuity Scale. Results found that

evangelical students responded in a more dichotomous fashion when compared with those respondents from a secular university. It was also found that evangelical conservative students who report greater religiosity have a more dichotomous orientation than the evangelical students who have reported less religiosity, and that secular university students who report greater religiosity have a more dichotomous orientation than the secular students who report less religiosity. Both groups of students who report greater religiosity have a more dichotomous orientation, and furthermore evangelical and secular university students combined have a greater standard deviation than that obtained by each of the groups individually.

The purpose of the present research was to relate religious variables to the Animal Human Continuity Scale of (Templer et al., 2006). This instrument assesses the extent to which the respondent views humans as animals in a continuous versus dichotomous fashion. The traditional Judaic Christian system views that there are qualitative differences. Genesis states that animals are to be under the dominion of humans. The Animal Human Continuity Scale has such items as "humans have a mortal soul but animals do not". In addition to this instrument a religious inventory and the Life Attitude Profile –Revised scale (Reker, 2004), which assess existential values, were administered to evangelical university students and secular university students.

The findings strongly support the generalization that more religious people are more inclined to view animals and humans in a dichotomous fashion. The evangelical university students tended to score more in the dichotomous direction than the secular university students. Both evangelical and secular students who have higher existential

values score in the more dichotomous direction. Implications for counseling and future research were discussed.

#### REFERENCES

- Alcorn, R. (2004). Heaven. Carol Springs, IL: Tyndale House.
- All, A.C., & Loving, G.L. (1999). Animals, horseback riding, and implications for rehabilitation therapy. *The Journal of Rehabilitation*, 65(3), 49-57.
- Allen, C. (2010). Animal consciousness. *Stanford Encyclopedia of Philosophy*. Retrieved from http://plato.stanford.edu/entries/consciousness-animals/.
- Allen, K. (2003). Are pets a healthy pleasure? The influence of pets on blood pressure. *Current Directions in Psychological Science*, *12*, 236-239. doi: 10.1046/j.0963-7214.2003.01269
- American Academy of Religion. (2009). Call for papers: Animal and religion consultation. Retrieved from <a href="http://fore.research.Yale.edu/education/professional-development/call-for-papers-AAR-2009\_CFP\_Animals\_and\_Religion.pdf">http://fore.research.Yale.edu/education/professional-development/call-for-papers\_AAR-2009\_CFP\_Animals\_and\_Religion.pdf</a>
- American Counseling Association. (2005). ACA Code of Ethics retrieved on June 20, 2010 from <a href="http://www.counseling.org/Resources/CodeofEthics/TP/Home/CT2.aspx">http://www.counseling.org/Resources/CodeofEthics/TP/Home/CT2.aspx</a>
- Anderson, W.P., Reid, C.M., & Jennings, G.L. (1992). Pet ownership and risk factors for cardiovascular disease. *Medical Journal of Australia*, 157, 298-301.
- APPMA. (2005). Pet ownership. Retrieved from <a href="http://www.appma.org/press\_industry">http://www.appma.org/press\_industry</a> trends.asp
- Arluke, A., Levin, J., Luke, C., & Ascione, F.R. (1999). The relationship of animal abuse to violence and other forms of antisocial behavior. *Journal of Interpersonal Violence*, *14*, 963-975. doi: 10.1177/088626099014009004.
- Ascione, F.R. (1993). Children who are cruel to animals: A review of research and implications for developmental psychopathology. *Anthrozoos*, 6(4), 226-247.
- Ascione, F.R. (1998). Battered women reports of their partners' and their children's cruelty to animals. *Journal of Emotional Abuse*, 1, 119-133. doi: 0.1300/J135v01n01\_06.
- Ascione, F.R. (2001). Animal abuse and youth violence. *Juvenile Justice Bulletin*, 1-16. National Crime Justice Reference Service. U.S. Department of Justice. Office of Justice Programs. Office of Juvenile Justice and Delinquency. Rockville, MD. Retrieved from <a href="http://www.ncjrs.gov/pdfiles1/ojjdp/18867.pdf">http://www.ncjrs.gov/pdfiles1/ojjdp/18867.pdf</a>

- Ascione, F.R., Thompson, T.M., & Black, T. (1997). Childhood cruelty to animals: Assessing cruelty dimensions and motivations. *Anthrozoos*, 10, 170-177.
- Ascione, F.R., Weber, C.V., Wood, D.S. (1997). The abuse of animals and domestic violence: National survey of shelters of women who are battered. *Society and Animals*, 5(3), 205-218. doi: 10.1163/156853097X00132.
- Asch, S.E. (1974). Forming impressions of personality. *Journal of Abnormal and Social Psychology*, 41, 258-290.
- AZA. (2009). *Conservation*. Produced by The American Zoo and Aquarium Association. Retrieved from www./aza.org/conservation/
- Azzi, C. (1974). More on India's sacred cattle. *Current Anthropology*, 15, 317-321. doi: 10.1086/201478
- Baenninger, R. (1991). Violence toward other species. In R. Baenninger (Ed.), *Targets of violence and aggression* (Chapter 2, pp. 5-43). New York, NY: Elsevier Science.
- Baenninger, R. (2000). *Child abuse, domestic violence and animal abuse: Cruelty to animals and interpersonal violence.* Purdue, IN: Purdue University Press.
- Baines, J. (1987). Practical religion and piety. *The Journal of Egyptian Archeology*, 73, 79-98. doi: 10.2307/3821523
- Baines, J. (1994). Kingship, definition of culture, and legitimation. In D. O'Connor., & D.P. Silverman (Eds.), *Ancient Egyptian Kingship* (Chapter 1, pp. 3-48). Leiden, The Netherlands: E.J. Brill.
- Baird, J. (2008). Respecting animals: St. Thomas Aquinas and St. Francis of Assisi. *The Ark*, 21. Retrieved from http://www.all-creatures.org/ca/ark-210-/html.
- Baldry, A.C. (2003). Animal abuse and exposure to interparental violence in Italian youth. *Journal of Interpersonal Violence*, 18, 258-281. doi: 10.1177/0886260502250081
- Barba, B.E. (1995). The positive influence of animals: Animals-assisted therapy in acute care. *Clinical Nurse Specialist*, *9*(4), 199-2002. doi: 10.1097/00002800\_199507000-00005
- Beane, L. (2003). The new animal spirituality: Do all dogs go to heaven? Retrieved from <a href="http://www.all-creatures.org/aip/nl-26nov2003.thenew.html">http://www.all-creatures.org/aip/nl-26nov2003.thenew.html</a>

- Beck, A.M., & Katcher, A.H. (1993). Between pets and people: The importance of animal companionship. New York, NY: Putnam Books.
- Behrikis, N. (2002). There is eternal life for animals. Tyngsborough, MA: Pete.
- Beirne, P. (2004). From animal abuse to interhuman violence? A critical review of the progression theses. *Society and Animals*, *12*(1), 39-65. doi: 10.1163/15685 3004323029531.
- Bekoff, M. (2002). *Minding animals: Awareness, emotions, and heart.* New York, NY: Oxford University Press.
- Bell, L. (2001). Abusing children-abusing animals. *Journal of Social Work, 1*, 223-234. doi: 10.1177/146801730100100207.
- Bennett, E. (2010). State of the wild. In S. Guynup (Ed.), *State of the wild 2008-2009: A global portrait of wildlife, wildlands, and Oceans.* Washington, D.C.: Wildlife Conservation Society. Retrieved from http://www.wcs.org/stateofthewild/pasteditions.html.
- Bentham, J. (2005). Animal Rights. In J.H. Burns, & H.L.A. Hart (Eds.), *An introduction to the principles of morals and legislation* (pp. 85-88). New York, NY: Oxford University Press.
- Brown, C., & Braithwaite, V.A. (2005). Effects of predation pressure on the cognitive ability of the poeciliid Brachyraphs Episcopi. *Behavioral Ecology*, *16*(2), 482-487. doi: 10.1093/beheco/ari016.
- Brown, C.G. (2009). Meet the faculty. Retrieved from www.indiana.edu~relstad/faculty/GuntherBrown.shtml.
- Bshary, R., Wickler, W., & Fricke, H. (2002). Fish cognition: A primate's eye view. *Animal cognition*, *5*(1), 1-13. doi: 10.1007/s/0071-001-0116-5
- Buckner, E.D. (2004). The Immortality of Animals. Lewiston, NY: Edwin Mellen Press.
- Burghardt, G. (1985). Animal awareness/current perceptions and historical perspective. *Animal Psychologist*, 40(8). doi: 10.1037/0003-066X.40.8.905
- Burket, W. (1983). *The anthropology of ancient Greek sacrificial ritual and myth.*Translated by P. Bing. LA: University of California Press, Ltd. and Berkeley.

- Cain, A.O. (1983). A study of pets in the family system. In A.H. Katcher & A.M. Beck (Eds.), *New perspective on our live with companion animals*, (pp. 78-81). New York, NY: Hawthorn Press.
- Carmack, B.J. (1985). The effects on family members and functioning after the death of a pet. In M.B. Sussman (Ed.), *Pets and the family* (pp. 149-161). New York, NY: Hawthorn Press.
- Catania, A., & Laties, V. (1999). Pavlov and Skinner: Two lives in science (an introduction to B.F. Skinner's "some responses to the stimulus Pavlov"). *Journal of Experimental Analysis of Behavior*, 72(3), 455-461. doi: 10.1901/jeab.1999.72-455.
- Clinton, T., Hindson, E., & Ohlschlager, G. (Eds.). (2001). *The soul care Bible*. Nashville, TN: Thomas Nelson.
- Colburn, A., & Henriques, L. (2006). Clergy views on evolution, creationism, science, and religion. *Journal of Research in Science Teachings*, 43(4), 419-442. doi: 10.1002/tea.20109.
- Cook, R.G. (1993). The experimental analysis of cognition in animals. *Psychological Science*, 4(3), 174-178. doi:10.1111/j.1467-9280.1993.tb00483.x
- Corson, S.A., Corson, E.O., & Gwynne, P.H. (1975). Pet-facilitated psychotherapy in a hospital setting. *Current Psychiatric Therapy*, 15, 277-286.
- Corson, S.A., Corson, E.O., Gwynne, P.H., & Arnold, L.E. (1977). Pet dogs as nonverbal communication links in hospital psychiatry. *Comprehensive Psychiatry*, *18*, 61-72. doi: 10.1016/S0010-440X(77)80008-4.
- Darwin, C.R. (1984). Charles Darwin and the descent of man. In R. Boakes (Ed.), From Darwin to behaviorism: Psychology and the mind of animals (pp. 2-22). New York, NY: Cambridge University Press.
- Darwin, C.R. (2008). The expression of the emotions in man and animals. In J. Murray (Ed.), *The complete Works of Charles Darwin Online*. Retrieved from http://darwin-online.org.uk/content/frameset?itemID=F1142&viewtype=text&oageseq=1.
- Descartes, R. (1993). Animals are machines. In S.J. Armstrong & R.G. Botzler (Eds.), *Environmental ethics: Divergence and convergence* (pp. 281-285). New York, NY: McGraw-Hill.

- Descartes, R. (2008). Animals. In G. Hatfield (Ed.), *History of philosophy Modern* (*C17th-C19th*). Retrieved from http://www.blackwellreference.com/public/tocnode?id=g9781405121545\_chunk\_g978140.
- Densmore, F. (1988). *Chippewa customs*. St. Paul, MN: MHS Press.
- DeViney, E., Dickert, J., & Lockwood, R. (1983). The care of pets within child abusing families. *International Journal for the study of Animal Problems*, 4, 321-329.
- Duncan, A., & Miller, C. (2002). The impact of an abusive family context on childhood animal cruelty and adult violence. *Aggression and Violent Behavior*, 7, 365-383. doi: 10.1016/S1359-1789(01)00064-7.
- Eaton, C. Le Gai, & Thomas-Henzell, J. (2008). *The Book of Hadith: Sayings of the Prophet Muhammad for the Miskat at Masabih*. New York, NY: The Book Foundation.
- Ekman, P. (2004). Emotions inside out: 130 years after Darwin's expression of the emotions in man and animals (Annals of the New York Academy of Science). New York, NY: New York Academy of Sciences.
- Elkins, S. (1990). The politics of mystical ecology. *Telos*, 83, 52-70.
- Engel, M. (2000). The immorality of eating meat. From L. Pojman (Ed.), *The moral life: An introductory reader in ethics and literature* (pp. 856-890). New York, NY: Oxford University Press.
- Erickson, M.J. (1985). The constitutional nature of the human condition. *Christian Theology* (pp. 537-557). Grand Rapids, MI: Baker Book House.
- Farm Sanctuary (2008). *The issues regarding factory farming*. Retrieved from http://www.farmsanctuary.org/issues/factoryfarming/.
- Farm Sanctuary (2010). *Environmental impact*. Retrieved from http://www.farmsanctuary.org/issues/factoryfarming/environment/.
- FBR (2005). Bio-medical research facts. *Foundations of Bio-Medical Research*Retrieved from www.fbresearch.org/education/biomedical/research/tabid/425/default.aspx.
- Feldmeyer, M. (2009). *Special services*. Retrieved from www.chapel.duke.edu/special.html.

- Felthous, A.R. (1980). Aggression against cats, dogs and people. *Child Psychiatry and Human Development*, 10, 169-177. doi: 10.1007/BF1433629
- Felthous, A.R., & Kellert, S.R. (1986). Violence against animals and people: Is aggression against living creatures generalized? *Bulletin of the American Academy of Psychiatry & Law*, 14(1), 55-69.
- Felthous, A.R., & Kellert, S.R. (1987). Childhood cruelty to animals and later aggression against people: A review. *American Journal of Psychiatry*, 144, 710-717.
- Feshbach, N.D. (1989). The construct of empathy and the phenomenon of physical maltreatment of children. In D. Cicchetti., & V. Carlson (Eds.), *Child Maltreatment* (pp. 349-374). New York, NY: Cambridge University Press.
- Fine, A.H. (2006). *Handbook on animal-assisted therapy and theoretical foundations and guidelines*. San Diego, CA: Elsevier.
- Fish & Wildlife Service (2006). 2006 national survey of fishing, hunting, and wildlifeAssociated Recreation. Retrieved from www.census.gov/prod/2008/pubs/fhw06 va. pdf.
- Fleming, W.M., Jory, B., & Burton, D.L. (2002). Characteristics of juvenile offenders admitting to sexual activity with nonhuman animals. *Society and Animals*, 10(1), 31. doi: 10.1163/156853002760030860
- Flynn, C.P. (1999a). Animal abuse in childhood and later support for interpersonal violence in families. *Society and Animals*, 7(2), 161-171. doi: 10.1163/156853 3099 x00059
- Flynn, C.P. (1999b). Exploring the link between corporal punishment and children's cruelty to animals. *Journal of Marriage and the Family*, 61(4), 971-981. doi: 10.2307/354017
- Flynn, C.P. (2000a). Why family professionals can no longer ignore violence toward animals. *Family Relations*, 49(1), 87-95. doi: 10.1111/j.1741-3729.2000.00087.x
- Flynn, C.P. (2000b). Woman's best friend: Pet abuse and the role of companion animals in the lives of battered women. *Violence Against Women*, 6(2), 162-177. doi: 10.1177/10778010022181778.
- Flynn, C.P. (2001). Acknowledging the zoological connection: A sociological analysis of animal cruelty. *Society and Animals*, *9*(1), 71-87. doi: 10.1163/156853001300109 008.

- Fouts, R.S. (1974). Language: Origins, definitions and chimpanzees. *Journal of Human Evolution*, *3*(6), 475-482. doi: 10.1016/0047-2484(74)90007-4.
- Fouts, R.S., Hirsch, A.D., & Fouts, D.H. (1982). Cultural transmission of a human language in a Chimpanzee mother-infant relationship. H.E. Fitzgerald, J.A. Mullins, & P. Gage (Eds.), *Child Nurturance*, *3*, 159-193. New York, NY: Plenum.
- Frankfort, N. (2000). Ancient Egyptian religion: An interpretation. Mineola, NY: Dover.
- Friedman, E., Katcher, A.H., Lynch, I., & Thomas, S.A. (1979). *Pet ownership and survival after coronary heart disease*. Presented at the 2<sup>nd</sup> Canadian Symposium on Pets and Society. May 30-June 1, 1979. Vancouver, B.C., Canada.
- Fromm, E. (1992). *The anatomy of human destructiveness*. New York, NY: Henry Holt & Company.
- Fudin, C.E., & Cohen, S.P. (1988). Helping children and adolescents cope with the euthanasia of a pet. In W.J. Kay, S.P. Cohen, C.E. Fudin, A.H. Kutscher. Euthanasia of the Companion Animal. The Impact on Pet Owner, Veterinarians, and Society. (pp. 79-81). Philadelphia, PA: Charles Press.
- Gandhi, Mahatma (2006). Mahatma Gandhi's quote on animals. *Planet bytes*. Retrieved from http://www.fearnomorezoo.org/pb/index.php?mode=viewid&post\_id=23.
- Gardner, R.A., & Gardner, B.T. (1978). Comparative psychology and language acquisition. *Annuals of the New York Academy of Sciences*, *309*, 37-76. doi: 10.1111/j.1749-66-32.1978.tb29441.x
- Gilson, E. (1984). From Aristotle to Darwin and back again. In J. Lyon (Ed.). South Bend, ID: University of Notre Dame Press.
- Gleyzer, R., Felthous, A.R., & Holzer III, C.E. (2000). Animal cruelty and psychiatric disorders. *Journal of the American Academy of Psychiatry and the Law, 30*, 257-265.
- Grant, L., & McCarthy, M. (2008). Retailers see surge in insect repellent sales. *Health and behavior*. Retrieved from www.usatoday.com/news/health/2002-08-08-repellent\_x.htm.
- Griffin, D.R. (1994). Animal minds. Chicago, IL: The University of Chicago Press.

- Griffin, D.R. (2001). *Animal minds: Beyond cognition to consciousness*. Chicago, IL: University of Chicago Press.
- Grover, S.L., & Brockner, J. (1989). Empathy and the relationship between attitudes and similarity and attractions. *Journal of Research in Personality*, 23(4), 469-479. doi: 10.1016/0092-6566(89)90015-9.
- Habermas, G.R., & Moreland, J.P. (1998). *Beyond death*. Memphis, TN: Crossway Books.
- Hallmark. (2010). Retrieved from http://www.hallmark.com/papercards/sympathy/lossofapet.
- Harville, M., Stokes, S.J., Templer, D.I., & Rienzi, B. (2003-2004). Relation of experimental and religious variables to the Death Depression Scale-Revised. *Omega-Journal of Death and Dying*, 48(2), 165-184. doi: 10.2190/C2MJ-5DXN-EU6C-N2XR.
- Harris, M. (1971). An approach to the sacred cow of India. *Current Anthropology*, 12(2), 191-20. doi: 10.1086/201191.
- Harrison, P. (1992). Descartes on animals. *The Philosophical Quarterly*, 42(167), 219-227. doi: 10.2307/2220217.
- Hatfield, G. (2008). Psychology and philosophy: Historical perspectives. In S. Heinamaa & Reuter, M. (Eds.), *Psychology and philosophy: Inquiries into the soul from late scholasticism to contemporary thought* (Vol. 8, pp. 1-25). New York, NY: Springer.
- Heimlich, K. (2001). Animal-assisted therapy and the severely disabled child: A quantitative study. *The Journal of Rehabilitation*, 67, 48-54.
- Heston, A. (1971). An approach to the sacred cow of India. *Current Anthropology*, 12, 191-209. doi: 10.1086/201191.
- Hines, L., & Fredrickson, M. (1998). Perspectives on animal-assisted activities and therapy. In C.C. Wilson, & D.C. Turner (Eds.), *Companion Animals in Human Health* (pp. 23-29). Thousand Oaks, CA: Sage.
- Hoffman, M.T., & Hoffman, F.L. (2001). Animals and religion: Animals in heaven at look at Revelation 4:6-9. *Minoesj: An Animal Voice*. Retrieved from http://www.animalsuffering.com/articles/christian\_animals\_heaven.html.

- Hoffman, M.T., & Hoffman, F.L. (2001). Church silence promotes violence: Ignoring one of god's most beautiful prophecies. *All-Creatures.Org Publication*. Retrieved from www.all-creatures.org/cspv/ignoringgod.html.
- Holak, S.L. (2008). Ritual blessings with companion animals. *Journal of Business Research*, 61(5), 534-541. doi: 10.10161.jbusres.2007.07.016
- Hookway, C. (1986). *Minds, machines and evolution: Philosophical studies.* New York, NY: Cambridge University Press.
- House, H.W. (Ed.). (1997). *The Nelson Study Bible: NKJV*. Nashville, TN: Thomas Nelson.
- Howell, N. (2003). The importance of being chimpanzee. *Theology and Science*, 1(2), 179-191. doi: 10.1080/1474670032000124.86
- Hultkrantz, A. (1987). *Native religions of North America: The power of visions and fertility*. San Francisco, CA: Harper.
- HSUS (2009). *Religious statements on animals*. Retrieved from www.humanesociety.org/about/departments/faith/facts/statements.
- HSUS (2010). Frequently asked questions about animals in research. Retrieved from www.hsus.org/animals\_in\_research/general\_information\_on\_animals\_in\_research
- Iliff, S.A. (2002). An additional R: Remembering the animals. *ILAR Journal*, 43(1), 38-47.
- Jennings, G., Reid, C., Cristy, I., Jennings, J., Anderson, W., & Dart, A. (1998).

  Animals and cardiovascular health. In C.C. Wilson & D.C. Turner (Eds.),

  Companion Animals in Human Health (pp. 161-171). Thousand Oaks, CA: Sage.
- Katcher, A.H. (1981). Interactions between people and their pets: Form and function. In B. Fogle (Ed.), *Interactions between people and their pets* (pp. 41-67). Springfield, IL: Charles C. Thomas.
- Kaufman, S.R., & Braun, N. (2002). *Good news for all creation: Vegetarianism as Christian stewardship.* Cleveland, OH: Vegetarian Advocates Press.
- Kellert, S.R., & Felthous, A.R. (1985). Childhood cruelty toward animals among criminals and noncriminals. *Human Relations*, *38*(12), 1113-1129. doi: 10.1177/001872678503801202.

- Kemp, B.J. (2006). Ancient Egypt: Anatomy of a civilization. New York, NY: Routledge.
- Koenig, H.G. (1988). Religious behaviors and death anxiety in later life. *The Hospice Journal*, 4(1), 3-24. doi: 10.1300/J011v04n01\_02.
- Kohler, W. (1967). Gestalt Psychology. *Psychological Research*, 31(1), 18-30. doi: 10.1007/BF00422382
- Kohler, W. (2001). Simple structural functions in the chimpanzee and in the chicken. In W.D. Ellis (Ed.), *A Source Book of Gestalt Psychology* (pp. 217-227). New York, NY: Routledge.
- Kohler, W. (2001). The Mentality of apes. London, UK: Routledge.
- Konrad, W. (2009). An aide for the disabled, a companion nice and furry. *Health/NY Times*. Retrieved from http://www.nytimes.com/2009/08/22/health/22 patient.html?\_rel.
- Korom, F.J. (2000). Holy cow! The apotheosis of Zebu, or why the cow is sacred in Hinduism. *Asian Folklore Studies*, *59*(2), 181-203. doi: 10.2307/1178915
- Lasker Foundation (2000). Exceptional returns: The economic value of America's investment in biomedical research. Retrieved from http://www.lasker foundation.org/reports/pdf/exceptional.pdf.
- Levinson, B.M. (1968). Household pets in residential schools: Their therapeutic potential. *Mental Hygiene*, *52*, 411-414.
- Levinson, B.M. (1969a). Pets and old age. Mental Hygiene, 53, 364-368.
- Levinson, B.M. (1972). *Pets and human development*. Springfield, IL: Charles C. Thomas.
- Levinson, B.M. (1984). Human/companion animal therapy. *Journal of contemporary Psychotherapy*, 14(2), 131-144. doi: 10.1007/BF00946311
- Levinson, B.M. (1984). Grief at the loss of a pet. In W.J. Kay, H.A. Nieburg, A.H. Kutscher, R.M. Grey, & C.E. Fudin (Eds.), *Pet loss and human bereavement* (pp. 51-64). Ames, IA: Iowa State University Press.

- Lockwood, R., & Hodge, G.R. (1998). The tangled web of animal abuse: The links between cruelty to animals and human violence. In R. Lockwood & F.R. Ascione (Eds.), *Cruelty to Animals and Interpersonal Violence: Readings in Research and Application*. West Lafayette, IN: Purdue University Press.
- Loftus, J.W. (2010). The Bible and the treatment of animals. *God and animals: The Christian delusion*. Retrieved from http://sites.google.com/site/the Christiandelusion/Home/the\_bible\_and\_animals.
- Luk, E.S.L., Staiger, P.K., Wong, L., & Mathai, J. (1999). Children who are cruel to animals: A revisit. *Australian and New Zealand Journal of Psychiatry*, 33(1), 29-36. doi: 10.1046/j.1440-1614.1999.00528.x
- Majupuria, T.C. (1991). Sacred animals of Nepal and India: With reference to Gods and Goddesses of Hinduism and Buddhism. Redmond, OR: Devi Press.
- Malamud, R. (2003). *Poetic animals and animal souls*. New York, NY: Palgrave McMillan.
- Mallon, G. (1994). Some of our best therapists are dogs. *Child and Youth Care Forum*, 23(2), 89-101. doi: 10.1007/BF02209256
- McDaniel, J.B. (1989). Of God and pelicans A theology of reverence for life. Louisville, KY: Westminster John Knox Press.
- Mellor, D., Yeow, J., Hapidzal, N.F.M., Yamamoto, T., Yokoyama, A., & Nobuzane, Y. (2009). Childhood cruelty to animals: A tri-national study. *Child Psychiatry and Human Development*, 40(4), 527-541. doi: 10.1007/s10578-009-0142-0
- Melson, G.F. (1989). Studying children's attachment to their pets: A conceptual and methodological review. *Anthrozoos* 4(2), 91-99.
- Mercola, J. (2010). The ominous beef coverup: the hidden truth behind the meat on your plate. Retrieved from http://www.foodconsumer.org/newsite/feed/Opinion/Comments\_the\_ominous\_beef\_coverup.
- Messent, P.R. (1983). A review of recent developments in human-companion animal studies. *California Veterinarian* 5,26-50.
- Miller, C. 2001). Childhood animal cruelty and violence toward people. *Clinical Psychology Review*, 21(5), 735-749. doi: 10.1016/S0272-7358(00)00066-0

- Miller, K.S., & Knutson, J.F. (1997). Reports of severe physical punishment and exposure to animal cruelty by inmates convicted of felonies and by university students. *Child Abuse and Neglect*, *21*, 59-62. doi: 10.1016/S0145-2134(96)00131-7
- Minoes, J. (2009). Vegetarianism as stewardship. In: *Animal rights concerns*. Retrieved from http://www.animalsuffering.com/resources/articles/vegetarianism\_as\_stewardship/.
- Mishra, S.N. (1979). Comment on: Questions in the sacred-cow controversy. In F.J. Simoons (Ed.), *Current Anthropology*, *20*, 484-485.
- Monterey Bay Aquarium (2005). *Aquarium Facts and History*. Retrieved from http://www.montereybayaquarium.org/aa/aa\_hsty\_fag.asp.
- Morenz, S. (1992). Egyptian religion. New York, NY: Cornell University Press.
- Morgan, K. (1987). *The religion of Hindus*. Jawahar Nagar, Delhi: Motilal Banarsidass.
- Mugford, R.A., & M'Comisky, J.G. (1975). Some recent work on the psychotherapeutic value of cage birds with old people. In R.S. Anderson (Ed.), *Pet animals and society*. London, UK: Bailliere Tindall.
- Murphy, J.G. (1972). Moral death: A Kantian essay on psychotherapy. In W. Sellars (Ed.), Retribution, justice and therapy: Essays in the philosophy of law (Philosophical Studies Series), Retribution, Justice and therapy: Essays in the Philosophy of Law (Philosophical Studies Series), Part Two: Punishment and Responsibility. New York, NY: Springer.
- Nieburg, H.A., Grey, R.E., & M.M. Osman (Eds.), *Euthanasia of the companion animal*, (pp. 79-86). Philadelphia, PA: Charles Press.
- Neimeyer, R.A., Wittkowski, J., & Moser, R.P. (2004). Psychological research on death attitudes: An overview and evaluation. *Death Studies*, 28(4), 309-340. doi: 10.1080/07481180490432324
- Netting, F.E., Wilson, C.S., & New, J.C. (1987). The human animal bond: Implications for practice. *Social Work, 32*(1), 60-64.
- O'Brien, D.M. (2004). Animal sacrifice & religious freedom: Church of Lukumi Babalu Aye vs. City of Hialeah. Lawrence, KS: University Press of Kansas.

- Panksepp, J. (1998). Affective neuroscience: The foundations of humans and animals. New York, NY: Oxford University Press.
- Parshall, D.P. (2003). Research and reflection: Animal-assisted therapy in mental health settings. *Counseling and Values*, 48(1), 47-56.
- Patterson, F. (1978). The gestures of a gorilla: Language acquisition in another pongid\*1. *Brain and Language*, 5(1), 71-97. doi: 10.1016/0093-934x(78)90008-1
- Patterson, F., & Linden, E. (1981). *The education of Koko*. New York, NY: Holt, Rinehart & Winston.
- Paul II, John Pope (1990). *The ecological crisis: A common responsibility*. Retrieved from http://www.vatican.va/holy\_father/john\_paul\_II/messages/peace/documents/hf\_ip-ii\_mes\_19891208\_XXIII-world-day-for-peace-en.html.
- Penn, D.C., & Povinelli, D.J. (2007). Causal cognition in human and nonhuman animals: A comparative critical review. *Annual Review of Psychology*, *58*(1), 97-118. doi: 10.1146/annurev.psych.58.110405.085555
- Perera de Burt, T. (2004). Spatial parameters encoded in the spatial map of the blind Mexican cave fish, Astyanax Fasciatus. *Journal of American Behavior*, 68(2), 291-295. doi: 10.1016/j-anbehav.2003.11.009
- Perera, de Burt, T., & Braithwaite, V. (2005). Laterality in a non-visual sensory modality the lateral line of fish. *Current Biology*, *15*(7), R241-R242. doi: 10.1016/j.cub. 2005.03.035.
- Perez-Merz, L., Heide, K.M., & Silverman, I.J. (2001). Childhood cruelty to animals and subsequent violence against humans. *International Journal of Offender Therapy and Comparative Criminology*, 45(5), 556-573. doi: 10.1177/0306624x01455003
- Perez-Merz, L., & Heide, K.M. (2004). *Animal cruelty: Pathway to violence against people*. Lanham, MD: Alta Mira Press.
- PETA (2010). *Shrine circus: Every ticket funds cruelty to animals*. Retrieved from http://www.circuses.com/feat/shrine/index.asp.
- PETA (2010). Eating for life. Retrieved from http://www.goveg.com/healthconcerns.asp.

- Podberscek, A.L., Paul, E.S., & Serpell, J.A. (2005). *Companion animals and us: Exploring the relationships between people and pets.* New York, NY: Cambridge University Press.
- Podberscek, A.L. (2009). Good to pet and eat: The keeping and consuming of dogs and cats in South Korea. *Journal of Social Issues*, 65(3), 615-632. doi: 10.1111/j.1540-4560.2009.0161.x.
- Ponder, C., & Lockwood, R. (2000). Programs to educate law enforcement on link between animal cruelty and domestic violence. *The Police Chief*, 67(11), 31-36. Retrieved from http://www.ncjrs.gov/app/Publications/Abstract.aspx?ID=186483.
- Post, E. (1980). Origins, elements and functions of therapeutic empathy. *International Journal of Psychoanalysis*, 61, 277-293.
- Regan, T. (2004). *The case for animals*. Los Angeles, CA: University of California Press.
- Regenstein, L. (2008). The Bible's teachings on protecting animals and nature. Retrieved from www.humanesociety.org/about/departments/faith/facts/the\_bibles\_teachings\_teachings\_on.html.
- Reker, G.T. (1992). *Life Attitude Profile-Revised: Procedures manual* (Research Ed.). Peterborough, Ontario, Canada: Student Psychologists Press.
- Reker, G.T., & Peacock, E.J. (1981). The life attitude profile (LAP): A multidimensional instrument for assessing attitudes toward life. *Canadian Journal of Behavioral Science*, 13, 264-273.
- Rice, J.R. (1975). *Genesis: In the beginning A verse-by-verse commentary*. Murfreesboro, TN: Sword of the Lord.
- Roitblat, H.L. (2004). Animal cognition. In W. Bechtal, & G. Graham (Eds.), *A companion to cognitive science*. Malden, MA: Blackwell.
- Rumbaugh, D.M., & Rumbaugh-Savage, E.S. (1996). *In communicating meaning: The evolution and development of language.* Mahwah, NJ: Lawrence Eribaum Associates.
- Rumbaugh-Savage, E.S. (1987). Communication, symbolic communication, and language: Reply to Seidenberg and Pettito. *Journal of Experimental Psychology*, 116(3), 288-292. doi: 10.1037/0096-3445.116.3.288

- Rumbaugh-Savage, E.S., & Boysen, S.T. (1978). Cooperation in primates: Critical analysis of behavioural criteria. *Behavioural Processes*, 35(3), 101-111.
- Rumbaugh-Savage, E.S., McDonald, K., Sevcik, R.A., Hopkins, W.D., & Rupert, E. (1986). Spontaneous symbol acquisition and communicative use by pygmy chimpanzees (Panpaniscus). *Journal of Experimental Psychology*, 115(3), 211-235, doi: 10.1037/0096-3445.115.3.211.
- Rumbaugh-Savage, E.S., Pate, J.K., Lawson, J., Smith, S.T., & Rosenbaum, S. (1983). Can a chimpanzee make a statement? *Journal of Experimental Psychology: General*, *112*(4), 457-492. doi: 10.1037/0096-3445.112.4.457.
- Scaruffi (2000). *Gross national product*. Retrieved from http://www.scaruffi.com/politics/gnp.html.
- Schaffer, M. (2009). *The family dog: Why we treat our pets like royalty*. Retrieved from http://www.boston.com/bostonglobe/ideas/articles/2009/03/29/the\_family\_dog?m ode=PF.
- Scheiner, C.I. (2001). Crimes against nonhuman animals and Florida's Courts: 1889-2001. *The Florida Bar Journal, LXXV*(10), 52-60. Retrieved from: http://www.floridabar.org/DIVCOM/JN/JNJournal101.nsf/c0d731e03de9828d85257458004.
- Schiff, K., Louw, D., & Ascione, F.R. (1999). Animal relations in childhood and later violent behavior against humans. *Acta Criminologica* 12, 77-86.
- Schultz, D.P., & Schultz, S.E. (2007). *History of modern psychology* (7<sup>th</sup> ed.). New York, NY: Harcourt.
- Schwartz, R. (2009). Is fur a Jewish issue? *Animal Rights Concerns*. Retrieved from http://www.animalsuffering.com/resources/articles/Is\_Fur\_a-Jewish\_Issue\_//.
- Schweig, G.M. (2007). *Bhagavad-Gita: The Beloved Lord's Secret Love Song*. San Francisco, CA: Harper Collins.
- Scott, E. (1999). The creation/evolution continuum. *Reports of the National Center for Science Education*, 19(4), 16-17 and 21-23. Retrieved from www.ncseweb.org/resources/articles/1593\_the\_creationevolution-continu- 12\_7\_200.asp.
- Scully, M. (2002). *Dominion: The power of man, the suffering of animals*. New York, NY: St. Martin's Press.

- Seidenberg, M.S., & Petitto, L.A. (1987). Communication, symbolic communication and language: Comment on Savage-Rumbaugh, McDonald, Sevick, Hopkins, and Rupert. *Journal of Experimental Psychology*, 116(3), 279-287. doi: 10.1037/0096-3445.116.3.279
- Serpell, J.A. (2000). *Animal companions and human well-being: A historical explanation of the value of human and animal relationships*. Retrieved from <a href="http://research.vet.upenn.edu/Portals/e6/media/Serpell\_Animal\_Companions\_Human\_Wellbeing.pdf">http://research.vet.upenn.edu/Portals/e6/media/Serpell\_Animal\_Companions\_Human\_Wellbeing.pdf</a>.
- Shanahan, N.B. (2002). There is eternal life for animals. Tyngsborough, MA: Pete.
- Shanahan, N.B. (2008). Who says animals go to heaven? A collection of Prominent Christian Leaders' Beliefs in Life after Death for Animals. Tyngsborough, MA: Pete.
- Sherrer, N., & Murphy, T. (2006). Probing the relationship between Native Americans and ecology. Retrieved from www.bama.ua.edu/~joshua/archive/aug06/Nathan%20Sherrer.pdf.
- Shivaram, C. (2009). My encounter with a divine bovine. *Hinduism Today*, 31(2), 34-37.
- Siegel, A. (1962). Reaching the severely withdrawn through pet therapy. *American Journal of Psychiatry*, 118, 1045-1046.
- Singer, P. (2002). All animals are equal...or why the ethical principle on which human equality rests requires us to extend equal consideration to animals too. In R.F. Chadwick, & P. Schroeder (Eds.), *Applied Ethics: Critical Concepts in Philosophy*. New York, NY: Routledge.
- Singer, P. (2003). Practical ethics. In S.J. Armstrong, & R.G. Botzler (Eds.), *The animal ethics reader* (pp. 33-43). New York, NY: Routledge.
- Singer, P. (2006). *In defense of animals: The second wave.* Malden, MA: Blackwell.
- Skidmore, J. (2001). Duties to animals: The failure of Kant's moral theory. *The Journal of Value Inquiry*, 35(4), 541-559. doi: 10.1023/A:1013708710493.
- Slavkin, M.L. (2001). Enuresis, firesetting, and cruelty to animals: Does the ego triad show predictive validity? *Adolescence 36*, 461-466.
- Stepaniak, J. (2000). *Being vegan: Living with conscience, conviction and compassion*. Lincolnwood, IL: Lowell House.

- Straus, M.A. (1991). Discipline and deviance: Physical punishment of children and violence and other crime in adulthood. *Social Problems*, *38*, 133-154. doi: 10.1525/sp.1991.38.2.03a00010
- Straus, M.A. (1994). Beating the devil out of them: Corporate punishment in America families. New York, NY: Lexington Books.
- Stevenson, R.G. (1988). Euthanasia of pets: The impact on children. In W.J. Kay, S.P. Cohen, C.E. Fudin, A.H. Kutscher, H.A. Nieburg, R.E. Grey, & M.M. Osman (Eds.), *Euthanasia of the companion animal* (pp. 75-78). Philadelphia, PA: Charles Press.
- Sullivan, L.E. (2003). *Native religions and cultures of North America: Anthropology of the sacred*. New York, NY: Continuum International Publishing Group.
- Swarup, R. (2002). *Understanding the Hadith: The sacred traditions of Islam.* New York, NY: Prometheus Books.
- Templer, D.I., Connelly, H., Bassman, L., & Hart, J. (2006). Construction and validation of an animal-human continuity scale. *Social Behavior and Personality: An International Journal*, *34*(7), 769-776. doi: 10.2224/sbp.2006.34.7.769
- Templer, D.I., King, F.L., Brooner, R.K., & Corgiat, M. (1986). Assessment of body elimination attitude. *Journal of Clinical Psychology*, 40(3), 755-759.
- Terrace, H.S. (1985). In the beginning was the "name". *American psychologist*, 40(9), 1011-1028. doi: 10.1037/0003-066X.40.9.1011.
- Thomas, R.K. (1996). Investigating cognitive abilities in animals: Unrealized potential. *Cognitive Brain Research*, *3*(3-4), 156-166. doi: 10.1016/0926-6410(96)00003-1.
- Thompson, B., & Estabrook, S. (1999). Do animals have souls? *Apologetic Press*, 19(12), 89-92. Retrieved from www.apologeticpress.org/articles/448.
- Tingle, D., Bernard, G.W., Robbins, L., Newman, G., and Hutchinson, D. (1998). Childhood and adolescent characteristics of pedophiles and rapists. R. Lockwood & F.R. Ascione (Eds.), *Cruelty to Animals and Interpersonal Violence: Reading in Research* (pp. 211-222). West Lafayette, IN: Purdue University Press.
- Tribe, L.H. (1993). The mystery of motive, private and public: Some notes inspired by the problems of hate crime and animal sacrifice, the Supreme Court review. Chicago, IL: The University of Chicago Press.

- Unger, M.F. (1957). Unger's Bible dictionary 1043. Chicago, IL: Moody Press.
- USDA (2000). *Animal care report*. Retrieved from http://aphis.usda.gov/ac/awrep 2000.pdf.
- Van Impe, J. (Producer), & R. Van Impe, R. (Director). (2005). *Animals in heaven* (Video tape). United States: Jack Van Impe Ministries.
- Voith, V.L. (1985). Attachment of people to companion animals. *The Veterinary Clinics of North America: Small Animal Practice*, 15, 289-296.
- Waldau, P. (2002). The specter of speciesism: Buddhist and Christian views of animals. *Journal of Religion*, 85, 696-696. doi: 10.1086/499472
- Waldau, P. (2005). "Animals". In L. Jones (Ed.), *Encyclopedia of religion*, 2<sup>nd</sup> Ed. (pp.1-27). New York, NY: MacMillan & Company.
- Waldau, P. (2006). Religion and animals. In P. Singer (Ed.), *In Defense of Animals: The Second Wave* (Chapter 5, pp. 69-86). Malden, MA: Blackwell.
- Walvoord, J.F. (1989). The revelation of Jesus Christ. Chicago, IL: Moody Press.
- Wasserman, E.A. (1997). The science of animal cognition: Past, present and future. *Journal of Experimental Psychology: Animal Behavior Processes*, 23(2), 123-135.
- Webb, S.H. (2002). On God and dogs: A Christian theology of compassion for animals. New York, NY: Oxford University Press.
- Willis, D.A. (1997). Animal therapy. *Rehabilitation Nursing*, 22(2), 78-81.
- Willmington, H.L. (1993). The doctrine of man. *Willmington's Complete Guide to Bible Knowledge* (pp. 256-263). Wheaton, IL: Tyndale House.
- Woestendiek, J. (2010). *Pet industry continues to defy recession*. Retrieved from http://www.ohmidog.com/2010/02/09/pet-industry-growth-not-slowed-by-economy/.
- Wong, N. (2010). *The high environment costs of using animals for entertainment*. Retrieved from http://technorati.com/lifestyle/green/article/the-high-environmental-costs-of-using/.

- Woodhaven Labs (2010). *Heaven: Will animals be in heaven?* Retrieved from www.woodhavenlabs.com/animals-heaven2.html.
- Wright, J., & Hensley, C. (2003). From animal cruelty to serial murder: Applying thegraduation hypothesis. *International Journal of Offender therapy and Comparative Criminology*, 47, 71-78.
- Yang, A. (1980). Sacred symbol and sacred space in rural India: Community mobilization in the "Anti-Cow Killing riot of 1893. *Comparative Studies in Society and History*, 22,576-596.
- Zasloff, R.L. (1995). Views of pets in the general population. *Psychological Reports*, 76, 1166.

# APPENDIX A

# **DEMOGRAPHICS**

Name:
Occupation:
Age:
Sex: Male Female
Education Level:  Freshman Sophomore Junior Senior Graduate Student: (Concentration) Graduate Degree:
Upbringing:
City or Rural
Farm or Ranch
Animals on farm or ranch type:
Pets (types)
Pet stayed: Indoors Outdoors

# APPENDIX B

# ANIMAL-HUMAN CONTINUTIY SCALE

Directions: Please answer each of the following questions as honestly as you can. Use the scale provided below. Choose only one answer and put the number on the line next to the question.

1	2	3	4	5	6	7
Strongly Disagree	-			Slightly Agree	Moderately Agree	Strongly Agree
Disagree	Disagree	Disagree		115100	115100	115100
1.	Humans have a s	oul but ani	mals do n	ot.		
2.	Humans can thin	k but anim	als cannot	•		
3.	People have a life	e after deat	h but anin	nals do not.		
4.	People are anima	ls.				
5.	Animals are afrai	d of death.				
6.	People evolved fr	rom lower	animals.			
7.	People are superi	or to anim	als.			
8.	Animals can fall	in love.				
9.	People have a spi	ritual natu	re but anir	nals do not.		
10	. The needs of peo	ople should	l always c	ome before th	ne needs of ani	mals.
11	. It's okay to use	animals to	carry out	tasks for hun	nans.	
12	. It's crazy to thir	nk of an an	imal as a ı	nember of vo	our family.	

# APPENDIX C: LIFE ATTITUDE PROFILE-REVISED (LAP-R)

This questionnaire contains a number of statements related to opinions and feelings about you and life in general. Read each question carefully, then indicated the extent to which you agree or disagree by circling one of the alternative categories provided. For example, if you STRONGLY AGREE, circle SA, following the statement. If you MODERATELY DISAGREE, circle MD. If you are UNDECIDED, circle U. Try to use the undecided category sparingly.

SA A MA STRONGLY AGREE MODERATLEY UNDER AGREE AGREE	U CIDED		MD ERATLEY SAGREE	DIS	D AGREE	SI STRO DISA	
My past achievements have given my life meaning and purpose.	SA	A	MA	U	MD	D	SD
2. In my life I have very clear goals and aims.	SA	A	MA	U	MD	D	SD
3. I regard the opportunity to direct my life as very important.	SA	A	MA	U	MD	D	SD
4. I seem to change my main objectives in life.	SA	A	MA	U	MD	D	SD
5. I have discovered a satisfying life purpose.	SA	A	MA	U	MD	D	SD
6. I feel that some element which I can't quite define is missing from my life.	SA	A	MA	U	MD	D	SD
7. The meaning of life is evident in the world around us.	SA	A	MA	U	MD	D	SD
8. I think I am generally much less concerned about death than those aroun	SA d me.	A	MA	U	MD	D	SD
9. I feel the lack of an a need to find a real meaning and purpose in my life.	SA	A	MA	U	MD	D	SD
10. New and different things appeal to me.	SA	A	MA	U	MD	D	SD

SA A MA STRONGLY AGREE MODERATLEY UNDEC	U CIDED		MD ERATLEY DISAGREE		D SAGREE	STR	Page 2 SD ONGLY SAGREE
11. My accomplishments in life are largely determined by my own efforts.	SA	A	MA	U	MD	D	SD
12. I have been aware of an all-powerful and consuming purpose towards which	SA my lif	A fe has	MA been dire	U ected	MD	D	SD
13. I try new activities or areas of interests and then these soon lose their attractive		A	MA	U	MD	D	SD
14. I would enjoy breaking loose from the routine of life.	SA	A	MA	U	MD	D	SD
15. Death makes little difference to me one way or another.	SA	A	MA	U	MD	D	SD
16. I have a philosophy of life that gives my existence significance.	SA	A	MA	U	MD	D	SD
17. I determine what happens in my life.	SA	A	MA	U	MD	D	SD
18. Basically, I am living the kind of life I want to live.	SA	A	MA	U	MD	D	SD
19. Concerning my freedom to make my choice, I believe I am absolutely free to	SA make		MA e choices	U s.	MD	D	SD
20. I have experienced the feeling that while I am destined to accomplish some just what it is.	SA ething	A impoi	MA rtant, I ca	U innot	MD put my	D finge	SD r on
21. I am restless.	SA	A	MA	U	MD	D	SD
22. Even though death awaits me, I am not concerned about it.	SA	A	MA	U	MD	D	SD
23. It is possible for me to live my life in terms of what I want to do.	SA	A	MA	U	MD	D	SD

SA A MA STRONGLY AGREE MODERATLEY UNDECL AGREE AGREE	U IDED	MD MODERATLEY DISAGREE		MODERATLEY		DISA	D AGREE	SD STRO	Page3 NGLY GREE
24. I feel the need for adventure and "new worlds to conquer".	SA	A	MA	U	MD	D	SD		
25. I would neither fear death nor welcome it.	SA	A	MA	U	MD	D	SD		
26. I know where my life is going in the future.	SA	A	MA	U	MD	D	SD		
27. In thinking of my life, I see a reason for my being here.	SA	A	MA	U	MD	D	SD		
28. Since death is a natural aspect of life, there is no sense in worrying about it.	SA	A	MA	U	MD	D	SD		
29. I have a framework that allows me to understand or makes sense of my life.	SA	A	MA	U	MD	D	SD		
30. My life is in my hands and I am in control of it.	SA	A	MA	U	MD	D	SD		
31. In achieving life's goals, I have felt completely fulfilled.	SA	A	MA	U	MD	D	SD		
32. Some people are very frightened of death, but I am not.	SA	A	MA	U	MD	D	SD		
33. I daydream of finding a new place for my life and a new identity.	SA	A	MA	U	MD	D	SD		
34. A new challenge in my life would appeal to me now.	SA	A	MA	U	MD	D	SD		
35. I have the sense that parts of my life fit together into a unified pattern.	SA	A	MA	U	MD	D	SD		

SA A MA STRONGLY AGREE MODERATLEY UNDEC	U CIDED	MODE	MD ERATLEY SAGREE	DISA	D AGREE		NGLY AGREE
36. I hope for something exciting in the future.	SA	A	MA	U	MD	D	SD
37. I have a mission in life that gives me a sense of direction.	SA	A	MA	U	MD	D	SD
38. I have a clear understanding of the ultimate meaning of life.	SA	A	MA	U	MD	D	SD
39. When it comes to important life matters, I make my own decisions.	SA	A	MA	U	MD	D	SD
40. I find myself withdrawing from life with an "I don't care" attitude.	SA	A	MA	U	MD	D	SD
41. I am eager to get more out of life than I have so far.	SA	A	MA	U	MD	D	SD
42. Life to me seems boring and uneventful.	SA	A	MA	U	MD	D	SD
43. I am determined to achieve new goals in the future.	SA	A	MA	U	MD	D	SD
44. The thought of death seldom enters my mind.	SA	A	MA	U	MD	D	SD
45. I accept personal responsibility for the choices I have made in my life.	SA	A	MA	U	MD	D	SD
46. My personal existence is orderly and coherent.	SA	A	MA	U	MD	D	SD
47. I accept death as another life experience.	SA	A	MA	U	MD	D	SD
48. My life is running over with exciting good things.	SA	A	MA	U	MD	D	SD

## APPENDIX D: RELIGIOUS/SPIRITUAL INVENTORY

INSTRUCTIONS: Circle the response that best expresses your current religious/spiritual beliefs and practices.

1.	What is your religious belief system?	

- a. Protestant
- b. Catholic
- c. Jewish
- d. Muslim
- e. Buddhist
- f. Personal Spiritual Belief System
- g. Non Believer
- h. Other
- 2. How certain are your beliefs about God?
  - a. God definitely exists
  - b. God probably exists
  - c. I do not know whether God exists or not
  - d. God probably does not exist
  - e. God definitely does not exist
- 3. How certain are your beliefs about life after death?
  - a. Life after death definitely exists
  - b. Life after death probably exists
  - c. I do not know whether life after death exists or not
  - d. Life after death probably does not exist
  - e. Life after death definitely does not exist
- 4. How frequently do you currently attend an organized religious function?
  - a. Rarely or never
  - b. Several times a year
  - c. At least once a month
  - d. At Least once a week

#### APPENDIX E

## **INFORMED CONSENT FORM**

**Project Title:** The Relationship of Religious and Existential Variables to Scores on the Animal Human Continuity Scale and Perception of Beliefs about Animals and the Quality of Mankind.

Frank L. King, D.Min, Doctoral Candidate John C. Thomas, Ph.D., Ph.D. Faculty Advisor Liberty University

**Purpose**: Thank you for agreeing to take these three questionnaires. These are going to be used to do a study for a dissertation that I am doing on the relationship of animals and humans from a religious and existential worldview.

**Procedure:** You have not been promised anything in return for taking these three short questioners, except to see the final project if you wish to do so.

**Privacy/Confidentiality Consent:** You are taking these three questioners of your own free will with no threat or reward to do so. Neither your name nor any other pertinent information will be attached to any of my data. Data is housed in a protective location. You have the right to see the results of the study and only need to contact me to do so: <a href="mailto:flking@liberty.edu">flking@liberty.edu</a>

Participant please signs this if you give your permission and you fully understand and

agree with what I have read.		
	Date	
•	d consent procedure has been followed and that e participants as completely as possible.	: I
Dr. Frank Lyle King	Date	
School of Religion/Business		
Liberty University		