A deeper understanding of the visitor: The insights provided through psychographic data of visitors to Columbus’s free choice learning institutions

THESIS

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ABSTRACT

This paper reports on a study to examine the psychographics of visitors at two conservation focused organizations in the Midwestern United States. Organizations that wish to know more about their visitor’s lifestyles should look to psychographic measures (Thyne, 2001). Psychographics have been used in museums to help explain leisure activities including the motivation, expectations of visits and willingness to participate (Hood, 1993). A focal sampling method (Harris, 1995) was utilized to intercept visitors (n=700) as they entered the study areas. Visitors were asked to complete a questionnaire concerning their motivation for visiting, service quality expectations, cultural worldviews as well as several demographic measures. Visitors at the organizations differed in their motivation for visiting and in their cultural worldviews. There were also statistically significant differences in their service quality expectations. The results allowed the researcher to create a profile of visitors at both organizations.

Cluster analysis was used to create statistically meaningful clusters of visitors to conservation mission driven organizations. Visitors were clustered based on participant’s motivation for visiting, service quality expectations, cultural worldviews as well as several demographic measures. Cluster analysis can be useful for prediction (Lorr, 1983) as individuals within a group should have minimal statistical variance while the between group variance is
maximized (Ketchen & Shook, 1996). Results suggested that 4 clusters existed which were
differentiated by motivation, religion, sexual identity and gender identity factors. The results
provide valuable information for strategies to promote conservation to organization visitors.
DEDICATION

This thesis is dedicated to my Nana, Virginia Redlin, who taught me the value of lifelong learning. You have reminded me all my life to look at the sky and I think of you every time I see a beautiful sunset. Your presence in my life has forever changed me.

I love you heaps and heaps!
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INTRODUCTION

Organizations are guided by mission statements that serve as “operational, ethical, and financial guiding lights. They are not simply mottoes or slogans; they articulate the goals, dreams, behavior, culture, and strategies of companies” (Jones & Kahaner, 1996). The statement serves as the glue that connects the organization through shared values and behaviors (Campbell & Nash, 1992). Internally, the mission statement serves as the starting point for an organization’s planning (Stone, 1996). An organization with a mission statement develops a clear sense of purpose and direction which helps individuals within the organization to find their own roles in carrying out the mission (Bennis & Nanus, 1985).

While mission statements in the for profit sector are mostly used internally, nonprofit organizations share their mission statements widely with their audience and community. Not for profit organizations are in a unique position as their measure of success is not the bottom line, but their ability to carry out their mission. Stone (1996) points out that achieving the mission in the nonprofit arena is equivalent to making a profit in the private sector.
Conservation focused institutions like zoos and botanical gardens are guided by mission statements that help to shape their operation and goals for the future (Mazur & Clark, 2001). These statements also help to ensure that the ecological, conservation and education values are carried out (Mazur & Clark, 2001). Education, in particular conservation education, is a major focus in zoos and is featured in most zoo mission statements (Patrick, Matthews, Ayers, & Tunnifcliff, 2007). Educational activities revolve around the guidelines and values laid out in an organization’s mission statement (Patrick, Matthews, Ayers, & Tunnifcliff, 2007). Educating and inspiring visitors has become a goal for conservation focused organizations (Ballantyne et al., 2007). Through education and interpretive signage using conservation messaging organizations hope to further conservation efforts by shaping visitor knowledge, attitudes and behaviors (Smith, Broad & Weiler, 2008; Ham & Weiler, 2002; Hughes & Morrison-Saunders, 2005). Such conservation messaging may encourage visitors to care about natural resources, and participate in community actions like restoring and protecting local wildlife habitat (Rabb, 2004).

In fact, establishing a link between visits to conservation focused organizations and behavior has become a greater priority (Smith, Broad & Weiler, 2008) as influencing conservation behavior through visitation has been deemed the “the ultimate goal” (Povey & Spaulding, 2005). Conservation behaviors include taking action on conservation issues through exhibits that point out simple actions like donations, consumer choices, and contacting legislators via support letters or phone calls.
Zoos have been highlighted as success cases of conservation education due to their ability to reach communities that others have not and to provide an arena where emotional connections can be made with wildlife (Ebersole, 2001). Visitors have indicated increased interest in conservation issues after visiting these types of exhibits (Derwin & Piper, 1988; Ogden & Lindburg, 1991).

Sharing conservation messages and behaviors with visitors appears to be the first step in creating an engaged and interested public. One issue that arises in this area is the gap that remains about who the visitors to conservation focused organizations are. There is a great deal of literature about the simple demographic characteristics of these individuals. The average museum visitor is between ages 35 and 50 (Goldman & Wadman, 2002) of a higher than average socioeconomic level, and on average, minorities are underrepresented in the visitor population (Falk and Dierking, 1992).

Demographic focused studies of museum visitors create a shallow image of the visitor. Hood (1991) contends that while demographics and participation patterns have been the focus of many audience studies, this information doesn’t explain visitor personality or motivation factors. Hood (1991) explains that demographics can create a framework for visitor studies, psychographics should be used to explore what people expect from their museum visit and their measures of satisfaction. In addition to demographic information organizations should be exploring psychographics, which examine values, attitudes and beliefs of visitors. This information creates a deeper profile of the visitor than demographic data can provide. A further understanding of
visitor will allow institutions to better convey behavior messages (conservation or otherwise) to their visitors. Hood (1991) states,

'It’s our responsibility to find out what’s turning them off and to do whatever we can, within our mission and ability, to help make the museum a place that more audiences will enjoy. That doesn’t mean demeaning the mission, downgrading the offerings, or pandering to the public. It does mean researching how we can most effectively convey our message to as broad an audience as possible for their benefit and ours.'

1.1 Setting

Conservation education takes place at a variety of locations including nature centers, zoos, aquariums, botanical gardens and parks. Many botanic gardens around the world have incorporated plant conservation into their mission. Conservation action at botanical gardens comes in many forms, including educational programs, seed banking, natural area management and restoration. Many gardens are also involved in applied conservation research (American Public Gardens Association, 2008). The American Public Gardens Association (2008) notes the important roles of gardens by pointing out that millions of people per year visit gardens where they are exposed to the beauty and importance of plant diversity.

Zoos have the chance to impact a lot of people, as annual visitorship to AZA facilities is around 175 million people per year (AZA, 2005; Hutchins, 2003; Ebersole,
The World Association for Zoos and Aquariums (2005, pg. 35) states that ‘...by influencing people’s behavior and values, education will be seen as an important conservation activity’ and that zoos ‘uniquely have a massive “captive audience” of visitors whose knowledge, understanding, attitude, behavior and involvement can all be positively influenced and harnessed’. Educating visitors about conservation and including their actions and behaviors in a list of solutions to environmental issues can lead to an empowered and active community. Visitors can gain a feeling of importance and part of a purposeful team (Stone, 1996).

1.2 Research Question

The aim of this study is to examine the psychographic characteristics which distinguish visitors at one location from another. The following research question will guide the study.

1. Who are the visitors to conservation focused free choice learning institutions?
   • What are the demographics and psychographics that distinguish visitors at one facility from visitors at another?
   • Are the psychographic measures used in this study effective at creating visitor profiles for each organization?

1.3 Significance of the study

The educational messages at the selected institutions focus on conservation of natural resources. By understanding the psychographics of visitors of these types of
institutions educational messages can be tailored to appeal to their interests, values and attitudes. While the results of this study can’t be generalized to all zoos or botanical gardens, they can be used to better inform leaders of the participating organizations about their audience.

1.4 Definition of Terms

**Cultural Cognition** – Kahan (2008) defines cultural cognition as “the tendency of individuals to form beliefs about societal dangers that reflect and reinforce their commitments to particular visions of the ideal society”

**Free choice learning** – The idea of free choice learning was introduced by Falk (2001) as a replacement for the concepts of informal and nonformal learning. Free choice learning is out-of-school learning that allows the learning to choose a learning space, learning options and specific option. Dierking and Griffin (2001) describe free choice learning as learning that is self-directed, voluntary, and guided by a learner’s needs and interests. The operative issue is perception of choice and control by the learner (Falk, 2005, p. 273).

**Gender** – The American Psychological Association defines gender as a “psychological phenomenon that refers to learned sex-related behaviors and attitudes of males and females” (APA, 2009). Mertens, Fraser & Heimlich (2008) have described gender as a combination of “an individual’s internal awareness and experience of gender and
includes the five accepted categories of heterosexual, homosexual, bisexual, transgendered, and asexual”.

**Gender identity** – Gender identity is defined by the American Psychological Association as “one’s sense of maleness or femaleness; usually includes awareness and acceptance of one's biological sex” (APA, 2009). Fraser and Heimlich add that “gender identity is the gender role one applies to oneself” (Fraser & Heimlich, 2008).

**Psychographics** – Psychographics was a term coined by Demby (1974) by combining ‘psychology’ and ‘demographics’ (Vyncke, 2002). These “lifestyles” measures are used to describe consumer differences along psychological dimensions that supercede the traditional demographic variables (Burns & Harrison, 1979). Examples of psychographic characteristics include motivations, opinions, values, interests, attitudes, social behavior, expectations and satisfaction (Hood, Short & Adams, 1992).

**Service quality** – Service quality is defined by the “expectancy-disconfirmation theory, which states that a visitor’s expectancy level provides a baseline from which confirmatory or disconfirmatory judgments are made about level of performance” (Tomas, Crompton & Scott, 2003).
CHAPTER 2

REVIEW OF LITERATURE

The purpose of this study is to determine if there are distinguishable psychographic characteristics to visitors at a conservatory and a zoo. In order to accomplish this, instruments were used to measure visitor motivations, cultural cognition (CC), expectations of service, gender and religious identity. The following review of the literature will highlight the importance of these characteristics in distinguishing visitors at one museum from visitors at another. The sections will be covered as follows:

2.1 Museums
    2.11 Conservation Focus
    2.12 Zoo
    2.13 Conservatory

2.2 Free Choice Learning

2.3 Museum Visitors
    2.31 Minority Visitors
    2.32 Visitor Conservation Attitudes and Knowledge
2.4 Psychographics

2.5 Visitor motivation

2.6 Service Quality (SQ)

2.7 Visitor’s cultural cognition (CC)

2.8 Gender identity

2.9 Religious identity

2.1 Museums

There are several differing views of what constitutes a museum. The International Council of Museums (ICOM) defines a museum as “a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment” (ICOM, 2008). The Museum and Library Services Act defines a museum as “a public or private nonprofit agency or institution organized on a permanent basis for essentially educational or aesthetic purposes, which, utilizing a professional staff, owns or utilizes tangible objects, cares for them, and exhibits them to the public on a regular basis”. In the field of Visitor Studies, museums are generally defined as “historical homes and sites; science and technology and nature centers; aquaria, zoos, and botanical gardens; as well as the traditional art, history, and natural history museums“ (Falk and Dierking, 1998). There are approximately 17,500 museums
in the United States based on American Association of Museums (AAM) estimates following the construction of an IMLS (Institute of Museum and Library Services) database in 2005 (AAM, 2009).

The focus of museums has changed over time. Initially, they were conceived as warehouses of knowledge, but today they serve a wider purpose of recreation, learning and preservation. These changes have helped museums grow professionally and attract more visitors which allowed them to grow fiscally (Combs, 1999).

2.11 Zoos

Ancient zoos consisted of large private collections of animals held primarily by wealthy kings and rulers. The collections were a source of great pride and demonstrated the immense power these men held over their subjects (Hancocks, 2003; Rabb, 2004). European explorers returned home with an expanded view of the world and people started to see the world and their role in it differently. Modern zoological parks and aquariums are largely the result of views that emerged during this era (Hancocks, 2003). Modern zoos are very different from the ancient zoos and menageries which focused mainly on the entertainment value of the animal collection. Today’s zoos are still working to combat the impression of entertainment and recreation locations and shifting the focus towards conservation (Churchman, 1987). Zoo leaders are challenged to present conservation education in a way that engages the recreational
visitor and inspires them to act in an environmentally responsible manner (Brewer, 2001).

Zoos are considered the most important source of contact between humans and animals (Kellert, 1979). Although zoos maintain attendance records, most do not study the motives of their visitors. Due to the lack of information about their patrons, zoo leaders make assumptions about visitors (Morgan & Hodgkinson, 1999). Better understanding of zoos visitors, including their motives for visiting, creates more awareness about how time spent at a zoo impacts the visitor (Falk, 2007).

2.12 Botanic Garden

According to Botanic Gardens Conservation International (BGCI) the first botanic gardens were started in Italy in the 16th and 17th centuries. These gardens were established solely for the study of medicinal plants. Botanic gardens started in the United States in 1859 at the Missouri Botanic Garden. Over the last 30 years, there has been a resurgence of interest in botanic gardens due to the emergence of the conservation movement. Along with the movement, botanic gardens have broadened their focus from warehouses to places of conservation education (Maunder, 1994). Modern botanic gardens are identified as institutions which “hold documented collections of living plants for the purposes of scientific research, conservation, display and education” (BGCI, 2009).
Potential garden visitors include people who own a house with a garden, people who read magazines or visit websites about gardening, belong to horticultural associations or attend horticultural shows, and those who participate in outdoor recreation (Connell, 2004; Evans, 2001). As with any museum, visitors to botanic gardens come in search of different experiences and the gardens hold different meanings to different people (Hellyer, 1977). Visitor expectations of a garden visit can change depending on the season, the type of garden, and the mood of the visitor (Connell, 2004). One thing that is shared among visitors is the pleasure they derive from visiting the gardens (Gallagher, 1981).

2.2 Free Choice Learning

The concept of free choice learning was developed by Falk in 2001, replacing the ideas of informal and nonformal learning (Bamberger and Tal, 2007). Free choice learning allows the learner to use their curiosity, motivation, and ability to choose to construct their own learning experience (Csikszentmihalyi & Hermanson, 1995; Falk & Dierking, 1992; Griffin & Symington, 1997; Pedretti, 2002; Rennie & McClafferty, 1996). Visitors are empowered with choice and control of their experience giving them the opportunity to use a variety of spaces to explore and construct a personal understanding of a concept (Bamberger and Tal, 2007). As the most common type of learning in which people engage, free choice learning empowers the learner to direct their own learning process (Falk and Dierking, 2002).
Museums, including zoos, nature centers, and libraries, are among the most common providers of free choice learning (Bamberger and Tal, 2007; Falk, Donovan & Woods, 2001). These types of organizations can be vital sources of information and aid in lifelong learning since the average person only spends 3% of their time in school (Falk and Dierking, 2002). In addition, free choice learning experiences help to update visitor’s knowledge and understanding of evolving issues and challenges by offering an information source to supplement the media and internet (Adelman et al., 2000; Ham and Weiler, 2002).

This connection makes free choice learning especially relevant and important to museums with conservation messaging because several studies have shown the free choice learning organizations’ potential for attitude and value change. Hooper-Greenhill (2004) found that in some cases visitors felt an increase in empathy or motivation to get involved, as well as a change in visitor’s entrance perceptions. These changes can include changes in thoughts and feelings about a specific species, or the overall environment, including social and political issues. Others have reported a change in thought about one’s place in the world and how they interact with other people (Ballantyne and Packer, 2005; Packer, 2004).
2.3 Museum Visitors

Learning more about visitors to museums is of great importance since visitors bring life to the museum. If the visitors left, the museum would be devoid of heart and soul (Combs, 1999). In addition, visitation helps keep the museum in good financial standing. Without strong visitation, museums would be hard-pressed to stay solvent (Combs, 1999). Understanding and accommodating the visitor helps to ensure the effectiveness of museum interpretation and programming (Combs, 1999). For these reasons, visitor research is performed at a number of institutions, including science centers, museums, botanical gardens and many for profit attractions. The study of people at such places is the focus of the field of Visitor Studies (Loomis 1988; Bitgood 1989; Bitgood 2002).

Although defining a “typical” visitor to museums is not possible, it is possible to describe the characteristics that that majority of visitors share (Davey, 2006). The age of a museum visitor varies quite a bit depending on whether the visit is to a botanical garden, zoo, art museum or children’s museum. Overall, museum visitors typically fall between the ages 35-50, with only 10% of total visitation occurring by people over 60 years of age (Goldman & Waldman, 2002). Adults comprise the majority of museum visitors, with 30% to 90% of visitors falling into this category (Falk and Dierking, 1992). Visitor surveys consistently show that the socioeconomic status of museum visitors is higher than the population as a
whole (Cheek, et al., 1976; Balling and Cornell, 1985; Hood, 1988; Robinson, et al., 1986; Doering and Black, 1989; Goldman & Wadman, 2002).

Museums visitors don’t enter as “blank slates,” instead they bring with them their interests, knowledge, opinions and previous museum-going experiences (Falk & Dierking, 1992; 2000; Doering and Pekarik, 1996; Pekarik, Doering and Karns 1999). These entry conditions have been described as the visitor’s "personal context” (Falk & Dierking, 1992; 2000) or the visitor’s "entry narrative" (Doering and Pekarik, 1996). Conservation focused organizations should acknowledge and relate conservation messaging and programming to a visitor’s personal context.

2.31 Minority Visitors

Museums tend to be under-utilized by minorities, especially African Americans (Falk and Dierking, 1992; Falk, 1995; Robinson, et al, 1986; DiMaggio & Ostrower, 1990; Birney, 1990; Doering & Black, 1989; ASTC-AAAS, 1987; American Museum of Natural History, 1977, 1986; Kaplan & Talbot, 1988; Ziebarth, Doering and Bickford, 1992; Bickford, Doering & Smith, 1992; Horn & Finney, 1994). Research conducted by American Visions magazine indicates that highly educated, affluent African Americans are less likely than equally educated and affluent white Americans to support cultural activities like museum visiting (Puckrein, 1991). Further, Birney (1990) discovered that socioeconomic status was not a predictor of African Americans visitation. A study at the
Brookfield Zoo showed the socioeconomic status of African American visitors almost exactly matched that of the white American visitors (Birney, 1990).

### 2.32 Visitor Conservation Attitudes and Knowledge

Adelman, Falk and James (2000) studied visitors to the National Aquarium in Baltimore (NAB) to explore their conservation attitudes and knowledge. The researchers found that visitors to the aquarium generally had more knowledge about conservation issues than national survey respondents. NAB visitors also shared a strong belief that humans are having a negative impact on the world. The majority of visitors in the study expressed the view that they are “choice-makers” and the choices they make can impact the environment. These visitors recognized their power and the importance of making choices, which could control problems like waste and water pollution (Adelman, Falk & James, 2000). In a separate study Falk (2007) found most visitors (61%) had positive values and attitudes about conservation which were reinforced during zoo visits. The study also found that many visitors reconsidered their role in environmental problems and began to see themselves as part of the solution (Falk, 2007).
2.4 Psychographics

Demographics such as race, income, and level of educational attainment have been the focus of many studies conducted on consumers. Demographics can describe an individual on a basic level, but fail to delve deeper into personality and lifestyle factors (Hood, 1991). A demographic profile is probably the most well known measure used in market research (Wells, 1975). Companies have used demographic data to learn more about viewers of a television show or the readers of a specific magazine. But researchers soon realized that demographic information only provided a shallow glimpse into the consumer, and companies wanted to know their customers better (Wells, 1975).

During the 1960s, a new type of measurement was developed by blending two traditions together. Psychographics successfully combined the objective qualities of personality inventories with the rich, descriptive detail of qualitative motivation research (Wells, 1975). Psychographic characteristics go well beyond demographics to explore “lifestyle” factors such as attitudes, opinions, interests and goals (Burns & Harrison, 1979). Psychographic measures have been used in a number of ways in consumer research. Examples include studies of credit card users (Plummer, 1971), brand images (Vitz and Johnston, 1965), opinion leaders (Darden and Reynolds, 1972, 1974; Summers 1970), customer loyalty (Reynolds and Martin, 1974), and type of media to reach a target market (Tigert, 1974; Wind and Green, 1974; Ziff, 1974).
Psychographics have been used in museums to help explain leisure activities including the motivation, expectations of visits and willingness to participate (Hood, 1993). Psychographics are particularly helpful in learning settings, as demographics have been shown to be poor predictors of how people learn from museums (Falk, 1993; Falk and Adelman, 2003; Falk and Storksdieck, 2005). Psychographic characteristics like childhood experiences, religious affiliation, and home community have been found to be variables that impact museum visitation (Falk, 1995).

Museums can find psychographic information particularly helpful to discover more about their visitors as well as their organization. Measuring psychographics allows an organization to paint a broader picture of who their visitors are. There have been a number of studies examining a number of psychographic characteristics of visitors to museums. Chandler and Costello (2002) developed a profile of visitors to nationally significant heritage destinations in Eastern Tennessee based on lifestyle and activity level preferences of participants.

Psychographics can help to explore an array of concepts, including the organizations’ effectiveness in reaching their audience and communicating with the public (Thyne, 2001). This type of information can be used to improve educational programming, customer service and public relations. Past research using psychographics has examined volunteer motivations (Dolnicar & Randle, 2007), created donor segmentations (Smith & Beik, 1982) and explored donor attitudes (Webb, Green, & Brashear, 2000).
2.5 Visitor motivation

Learning about visitor motivations is vital for museums so they can more accurately predict what visitors gain from their visit. This knowledge can help museum professionals understand how time spent at a museum impacts the visitor (Falk, 2007). Although motivation is not the only component which explains human behavior, it is a very important variable (Crompton, 1979). Museum professionals cannot simply observe the behavior of their visitors and hope to make accurate inferences about the motivations that dictate their participation (Shaw, 1987).

Increased competition for visitor’s time and money is another reason it is advantageous for museums to learn about visitor motivation (Burton, Louviere & Young, 2008; Burton, 2003). Many museums have faced government funding cuts which have created a greater need to explore the motivations of museum visitation. Armed with this knowledge, museum employees can plan more effective programming and hope this will lead to increases in revenue (Combs, 1999).

Studies of visitor motivation have revealed that the reasons behind museums visits are as diverse and complex as the people who visit (Combs, 1999). Visitors want their museum visit to incorporate active participation, socializing with family and friends, getting information and utilizing their senses (Kotler, 1999; Beeho & Prentice, 1995). While education is important it may not be the primary motivation for many zoo
visitors, instead education occurs simultaneously with recreation (Morgan and Hodgkinson, 1999). Due to this combination of education and recreation, a new term was coined to describe the focus of many museums. “Edutainment” describes a location where visitors are educated and entertained at the same time (Combs, 1999). The term encompasses the desire to have fun and relax while having an enlightening experience in the museum that helps visitors escape their everyday world (Kotler, 1999; Beeho & Prentice, 1995). Some in the museum field have an aversion to combining museums with entertainment, while others have welcomed the grouping (Combs, 1999).

John H. Falk has conducted a substantial amount of research on museum visitor motivations. Falk (2006) notes that previous research suggests that people have a limited number of reasons for choosing to visit a museum. Motivation is actually a complex sociological and psychological construct made up of multiple sources, including a visitor’s prior knowledge, prior experience with the setting, social relationships, social and cultural meaning s/he gives to the museum, and personal interests and sense of identity (Falk, 2006).

In 1997 Moussouri found that all the reasons given for visiting a museum could be placed into one of six categories. The categories included: education; entertainment; social event; life-cycle; place; and practical issues (Moussouri, 1997). In subsequent research, Falk, Moussouri and Coulson (1998) found that the visitor usually expressed combinations of these motivations and that the motivation directly related to visitor
learning. Visitors with education as a dominant motivation learned different things than those who held entertainment as a dominant motivation, still both individuals learned (Falk, 2006). These findings reinforced Paris’ (1997) work which concludes that motivation and learning are related.

Falk (2006) hypothesizes that most museum visitors “enact’ a museum ‘identity’” during their visit, which represents their motivation during the visit. While visiting a museum in a new city, the visitor may enact the “tourist” identity, but at a museum in their home town, another identity might be utilized. During a visit with children, a “parent” identity may be employed by the visitor. Regardless of the identity used during a museum visit, the identity defines the motivation, which also influences visitor learning (Falk, 2006).

Research has begun to document the relationship between visitor’s entry motivations and their exiting learning (Falk, 2006). Harre and Moghaddam have suggested a “positioning theory” which connects visitor learning to specific motivations (2003). Houle (1961) has explored visitor’s need to learning, not specifically what was being learned. Packer and Ballantyne (2002) found that entry motivations were correlated with specific learning behaviors during the museum visit. Generalizing from such studies, it can be deduced that people’s motivations for museum visits seem to directly influence their learning while in the museum (Falk, 2006).
2.6 Service Quality (SQ)

Evaluating the quality of a service is more difficult than evaluating a product, because of the intangible nature of service (Nowacki, 2005). Service quality is difficult to measure because of three features unique to services: (1) intangibility, (2) heterogeneity and the (3) inability to separate production and consumption (Parasuraman, Zeithaml & Berry, 1988).

Service quality (SQ) is defined by the Expectancy-Disconfirmation theory which asserts that visitor’s expectations create a baseline and judgments are made regarding the levels of performance that confirm or disconfirm the expectations (Tomas, Crompton & Scott, 2003; Parasuraman, Zeithaml and Berry, 1988).

Improving SQ is a focus of museums due to the belief that satisfied visitors will become loyal visitors who will return to the destination time and time again. Even further, a satisfied visitor is likely to recommend the museum to others (Cole & Crompton, 2002). Consumers of leisure services have become more discerning and increased their expectations of their experience. This shift has made it even more important for service providers to assess the quality of the experiences they provide to their guests (Walker, Backman, Backman & Morais, 2001).

In 1988, Parasuraman, Zeithaml and Berry developed SERVQUAL, a 22 item instrument used to assess perceptions of service quality in both service and retail organizations (Walker, Backman, Backman & Morais, 2001; Nowacki, 2005). The development of this measurement of SQ opened the door for researchers to examine
the relationships between a customer’s perception of quality and their past, present and future behavior (Walker, Backman, Backman & Morias, 2001). The SERVQUAL instrument was particularly helpful due to its adaptability to many different sectors with a focus on service (Nowacki, 2005; Nyeck, Morales, Ladhari, Pons, 2002). SERVQUAL has been used to measure service quality in tourism settings, hotels (Ekinci & Riley, 2001), health care institutions (Babakus & Mangold, 1992, 1992; Bebko and Garg, 1995; Bowers et al., 1994), banking (Brown et al. 1993), fast food restaurants (Lee and Ulgado 1997), retail services (Gagliano and Hathcote 1994), and advertising (Quester et al. 1995). The SERVQUAL model is still considered the most comprehensive method to examine and quantify service quality (Nyeck, Morales, Ladhari & Pons, 2002).

2.7 Visitor’s cultural cognition

Cultural cognition describes the tendency of individuals to form beliefs about societal dangers that reinforce their feelings about the ideal society (Kahan, et al., 2007). This is a form of identity-protective cognition, which protects one’s own beliefs and sense of self. This allows individuals to believe that behavior one thinks is dignified also benefits society and that behavior one thinks is poor is also harmful to the society (Kahan, et al., 2007). These distinctions are used particularly when one is affiliated with self-defining group. Forming beliefs that are at odds with those held by fellow members of the identity-defining group can be risky. This dissention can drive a wedge between
that person and other members of the group. Therefore, individuals are motivated to conform their perceptions about risk to match those held by members of their self-identifying reference group.

Cultural cognition is measured using Douglas and Wildvasky’s (1982) culture theory of risk. Culture Theory of risk as shown in Figure 1 is schematic using x and y axis Douglas calls “group” and “grid.” The axes represent cultural ways of life and their supporting worldviews. These four worldviews include:

- **Communitarian**: A high group cultural world view represents people with a soldaristic or communitarian way of life where collective interests are given priority over the interests of the individual. The collective is responsible for creating conditions where the individual can flourish.
- **Individualistic**: A low group cultural world view characterizes people with an individualistic way of life, where individuals are responsible for creating conditions of their own to flourish in without any assistance.
- **Hierarchical**: A high grid cultural worldview supports a hierarchical social structure where privileges and responsibilities, commodities and positions are disseminated based on characteristics like race, gender, lineage and wealth.
- **Egalitarian**: A low grid cultural worldview supports the dissemination of such entitlements without regard to characteristics like race, gender, lineage or wealth.
These identities can be more easily understood using what Douglas and Wildvasky (1982) consider the paradigmatic case of environmental risk perception as an example. Individualists are likely to dismiss claims of environmental risk because they subconsciously recognize that accepting the claims would lead to limits on commerce and industry, which are forms of behavior they like. Egalitarians dislike commerce and industry, because they view them as sources of social disparities. Therefore, egalitarians are likely to believe such activities cause environmental harm and deserve restrictions. Communitarians are also sensitive to claims of environmental risk. Crediting claims of environmental risk would condemn self seeking and individualism created by unregulated markets. Hierarchists are inclined to reject claims about environmental risks because of the blame those claims cast on societal elites. White male hierarchists have more of a stake in resisting these claims, as they’ve likely gained status in occupations of authority in industry or government.
2.8 Gender identity

Museums spend a great deal of time courting diverse visitors through events, activities or special exhibits (Fraser & Heimlich, 2008). In the 1990s, marketing researchers identified LGBTQs (Lesbian, Gay, Bisexual, Transgender, Queer) as ideal consumers because they are highly educated, have higher than average amounts of disposable income and typically don’t have dependents (Kahan and Mulryan, 1995:40; Kates, 1998; Prince, 2002; Lukenbill, 1995; Badgett, 1995; Black et al., 2000; Allegretto and Arthur, 2001; Berg and Lien, 2002). LGBTQ’s are highly educated; in the US nearly
40% of unmarried homosexual partners have a college degree, compared to 18% of unmarried heterosexual partners (Pritchard, Morgan, Sedgely & Jenkins 1998).

The gay community continues to be a target of mainstream marketers. In the US, estimates describe 10% of the population as homosexual (Pritchard, Morgan, Sedgely & Jenkins 1998). This equates to over 30 million individuals as homosexual. Research has also shown a higher concentration of LGBTQs living in metropolitan areas (Kahan and Mulryan, 1995:40; Kates, 1998; Prince, 2002; Lukenbill, 1995), where participation in the arts is more prevalent (Heilbrun and Gray, 2001: Table 3.3; Black et al., 2002). Income is typically higher for gay male couples than for married couples (Klawitter and Flatt, 1998). This higher income combined with the typical absence of children in LGBTQ households leaves a larger amount of income to allocate to leisure than heterosexuals with similar earnings enjoy (Black et al., 2003; Berg and Lien, 2002). LGBTQ couples are considered a strong economic force due to this higher than average disposable income (Chasin, 2001). Gays are looked at as “the closest thing to a recession-proof market” (Pritchard, Morgan, Sedgely & Jenkins 1998). Research has shown theatre, musical or dance performances attendance is typically lower when children are present (Belk and Andreasen, 1982; Levy-Garboua and Montmarquette, 1996), while income and urban residence are known to increase attendance (Heilbrun and Gray, 2001; 49, 99; Throsby, 1994:7-8; Withers, 1980; Moore, 1966).

These distinctions of income, absence of dependents and education makes LGBTQs ideal consumers of the arts. The LGBTQ community clearly holds a large
presence in the museum world, and while museums contend to be working on inclusion and representing all audiences, they often fall short of meeting that goal. Museums often publicize their desire to serve their community, but there is uncertainty about whether the museum professionals have explored the community and found out what people want from the institution (Falk & Sheppard, 2006). Museums often feel they are more accepting of diversity than other cultural sites, but these feelings should not prevent the examination of practices that can either welcome or discourage visitation by minority communities (Mertens, Fraser, & Heimlich, 2008).

One issue that impacts museum visitation by the LGBTQ community is the issue of representation. LGBTQ issues and artists are often carefully concealed or ignored by museums staff (Mertens, Fraser, & Heimlich, 2008). Interpretative signage at museums often excludes references to an artist’s connection to the LGBTQ community (Petry, 2004). These omissions and silencing aid in continuing homophobic prejudice (Ferfolja, 2007). Museums that stifle the gender identity of material on display support the idea that there is something wrong or unnatural with the identity.

This continues a long history of discrimination, oppression, and stigmatism surrounding the LGBTQ community. They have been viewed as criminal, immoral and pathological (Fone, 2000; Garnets & Kimmel, 2003). Museum professionals, through their collection and interpretation policies, contribute to the marginalization of the LGBTQ community. These museums seem to have dealt with sexuality by denying its existence to the public (Stuart Frost, 2008).
In 2008, Heimlich and Koke studied gay and lesbian comfort level regarding visits to cultural institutions. Results show the highest level of comfort expressed when visiting as a group or with children. These results aren’t surprising as visiting these sites is considered a group activity (Falk and Dierking, 1992). Participants expressed a neutral response in comfort levels at museums and performance venues (Heimlich & Koke, 2008).

Heimlich and Koke (2008) also explored the differences in visiting as a heterosexual individual versus visiting as LGBTQ individual. Several concepts were identified as major differences. First, members of the LGBTQ community felt they needed to restrict their use of demonstrative actions with their partner. These actions include holding hands, kissing or touching (Heimlich & Koke, 2008). Natural reactions to art, dance or music are stifled. A second difference is the feeling of representation within the museum. LGBTQ visitors felt strongly that they are not reflected in the museum content or in museum marketing materials or pricing structures (Heimlich & Koke, 2008).

Museums need to stretch the bounds of minority inclusion. Such a shift is important to reveal suppressed communities and engage voices what have been stifled or ignored (Mertens, Falk, & Heimlich, 2008). In addition, examining identify at the most base level of sexuality acknowledges that we all use our own lenses to view the world and these lenses can affect how we live in the world (Fraser & Heimlich, 2008). If
a visitor does not see themselves represented or expected in the museum, the message
to the visitor is that they are not to be represented or expected, essentially the message
is, you are not welcome (Szymanski, 2006). These sorts of messages are likely to push
away a visitor from institutions that rely on membership, donor monies and repeat
visitation (Szymanski, 2006).

It seems that the LGBTQ community may be the last group to enjoy full
representation in the museum. Until recently it would have been difficult to find any
exhibits in museums in the United States which featured homosexuals and depicted
them in a positive manner (Clark & Wexler, 2008). Several museums have modified
their collecting policies to ensure that they are addressing LGBTQ audiences and
acknowledging their histories (Frost, 2008). It appears that exhibitions that recognize
same-sex relationships and the history of the LGBTQ community will increase in
frequency (Frost, 2008).

2.9 Religious identity

Religion and environmental concerns have always had a tenuous relationship.
There wasn’t significant work in the area of environmental theology until the 1950s and
1960s (Hitzhusen, 2006). After Earth Day 1970 and the rise of environmental literature,
the environment began receiving more widespread theological attention (Siemer &
Hitzhusen, 2007). In 1967, Lynn White proposed that Christian religions are one of the
root causes of the ecological crisis. The idea that Bible doctrine encourages distain for
the environment and that belief in the Bible reduces environmental concern became known as the “White Thesis” (Hitzhusen, 2007). Though there was evidence to refute White’s claims (Haluza-Delay, 2008), the view that Christian belief and ecological concerns conflict persisted (Booth 1999; O’Sullivan 1999). Later studies concluded that political factors, not religious beliefs, are better determinants of a respondents’ environmental concern (Greeley, 1993; Guth et al. 1993, 1995; Eckberg & Blocker, 1996; Woodrum & Wolkomir, 1997; Wolkomir et al. 1997b).

In a 1993 study of environmental concern Judeo-Christian respondents did not demonstrate significantly poorer environmental behaviors, although they did show greater acceptance of mastery attitudes (Kanagy and Willits, 1993). In some measures of environmental behavior, religiously affiliated respondents rated higher than non-religiously affiliated respondents (Kanagy and Willits, 1993). Hitzhusen (2006) points out that many religious groups now support conservation efforts and that such developments serve as an invitation to environmental educators to take advantage of the religious resources.

Research indicates that religion could enhance the effectiveness of outdoor, experiential and adventure education in some groups (Stringer, 2000). There is continued investigation into how religious themes should be incorporated into environmental education (Baer, Tantillo, Hitzhusen, Johnson, & Skillen, 2004; Hitzhusen, 2005).
CHAPTER 3

METHODOLOGY

3.1 Study Sites

This study was conducted at the Columbus Zoo and Aquarium (CZA) and The Franklin Park Conservatory (FPC). The Columbus Zoo and Aquarium opened in 1927 with a small collection of animals guided by the mission to “enrich our community’s quality of life and to inspire a greater appreciation of wildlife for the advancement of conservation action” (columbuszoo.org, 2009). CZA gained worldwide attention when Colo became the first captive born gorilla in 1956. In 1978, Jack Hanna became the director of the Zoo and brought more attention to the work at CZA through numerous television appearances. In 1999, CZA added West Indian Manatees to its collection, and changed its name to reflect the addition. More recently, CZA saw the birth of Bodhi, an Asian elephant. This was the first successful birth of an Asian elephant at CZA. Since its inception in 1927, CZA has grown to house more than 700 species and has grown into a global leader in animal education and conservation (columbuszoo.org, 2009). According
to the 2007 Annual Report, CZA had over 1,500,000 visitors in 2007 (CZA Annual Report online).

The Franklin Park Conservatory was built in 1895, just two miles from downtown Columbus. Situated on 88 acres, FPC aims to nurture plants and people. *We promote environmental appreciation and ecological awareness for everyone. Our unique botanical collections provide lifelong learning opportunities in a friendly and accessible setting, which preserves tradition and provides a refuge for the soul (fpconservatory.org, 2009).*

In 1974, the original glass structure was listed on the National Register of Historic Places. This officially recognized the history and architectural importance of the structure which is now known as the Palm House. According to the FPC website, FPC debuted the *Blooms and Butterflies* exhibition in 1994. The event made FPC the first conservatory in the United States to display a seasonal butterfly exhibition. This event alone attracts thousands of visitors to FPC each year. Many conservatories throughout the nation have followed suit and created their own butterfly exhibition. In 2003, FPC presented the glassworks of Dale Chihuly in the *Chihuly at the Conservatory* exhibition. The glassworks were later purchased and have since become a permanent part of the FPC collection. By 2006, FPC’s operating budget had grown to more than $4 million which supports 100 staff members. Today, FPC has become a premier horticultural and educational institution which displays an immense plant collection, including 400 species of plants. The Conservatory serves the public through its educational
programming by providing hands on learning opportunities about the natural world, gardening and the arts *(fpconservatory.org, 2009)*.

The Columbus Zoo and Aquarium and The Franklin Park Conservatory are ideal locations to conduct this study. The two sites available to the researcher share strong conservation themes. They both highlight the importance of conservation in their respective organizations’ mission statement. Because of their conservation focus and strong visitorship these organizations provide suitable locations to explore the research question.

### 3.2 Population and Sampling Procedures

The population for this study includes all adult visitors during at the two study sites (CZA & FPC) during the study period. The population at the Columbus Zoo and Aquarium included all adults that visited between May 2009 and July 2009, during the times of study. The population at the Franklin Park Conservatory included all adults that visited between February 2009 and June 2009, during the times of study.

A focal sampling method was utilized to intercept visitors as they entered the study area *(Harris, 1995)*. The focal sampling method involves intercepting the first person to cross into the predetermined study area. Once the researcher has finished with this individual, the next person to enter the area is approached. A minimum number of 400 participants was desired at each location. These numbers were
determined using an online sample size calculator tool (Raosoft, 2004). These calculations were based on five percent margin of error, a 95% confidence level and a population size of 20,000. The response distribution rate was 50%. Ultimately, 303 surveys were completed at the Franklin Park Conservatory and 400 surveys were completed at the Columbus Zoo and Aquarium. Unfortunately the research was unable to acquire the ideal number of completed surveys; however a satisfactory number was acquired. The time budgeted to complete the project did not allow for continuing data collection beyond July 2009. The decision was made by the research and her advisory committee that project viability could be maintained using the number collected during this time period.

3.3 Scales

The instrument was divided into 3 scales used to explore visitor psychographics as well as several questions to explore demographic features of visitors. The psychographic scales include motivation for visit, expectations of service quality and cultural cognition. The demographic scales included topics of membership status, frequency of visits, zip code, as well as racial, religious and gender identity. All of the scales are described in detail below.
3.31 Motivation

The motivation instrument was developed by Falk (2006) after interviewing 52 individuals about their science center experience. He discovered that the visitors’ satisfaction was directly tied to their reason for visiting the science center. The reasons provided resembled the responses of individuals interviewed by Moussouri (1997) and Packer and Ballantyne (2002), and others. Using content analysis to examine interview responses five identity-related motivations were developed: the explorer; the facilitator; the professional/hobbyist; the experience seeker; and the recharger. These motivations served as the foundation for developing an instrument to measure motivations (Falk, 2006).

The visit motivation instrument includes 20 statements representing four examples from each of the five identity related motivations common to zoo visitors (Falk, et. al, 2007). See Appendix B. Visitors are asked to choose the five statements that best described why they decided to visit the zoo on that day. After selecting the five statements, visitors ranked their selections in order of importance on a seven-point Likert-type scale (Falk, et. al, 2007). Each point was assigned a value from 1 (low) to 7 (high) and summed (Nickels, 2008). A score between 14 and 28 on a motivation indicates a dominant motivation. Dual dominant motivations occur when two motivations score between 14 and 20. Scores in all five motivation categories below 14 points indicates the individual has no dominant motivation (Nickels, 2008).
Four of the five subscales had reliability above Cronbach’s $\alpha = .65$, which indicates a good scale (Heimlich, et al., 2005). See the table below for the reliability scores of each subscale. The Experience Seeker scale had a negative score due to the negative average covariance among scale items (Heimlich, et al., 2005). The negative value occurred because two of the three items on The Experience Seeker subscale were in absolute terms. For example, “I came a long time ago and want to revisit it” and “I came to this area as a tourist to visit the zoo” would result in opposite response patterns which lowered the reliability (Heimlich, et al., 2005). The Experience Seeker has a negative Cronbach’s $\alpha$ value due to the negative average covariance among the items. This result was caused by two of the three The Experience Seeker subscale items which were absolute in terms of responses. For example: “I came a long time ago and want to revisit it” (ES 2) and “I came to this area as a tourist to visit the zoo/aquarium” (ES 5) likely produced opposite response patterns and lowered the reliability score (Heimlich, et al., 2005. Both items are highly predictive and work independently with the other items in the subscale.

<table>
<thead>
<tr>
<th>Factor</th>
<th>The Experience Seeker</th>
<th>The Professional/Hobbyist</th>
<th>The Recharger</th>
<th>The Facilitator</th>
<th>The Explorer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach’s $\alpha$</td>
<td>-.030</td>
<td>.785</td>
<td>.795</td>
<td>.860</td>
<td>.745</td>
</tr>
</tbody>
</table>

Table 1: Reliability of Motivation subscales (Heimlich, et al., 2005).
3.32 Service Quality

Service Quality (SQ) is defined by the expectancy-disconfirmation theory, which states that a visitor’s expectancy level creates a baseline from which judgments can be made about levels of performance. These judgments can either confirm or disconfirm the initial expectations of the visitor (Tomas, Crompton & Scott, 2003).

The 22 item SERVQUAL instrument was developed in 1988 by Parasuraman, Zeithaml and Berry. The instrument measures service quality by calculating the difference between perceptions and expectations in five dimensions (Parasuraman, Zeithaml, & Berry, 1988). The dimensions include tangibles, reliability, responsiveness, assurance, and empathy (Walker, Backman, Backman, Morais, 2001). The five dimensions are broken down into 22 items. Each of those items is split into two more items, one of which measures expectations and the other measures perceptions (Asubonteng, et al., 1996).
Reliability of each dimension of the SERVQUAL scale can be examined further in Table 2. Using the formula for the reliability of linear combination (Nunnally (1978) the SERVQUAL scale was found to have a total scale reliability of .92 (Parasuraman, Zeithaml & Berry, 1988).

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Definition</th>
<th>Items in scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>The ability to perform the promised service dependably and accurately</td>
<td>4</td>
</tr>
<tr>
<td>Assurance</td>
<td>The knowledge and courtesy of employees and their ability to convey trust and confidence</td>
<td>5</td>
</tr>
<tr>
<td>Tangibles</td>
<td>The appearance of physical facilities, equipment, personnel and communication materials</td>
<td>4</td>
</tr>
<tr>
<td>Empathy</td>
<td>The provision of caring, individualized attention to customers</td>
<td>5</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>The willingness to help customers and to provide prompt service</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 2: SERVQUAL Dimensions (Buttle, 1995)
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Reliability Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibles</td>
<td>.72</td>
</tr>
<tr>
<td>Reliability</td>
<td>.83</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.82</td>
</tr>
<tr>
<td>Assurance</td>
<td>.81</td>
</tr>
<tr>
<td>Empathy</td>
<td>.86</td>
</tr>
<tr>
<td>Reliability of Linear Combination (Total-Scale Reliability)</td>
<td>.92</td>
</tr>
</tbody>
</table>

Table 3: SERVQUAL Instrument Reliability (Parasuraman, Zeithaml & Berry, 1988).

3.33 Cultural Cognition

The cultural cognition thesis states that people’s core values shape their beliefs about risk (Kahan, et al, 2007). The cultural cognition scale was developed by Kahan et al., and consisted of items which were adapted from work by Dake (1991), Ellis & Thompson (1997) and Peters & Slovic (1996). The survey contains 32 items on worldview. Respondents indicate their level of agreement or disagreement on a four-point Likert-type scale (Kahan, et al., 2007). These items form two scales: Communitarianism-Individualism and Egalitarianism-Hierarchy Scale. The Communitarianism-Individualism scale measures concern for the individual opposed to the interests of the collective and how the responsibility for meeting individual’s needs should be divided between individuals and the community (Kahan, et al., 2007). The
Egalitarianism-Hierarchy Scale measures attitudes about group stratification and deviating from dominant norms and roles (Kahan, et al., 2007).

Cultural cognition measures two constructs on separate scales. See Appendix D. The Hierarchy-Egalitarianism scale contains items that determine a person’s relative orientation toward high or low grid ways of life. The “grid” dimension measures the pervasiveness and implications of social differentiation within an individual’s worldview (Douglas 1982:202 in Kahan, et al., 2007). Individuals with high grid orientations (hierarchical) believe resources and opportunities should be distributed based on social classifications like race, lineage, gender, and positions of power (Gross & Rayner 1985:6 in Kahan, et al., 2007). Those with low grid orientations (egalitarian) feel that characteristics like sex, age, and family connections should not prevent individuals from participating in any social role (Rayner 1992:86 in Kahan, et al., 2007).

The Individualism-Communitarianism scale contains items that measure a person’s relative orientation toward low or high group ways of life. The “group” dimension measures the extent to which an individual’s life is engaged and sustained by membership to a particular group (Douglas 1982:202 in Kahan, et al., 2007). Persons with a low group orientation (individualistic) feel individuals should fend for themselves and compete for resources. Those with a high group orientation (communitarian) expect individuals to depend on each other and interact in a way that promotes solidarity (Rayner 1992:86 in Kahan, et al., 2007).
When one uses a single scale for group and single scale for grid, each individual respondent’s worldview is identified with a unique point within the quadrants demarcated by the intersection of group and grid.

The two scales that comprise the cultural cognition instrument are reliable (Kahan et al., 2007). The Communitarianism-Individualism scale which is based on the group dimension of the Douglas typology is reliable (Cronbach’s $\alpha = 0.77$). The Egalitarianism- Hierarchy scale based on the grid dimension by Douglas is reliable (Cronbach’s $\alpha = 0.81$).
3.34 Demographic Measures

The last page of the instrument consisted of several smaller checklist scales. These scales covered topics of membership status, frequency of visits, zip code, as well as racial, religious and gender identity. These single item scales are described further below.

3.35 Gender

Mertens, Fraser & Heimlich (2008) have described gender as a combination of “an individual’s internal awareness and experience of gender and includes the five accepted categories of heterosexual, homosexual, bisexual, transgendered, and asexual”. These five categories were listed in a checklist for participants to select the appropriate response.

3.36 Religious Identity

The religions included on the questionnaire were selected after a review of the world’s religions. The search resulted in a grouping of 19 to 40 different religious identities (Robinson, 2009). The list of 40 religions was reduced to the ten most commonly practiced religions in the United States (Adherents.com, 2007). This reduction served to reduce questionnaire length and to include only the most common
religions. A checklist was created with 10 religion choices. The religions were first separated in to Christian and Non Christian. Under the Christian option two religions were listed: Catholic and Protestant. Under the Non Christian category the following options were listed: Islam, Nonreligious, Hinduism, Chinese traditional, Buddhism, Primal-indigenous, Unitarian and other.

3.4 Research Design

The aim of this study is to explore the psychographic characteristics which distinguish visitors at one location from another. The following research question will guide the study.

1. Who are the visitors to conservation focused free choice learning institutions?
   - What are the demographics and psychographics that distinguish visitors at one facility from visitors at another?
   - Are the psychographic measures used in this study able to create visitor profiles for each organization?

This study employs quantitative data collected on site at CZA and FPC with pen and paper instrument. The survey instrument included three scales to measure psychographic dimensions including motivation for visit, service expectations, and cultural cognition. The instrument concluded with several items on demographic characteristics.
3.5 Instrumentation and Data Collection

The survey measured visitor psychographic and demographic characteristics. The specifics of data collection at each research site are discussed further below.

At FPC the questionnaire was administered to visitors in the Grand Atrium near the entrance to the building. This site was chosen because of its proximity to the entrance/exit, restrooms and many benches and tables where visitors are often at rest. This site was deemed a good location to access potential participants because of its high traffic level. A table was set up in the atrium that served as the home base for data collection.

While at CZA the survey was administered to visitors inside the Manatee Coast building in the Shores exhibit. This area was chosen because of its indoor location and high traffic flow. Cool or rainy weather was a concern because data collection started in the winter season. For this reason, an indoor location was essential to ensure participant and researcher comfort. Two tables and four chairs were set up inside the entrance to the Manatee Coast building. This allowed for data collection to occur slightly out of the way of the main traffic area, while still being very visible to visitors. There was no other spot in the Manatee Coast building that allowed for the high volume of traffic and enough space for both tables and chairs to be set up. Data collection sites were tested in the Discovery Reef building with little success. This area was near the exit of the exhibit and because of the nature of the collection it was very dimly lit. After failed collection at this site, researchers decided on the site within the Manatee Coast
building. Data collection inside the Manatee Coast building did not allow for roaming throughout the exhibit for potential participants. There is a very high level of traffic flowing in one direction through the narrow walkway in the exhibit. On a few occasions walking through the exhibit with blank surveys was attempted but failed to yield a strong return. Instead, stationing collection efforts at the table near the entrance produced satisfactory results.

Prospective participants were approached and greeted by the researcher. Background information on the research project was provided, including the study’s focus, how the results will be treated, and the anonymous nature of the survey. Visitors were told that their participation was voluntary and they could refuse to participate or end their participation at any time. Upon agreeing to complete the survey, the researcher handing the participant a blank survey, clipboard and pen to complete the survey. Surveys were self administered due to the sensitive nature of the statements included in the survey. To ensure anonymity participants were to place completed surveys in a seal bin. At this time they received a small thank you gift on behalf of the participating organizations. At FPC, participants received a coupon for half off of admission on their next visit. At CZA, participants received zoo posters. The researcher also provided an incentive. Participants could enter a raffle to win a free one year family membership to either FPC or CZA. Raffle entry forms were on separate pieces of paper rather than attached surveys. Name and email address were requested on the form. A winner was selected from each site, contacted via email and notified of their
selection. All raffle entry forms were shredded after the research project was completed.

3.6 Data Analysis

Data were analyzed using SPSS version 17.0 statistical software. Any generalizations must be approached with caution due to the small number of study sites and the fact that data were not collected at the same time of year. Measures of central tendency were used to analyze data from items that used a Likert-type scale. Frequencies were computed for data from items such as demographic and visit data. Independent samples T test were conducted to determine if there were significant differences in mean scores between institutions. Results are summarized in subsequent chapters.
RESEARCH ARTICLE 1

(This article will be submitted to the Journal of Interpretation Research, a peer-reviewed journal published by the National Association on Interpreters)

The development of visitor profiles at two conservation focused free choice learning organizations

ABSTRACT

This paper reports on a study to examine the psychographics of visitors at two conservation focused organizations in the Midwestern United States. Organizations that wish to know more about their visitor’s lifestyles should look to psychographic measures (Thyne, 2001). Psychographics have been used in museums to help explain leisure activities including the motivation, expectations of visits and willingness to participate (Hood, 1993). A focal sampling method (Harris, 1995) was utilized to intercept visitors (n=700) as they entered the study areas. Visitors were asked to complete a questionnaire concerning their motivation for visiting, service quality expectations, cultural worldviews as well as several demographic measures. Visitors at the
organizations differed in their motivation for visiting and in their cultural worldviews. There were also statistically significant differences in their service quality expectations. The results allowed the researcher to create a profile of visitors at both organizations.

**INTRODUCTION**

Conservation focused institutions like zoos and botanical gardens are guided by mission statements that help to shape their operation and goals for the future (Mazur & Clark, 2001). Conservation and education values are reflected in the experience provided to visitors (Mazur & Clark, 2001). Through education and interpretive signage using conservation messaging, organizations hope to further conservation efforts by shaping visitor knowledge, attitudes and behaviors (Smith, Broad & Weiler, 2008; Ham & Weiler, 2002; Hughes & Morrison- Saunders, 2005). Such conservation messaging may encourage visitors to care about natural resources, and participate in community actions like restoring and protecting local wildlife habitat (Rabb, 2004).

In fact, establishing a link between visits to conservation focused museums and behavior has become a greater priority (Smith, Broad & Weiler, 2008) as influencing behavior through visitation has been deemed the “the ultimate goal” (Povey & Spaulding, 2005). Visitors are encouraged to take action on conservation issues through exhibits that point out simple actions like donations, consumer choices, and contacting legislators via support letters or phone calls (Swanagan, 2000). Visitors have indicated
increased interest in conservation issues after visiting these types of exhibits (Falk, et. al, 2007; Derwin & Piper, 1988; Ogden & Lindburg, 1991). Sharing conservation messages and behaviors with visitors appears to be the first step in creating an engaged and powerful public.

Conservation focused organizations need visitors to carry out their mission outside of the organizations walls. While mission statements in the profit sector are mostly used internally, nonprofit organizations share their mission statements widely with their audience and community. Not for profit organizations are in a unique position as their measure of success is not the bottom line, but their ability to carry out their mission. Stone (1996) points out that achieving the mission in the nonprofit arena is equivalent to making a profit in the private sector. Further, visitors bring life to conservatories and zoos; if the visitors left, these sites would devoid of heart and soul (Combs, 1999). Without the visitor, museums would serve simply as warehouses of material, with little concern with the world outside their walls. In addition, visitation helps keep the museum in good financial standing. Without strong visitation, museums would be hard-pressed to remain relevant (Combs, 1999).

Although defining a “typical” visitor to museums is not possible, it is possible to describe the characteristics that the majority of visitors share (Davey, 2006). The average museum visitor is between ages 35 and 50 (Goldman & Wadman, 2002) of a higher than average socioeconomic level (Cheek, et al., 1976; Balling and Cornell, 1985; Hood, 1988; Robinson, et al., 1986; Doering and Black, 1989; Goldman & Wadman,

Several studies have shown blacks in art audiences in proportions comparable to whites (Greenberg & Frank, 1983; Marsden et al. 1982) while other have shown lower levels of participation by blacks than whites at museums but near comparable rates at performing arts events (Crowther & Kahn, 1978; Marsden & Reed, 1983). While many attempts have been made to decipher the characteristic that helps determine visitation, no one factor has been successfully identified. Marketing research conducted by American Visions magazine showed that well educated, well to do African Americans were less likely to support cultural activities than their white counterparts (Puckrein, 1991). Socioeconomic factors have not been deemed a sufficient determinant in explaining museum visitation patterns. African American visitors and white visitors at the Brookfield Zoo had nearly identical socio-economic profiles (Birney, 1990). Feelings of comfort and belonging may have some impact on African American visitation. Many museums can be viewed as unwelcoming and racist by the African American community because they are monuments to the prevailing European American culture (Karp & Lavine, 1991; Falk, 1995). Some have described museum going as “not a black thing”
(Falk, 1993), and that they avoid museums because they’d rather do other activities during their leisure time (Kelly, 1992). It appears that the biggest contributor to the present day limited use of museums by African American is the absence of a museum going tradition (Falk, 1995).

Visitors to conservation focused institutions generally have more knowledge about conservation issues than national survey respondents (Adelman, Falk and James 2000). These visitors view themselves as “choice-makers” and recognize their power and the importance of making choices, which could reduce problems like waste and water pollution (Adelman, Falk & James, 2000). Most visitors have positive values and attitudes about conservation which were reinforced during zoo visits (Falk, et al., 2007).

Minority groups, like members of the Lesbian, Gay, Bisexual, Transgendered, and Queer (LGBTQ) community are regular users of museums. The LGBTQ community is known to be highly educated, have higher than average amounts of disposable income and typically don’t have dependents (Kahan and Mulryan, 1995:40; Kates, 1998; Prince, 2002; Lukenbill, 1995; Badgett, 1995; Black et al., 2000; Allegretto and Arthur, 2001; Berg and Lien, 2002). Higher incomes and the typical absence of children in LGBTQ households leaves a larger amount of income to allocate to leisure than heterosexuals with similar earnings enjoy (Black et al., 2003; Berg and Lien, 2002). Gays are looked at as “the closest thing to a recession-proof market” (Pritchard, Morgan, Sedgely & Jenkins 1998). Although LGBTQ’s are strong participants in theatre, musical or dance performances, they often decline organization membership. Representation and
comfort in these settings appears to be a deterrent to membership (Heimlich & Koke, 2008). LGBTQ visitors feel strongly that they are not reflected in the museum content or in museum marketing materials or pricing structures (Heimlich & Koke, 2008). These visitors expressed neutral comfort levels at museums and performance venues (Heimlich & Koke, 2008). LGBTQ visitors feel they have to restrict their demonstrative actions like hand holding, kissing or touching their partner (Heimlich & Koke, 2008).

**Motivation** is a complex sociological and psychological construct made up of multiple sources, including a visitor’s prior knowledge, prior experience with the setting, social relationships, social and cultural meaning s/he gives to the museum, and personal interests and sense of identity (Falk, 2006). Falk (2006) notes that previous research suggests that people have a limited number of reasons for choosing to visit a museum. Visitor’s motivations for museum visits seem to directly influence their learning while in the museum (Falk, 2006; Packer & Ballantyne, 2002; Harre & Moghaddam, 2003; Paris, 1997; Falk, Moussouri & Coulson, 1998). Visitors with education as a dominant motivation learned different things than those who held entertainment as a dominant motivation, still both individuals learned (Falk, 2006). The five categories of identity-related motivations Falk (2006) created include:

- **Explorers** are curious and are looking to discover more about the subject matter at the institutions.

- **Facilitators** are socially motivated. They focus on enabling the experience of their accompanying social group, especially children.
- **Professional-Hobbyists** are closely attached to the institution’s content due to their professional or hobbyist passions.

- **Experience Seekers** derive satisfaction from visiting an important site. Their perception that the museum is noteworthy, gives them a “been there, done that” attitude.

- **Rechargers** are seeking a contemplative and restorative experience. They see the museum as a refuge from normal life.

Providing quality service to zoo and conservatory visitors is important as satisfied visitors will become loyal visitors who are more likely to return to the destination. Even further, a satisfied visitor is likely to recommend the museum to others (Cole & Crompton, 2002). Consumers of leisure services have become more discerning and increased their expectations of their experience. This shift has made it even more important for service providers to assess the quality of the experiences they provide to their guests (Walker, Backman, Backman & Morais, 2001).

**Service Quality** (SQ) is defined by the expectancy-disconfirmation theory, which states that a visitor’s expectancy level creates a baseline from which judgments can be made about levels of performance. These judgments can either confirm or disconfirm the initial expectations of the visitor (Tomas, Crompton & Scott, 2003). The development of the SERVQUAL instrument in 1988 opened the door for researchers to examine the relationships between a customer’s perception of quality and their past,
present and future behavior (Walker, Backman, Backman & Morias, 2001). The instrument has been used in many service sectors (Nowacki, 2005; Nyeck, Morales, Ladhari, Pons, 2002), including tourism settings like hotels (Ekinci & Riley, 2001), banking (Brown et al. 1993), fast food restaurants (Lee and Ulgado 1997), and retail services (Gagliano and Hathcote 1994). The SERVQUAL model is considered the most comprehensive method to examine and quantify service quality (Nyeck, Morales, Ladhari & Pons, 2002).

Cultural cognition describes the tendency of individuals to form beliefs about societal dangers that reinforce their feelings about the ideal society (Kahan, et al., 2007). Culture cognition is formed prior to facts, meaning that citizen’s beliefs about the consequences of policy decisions are derived from their cultural worldview (Kahan & Braman, 2006). Individuals’ acceptance or rejection of claims about controversial policies is based on their vision of an ideal society (Kahan & Braman, 2006). This is a form of identity-protective cognition, which protects one’s own beliefs and sense of self. This allows individuals to believe that behavior one thinks is dignified also benefits society and that behavior one thinks is poor is also harmful to the society (Kahan, et al., 2007). The cultural cognition scale has primarily been used in a public policy realm to explore issues like gun control, the death penalty, and abortion (Kahan & Braman, 2006).

Cultural cognition is a concern of conservation-focused institutions like conservatories and zoos because of the importance of visitors embracing and acting on
the conservation missions these organizations put forth. Communicating conservation issues and potential behaviors to visitors is a delicate task. Organizations must consider the framing of the information as it is not sufficient to simply present empirically sound information to visitors (Kahan & Braman, 2006). Instead, the information should be framed in ways that make agreement with it compatible with rather than opposed to the cultural worldview of all visitors (Kahan & Braman, 2006).

The aim of this study was to examine the characteristics that distinguish visitors at one museum from visitors to another. The overarching question for this study was who are the visitors to conservation focused free choice learning institutions? Two sub-questions include

- What are the demographics and psychographics that truly distinguish visitors at one facility from visitors at another?

- Are the psychographic measures used in this study effective at creating visitor profiles for each organization?

METHOD

Study sites

This study was conducted at a zoo and a conservatory in the Midwestern United States. The two sites share strong conservation focuses and highlight the importance of conservation in their respective organizations’ mission statement. Because of their
conservation focus and strong visitorship these organizations provide suitable locations to explore the research question.

**Research Design**

A focal sampling method was utilized to intercept visitors as they entered the study area (Harris, 1995). The focal sampling method involves intercepting the first person to cross into the predetermined study area. Once the researcher has finished with this individual, the next person to enter the area is approached. Ultimately, 303 surveys were completed at the conservatory and 400 surveys were completed at the zoo. A booklet style instrument was developed containing the following scales:

**Psychographic Measures:**

The *motivation scale* (Falk, et. al, 2007) uses 20 statements representing four examples from each of the five identity related motivations common to zoo visitors (Falk, 2006). The identity related motivations include Experience Seeker, Professional-Hobbyist, Recharger, Facilitator and Explorer. Participants can be classified as expressing a single dominant motivation or non dominant motivation. A score of 14 or higher within one motivational category is considered expressing a single dominant motivation. If an individual doesn’t score above 14 in any of the motivational categories they were considered to
have expressed a non dominant motivation. The Experience Seeker has a negative Cronbach’s α value due to the negative average covariance among the items. This result was caused by two of the three The Experience Seeker subscale items which were absolute in terms of responses. For example: “I came a long time ago and want to revisit it” (ES 2) and “I came to this area as a tourist to visit the zoo/aquarium” (ES 5) likely produced opposite response patterns and lowered the reliability score (Heimlich, et al., 2005. Both items are highly predictive and work independently with the other items in the subscale.

<table>
<thead>
<tr>
<th>Factor</th>
<th>The Experience Seeker</th>
<th>The Professional/Hobbyist</th>
<th>The Recharger</th>
<th>The Facilitator</th>
<th>The Explorer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach’s α</td>
<td>-.030</td>
<td>.785</td>
<td>.795</td>
<td>.860</td>
<td>.745</td>
</tr>
</tbody>
</table>

Table 4: Reliability of Motivation subscales (Heimlich, et al., 2005).

The **SERVQUAL instrument** measures service quality expectations in five dimensions (Parasuraman, Zeithaml, & Berry, 1988). The dimensions include tangibles, reliability, responsiveness, assurance, and empathy (Walker, Backman, Backman, Morais, 2001). The five dimensions are broken down into 22 items. The SERVQUAL dimensions include:

- Tangibles: Physical facilities, equipment, and appearance of personnel
- Reliability: Ability to perform the promised service dependably and accurately
- Responsiveness: Willingness to help customers and provide prompt service
- Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence
- Empathy: Caring, individualized attention the firm provides its Customers

The SERVQUAL instrument can yield an overall score as high as 154 or as low as 22. The Tangibles, Responsiveness and Assurance dimensions can receive a high score of 28 (4 items each on a 7 point scale) and a low score of 4. Reliability and Empathy dimensions can receive a high score of 35 (5 items each on a 7 point scale) and a low score of 5. The higher the SERVQUAL score, the higher the level of expected service quality.
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Reliability Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibles</td>
<td>.72</td>
</tr>
<tr>
<td>Reliability</td>
<td>.83</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.82</td>
</tr>
<tr>
<td>Assurance</td>
<td>.81</td>
</tr>
<tr>
<td>Empathy</td>
<td>.86</td>
</tr>
</tbody>
</table>

Table 5: SERVQUAL Instrument Reliability (Parasuraman, Zeithaml & Berry, 1988).

- **Cultural cognition scale** contains 32 items (Kahan, et al., 2007) divided into two scales: Communitarianism-Individualism and Egalitarianism-Hierarchy Scale. The Communitarianism-Individualism scale measures concern for the individual opposed to the interests of the collective and how the responsibility for meeting individual’s needs should be divided between individuals and the community (Kahan, et al., 2007). The Egalitarianism-Hierarchy Scale measures attitudes about group stratification and deviating from dominant norms and roles (Kahan, et al., 2007).
Demographic Measures

- The five accepted gender identity categories: heterosexual, homosexual, bisexual, transgendered, and asexual (Mertens, Fraser & Heimlich, 2008) were listed in a checklist for participants to select the appropriate response.

- A list of the ten most commonly practiced religions in the United States (Adherents.com, 2007) was used to create a checklist. The religions were first separated into Christian and Non Christian. Under the Christian option two religions were listed: Catholic and Protestant. Under the Non Christian category the following options were listed: Islam, Nonreligious, Hinduism, Chinese traditional, Buddhism, Primal-indigenous, Unitarian and other.

- A checklist of six race categories was included using the commonly utilized categories from the US census. The categories include: White, Black or African-American, American Indian or Alaska Native, Asian, Native Hawaiian or other...
Pacific Islander, Other (U.S. Census Bureau, 2009). Participants were asked to choose the race with which they most closely identified.

- Other single item scales included membership status, frequency of visits, and zip code.

Data were analyzed using SPSS version 17.0 statistical software. Any generalizations must be approached with caution due to the small number of study sites and the fact that data were not collected at the same time of year. Measures of central tendency were used to analyze data from items that used a Likert-type scale. Frequencies were computed for data from items such as demographic and visit data. Independent samples T test were conducted to determine if there were significant differences in mean scores between institutions.

**FINDINGS**

Measures of *visitor motivation* could result in a single dominant motivation or a non-dominant motivation. Less than half (24%) of all participants indicated a dominant motivation. Of those who displayed a domination motivation (N=68) at the conservatory, Professional-Hobbyists (25.0%) and Rechargers (23.5%) were the most prevalent visitor motivations. Those who displayed a dominant motivation (N=90) at the zoo were largely distributed between the Explorer (42.2%) and Facilitator (33.3%) motivation categories. As shown in table 7, the frequencies of the different dominant
motivations varied between sites, with each developing a distinct profile. The number of participants that displayed a dominant motivation varied from 33.8% at the conservatory and 25.8% at the zoo. Generalizations must be approached with caution as there were only two sites and data were not collected at exactly the same time of the year at each site.

<table>
<thead>
<tr>
<th>Identity related motivations</th>
<th>Conservatory (n=68)</th>
<th>Zoo (n=90)</th>
<th>Total (n=158)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explorers</td>
<td>10 (15%)</td>
<td>38 (42%)</td>
<td>48 (57%)</td>
</tr>
<tr>
<td>Facilitators</td>
<td>12 (18%)</td>
<td>30 (33%)</td>
<td>42 (51%)</td>
</tr>
<tr>
<td>Professional-Hobbyists</td>
<td>17 (25%)</td>
<td>15 (17%)</td>
<td>32 (42%)</td>
</tr>
<tr>
<td>Experience Seekers</td>
<td>13 (19%)</td>
<td>4 (4%)</td>
<td>17 (24%)</td>
</tr>
<tr>
<td>Rechargers</td>
<td>16 (24%)</td>
<td>3 (3%)</td>
<td>19 (50%)</td>
</tr>
<tr>
<td>Non-dominant</td>
<td>199</td>
<td>296</td>
<td>495</td>
</tr>
</tbody>
</table>

Table 7: Identity related motivations

1 N= total number of participants that expressed a dominant motivation.
A Pearson’s Chi-Square test was conducted to ensure that the distribution into identity related motivation categories was not due to chance. The test revealed that the distribution was more than just a random distribution. The distribution of the motivations by institution were significant at $\chi^2(6, N = 653) = 39.67, p > .000$.

**Service quality expectations** were measured on five dimensions including tangibles, reliability, responsiveness, assurance, and empathy (Walker, Backman, Backman, Morais, 2001). A high score represents a high expectation of service quality on behalf of participants. Analysis included conducting descriptive statistics and an independent sample t-test between the differences in service quality scores between study sites.

Conservatory and zoo visitors scored reliability and assurance dimensions the highest on the service quality measure. This indicates that the visitors place high importance on having a service provided as promised as well as employees showing knowledge and courtesy. Zoo visitors rated all 5 service quality expectation dimensions higher than visitors at the conservatory.

Conservatory participants (N=256) had an overall SERVQUAL $\bar{x}$ of 97.8. Conservatory participants had an overall $\bar{x}$ in the Tangibles dimension of 22.1, an overall $\bar{x}$ in the reliability dimension of 28.6, an overall $\bar{x}$ in the responsiveness dimension of 11.1, an overall $\bar{x}$ in the assurance dimension of 25.0 and an overall $\bar{x}$ in the empathy dimension of 10.8. Zoo participants (N=364) had an overall SERVQUAL $\bar{x}$ of 104.1. Zoo participants had an overall $\bar{x}$ in the Tangibles dimension of 23.6, an
overall $\bar{x}$ in the reliability dimension of 30.7, an overall $\bar{x}$ in the responsiveness dimension of 12.2, an overall $\bar{x}$ in the assurance dimension of 25.8 and an overall $\bar{x}$ in the empathy dimension of 11.6.

<table>
<thead>
<tr>
<th></th>
<th>Cons</th>
<th>Zoo</th>
<th>$\bar{x}$</th>
<th>df</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibles$^2$</td>
<td></td>
<td></td>
<td>22.1</td>
<td>662</td>
<td>-4.8</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>23.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability$^3$</td>
<td></td>
<td></td>
<td>28.6</td>
<td>513</td>
<td>-5.5</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsiveness$^3$</td>
<td></td>
<td></td>
<td>11.1</td>
<td>617</td>
<td>-2.5</td>
<td>.011</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assurance$^3$</td>
<td></td>
<td></td>
<td>25.0</td>
<td>570</td>
<td>-2.8</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td></td>
<td></td>
<td>10.8</td>
<td>643</td>
<td>-1.7</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>11.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total$^3$</td>
<td></td>
<td></td>
<td>97.8</td>
<td>618</td>
<td>-6.0</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>104.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8: SERVQUAL comparison by institution

**Cultural cognition** describes individual’s tendency to form beliefs about societal dangers that reinforce their feelings about the ideal society (Kahan, et al., 2007). These beliefs are created prior to facts, and derived from their cultural worldview (Kahan & Braman, 2006).

$^2$ Statistically significant at $p < .05$
The **Communitarianism-Individualism** scale measures concern for the individual opposed to the interests of the collective and how the responsibility for meeting individual’s needs should be divided between individuals and the community (Kahan, et al., 2007). Participants at the conservatory tend to align more with the Communitarianism worldview. Individuals with the Communitarian worldview expect individuals to depend on each other and interact in a way that promotes solidarity (Rayner 1992:86 in Kahan, et al., 2007). Participants at the zoo tended to align with the Individualism worldview. Persons with an individualistic worldview feel individuals should fend for themselves and compete for resources. These differences are not considered significant.

<table>
<thead>
<tr>
<th></th>
<th>Conservatory(^3) (N= 237)</th>
<th>Zoo(^4) (N=304)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communitarianism</td>
<td>122 (41%)</td>
<td>139 (35%)</td>
</tr>
<tr>
<td>Individualism</td>
<td>115 (39%)</td>
<td>165 (41%)</td>
</tr>
</tbody>
</table>

Table 9: Communitarianism-Individualism scale

\(^3\) Combined N for Communitarianism-Individualism scale is N= 541. The cultural cognition scale was not fully complete in many cases. This could be due to its placement as one of the last scales on the questionnaire or the sensitive nature of the items in the scale.
The **Egalitarianism-Hierarchy** scale measures attitudes about group stratification and deviating from dominant norms and roles (Kahan, et al., 2007). Participants at the conservatory tend to align with the Egalitarian worldview. Individuals with the egalitarian worldview feel that characteristics like sex, age, and family connections should not prevent individuals from participating in any social role (Rayner 1992:86 in Kahan, et al., 2007). Participants at the zoo align with the Hierarchy worldview. Individuals with hierarchical worldviews believe resources and opportunities should be distributed based on social classifications like race, lineage, gender, and positions of power (Gross & Rayner 1985:6 in Kahan, et al., 2007). The differences in worldviews between institutions was significant at χ²(563) = -3.46, p > .001.

<table>
<thead>
<tr>
<th></th>
<th>Conservatory⁴ (N= 235)</th>
<th>Zoo⁵ (N= 330)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egalitarianism</td>
<td>134 (45%)</td>
<td>130 (32%)</td>
</tr>
<tr>
<td>Hierarchy</td>
<td>101 (34%)</td>
<td>200 (50%)</td>
</tr>
</tbody>
</table>

Table 10: Hierarchy-Egalitarianism scale

Combining the two scales, Hierarchy-Egalitarianism and Individualism-Communitarianism helps to characterize the ways of life and worldviews of participants.

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⁴ Combined N for Hierarchy-Egalitarianism scale is N= 565. The cultural cognition scale was not fully complete in many cases. This could be due to its placement as one of the last scales on the questionnaire or the sensitive nature of the items in the scale.
(Kahan, 2008). All worldviews were represented in participants at the conservatory and the zoo. Participants at the conservatory held predominantly Egalitarian-Communitarian worldviews (36%) while zoo participants held predominantly Hierarchical-Individualism worldviews (38%).

<table>
<thead>
<tr>
<th>Cultural Worldview Distribution</th>
<th>Conservatory</th>
<th>Zoo</th>
<th>Conservatory Worldview Rankings</th>
<th>Zoo Worldview Rankings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hierarchical-Individualism</td>
<td>61 (28%)</td>
<td>110 (38%)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Hierarchical-Communitarian</td>
<td>36 (17%)</td>
<td>64 (22%)</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Egalitarian-Individualism</td>
<td>43 (20%)</td>
<td>48 (16%)</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Egalitarian-Communitarian</td>
<td>78 (36%)</td>
<td>70 (24%)</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 11: Cultural Worldview distribution

Visitors to both institutions overwhelmingly identify as white. At the conservatory, the next most common racial identities include other (10%) and Asian (4%). The other most common racial identity among visitors to the zoo include other (4%) and African American (5%). While the study sites are both located in Central Ohio, their immediate surroundings around the sites are quite different. The conservatory is located near the urban center of Columbus and is surrounded by a large African
American population. The racial diversity of the community around the conservatory is not reflected in visitation.

![Figure 3: Racial Identity](image)

Religious identities were fairly similar between the two study sites. The most prevalent religious identity at the conservatory was Protestant (34.9%), while Catholic (16.3%), Nonreligious (15.6%), and Other (12.2%) were the next largest religious identities. At the zoo the most common religious identity was Protestant (33.2%), with Catholic (19.9%), Nonreligious (9.3%) and Other (10.6%) as the next largest religious identities. Both sites had a large number of participants who chose not to respond to the religious identity. This is likely because participants felt they didn’t want to share this personal information. The conservatory had 16.6% non response, while the zoo had 23.4% non response.
The most prevalent gender identity at each site was heterosexual with 78.6% at the conservatory and 76.6% at the zoo. The homosexual gender identity was chosen by 8.1% of survey participants conservatory compared to 2.3% at the zoo. While survey participants at the conservatory did not choose transsexual or intersex as a gender identity, both were represented at the zoo (transsexual, 0.4% and intersex, 0.5%). Both sites had a large number of participants who chose not to respond to the gender identity. This is likely because participants felt they didn’t want to share this personal information. The conservatory had 11.9% non response, while the zoo had 18.4% non response.
Female sex outnumbered male participants at both study sites. At the conservatory 56% females compared to 37% male participants. There was a slightly larger disparity at the zoo, where there were 69% women participants compared to 24% of male participants. Both sites had 7% of participants not respond to the sex identity question.
**Membership** status was similar between the conservatory and zoo. 34% of survey participants at the zoo were members compared to 39% of survey participants at the conservatory. There was a slightly larger difference in the number of nonmembers between the two sites. 50% of survey participants at the zoo were nonmembers while 58% of survey participants at the conservatory were nonmembers.

![Membership Status](image)

**Figure 7: Membership Status**

Most survey participants had **visited the site** within the last 12 months. At the conservatory 60% of participants visited in the last year, while at the zoo 70% had visited in the last year. Survey participants that had not visited in the last 12 months varied a bit more between the organizations, at 33% at the conservatory and 24% at the zoo. If survey participants answered had visited within the last year, they were asked about the frequency of their visits. Conservatory (33%) and zoo (38%) visitors both choose 4 or more visits with the most frequency.
Figure 8: Visitation Frequency

A visitor profile (table 12) was created using the results from each of the scales. As described in table 12 there were characteristics that distinguished visitors from each institution based on the scales used in this study. Motivation differed between institutions with conservatory visitors being Rechargers and Professional-Hobbyists while zoo visitors held Explorer and Facilitator motivations.
Table 12: Visitor Profile

<table>
<thead>
<tr>
<th>Visitor Profile</th>
<th>Conservatory</th>
<th>Zoo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
<td>Recharger</td>
<td>Explorer</td>
</tr>
<tr>
<td></td>
<td>Professional-Hobbyist</td>
<td>Facilitator</td>
</tr>
<tr>
<td><strong>Service Expectation</strong></td>
<td>Reliability</td>
<td>Reliability</td>
</tr>
<tr>
<td></td>
<td>Assurance</td>
<td>Assurance</td>
</tr>
<tr>
<td><strong>Cultural Worldview</strong></td>
<td>Egalitarian-Communitarian</td>
<td>Hierarchical-Individualism</td>
</tr>
<tr>
<td><strong>Racial identity</strong></td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td><strong>Religious identity</strong></td>
<td>Protestant</td>
<td>Protestant</td>
</tr>
<tr>
<td><strong>Sex identity</strong></td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td><strong>Gender identity</strong></td>
<td>Heterosexual</td>
<td>Heterosexual</td>
</tr>
<tr>
<td><strong>Membership status</strong></td>
<td>Nonmember</td>
<td>Nonmember</td>
</tr>
<tr>
<td><strong>Visitation frequency</strong></td>
<td>4 times/year</td>
<td>4 times/year</td>
</tr>
</tbody>
</table>
DISCUSSION AND CONCLUSION

The aim of this study was to explore the characteristics that distinguish visitors at one museum from visitors at another. In this study, distinguishing characteristics included motivation and cultural worldview. The psychographic measures used in this study were effective at creating a visitor profile for both study sites. The results are shown in table 12. As described in table 12 there were characteristics that distinguished visitors from each institution based on the scales used in this study. The patterns which emerged suggest that Conservatory visitors held Recharger and Professional-Hobbyist motivations while zoo visitors held Explorer and Facilitator motivations.

The findings of zoo visitor motivations echo the results of a visitor motivation study at four sites (Philadelphia Zoo, Salisbury Zoo, National Aquarium, New York Aquarium). At three locations, Explorer and Facilitator were the dominant identity related motivation. At the National Aquarium, the identity related motivations most frequently expressed were Explorer and Professional-Hobbyist (Heimlich, et al., 2005). These results could indicate that the majority of zoo visitors enact Explorer and Facilitator identity related motivations. The motivation scale has not been used at a conservatory prior to this study.

While many visitors come for multiple reasons, the majority of visitors expressed a dominant identity-related motivation. Less than half (24%) of all participants indicated a dominant motivation during their zoo or conservatory visit. Zoos and conservatories
need to offer many types of experiences in order to appeal to the all visitor motivations and interests. The sites can design experiences for each of the identity related motivations in order to meet their desired outcomes (Falk, et al., 2007).

The Facilitator is interested in attributes that facilitate interaction during their visit. Seating for large groups, changing tables in restrooms, high chairs at food service locations (Hood, 1993) are likely important elements to the Facilitator. Falk et al., (2007) points out that Facilitators are looking for a social experience focused on the satisfaction of someone else. They need to be offered opportunities for social interaction, like chances to talk with staff or locations where they can rest and process their visit.

The Explorer is curious and looking to discover more about the subject matter at the zoo. A satisfactory visit for an Explorer includes the chance to see animals and the quality of the interpretation (Falk, et al., 2007). To meet the needs of Explorer the zoo should attempt to pique their interests through the exhibits and interpretive signage that complement the wildlife. Explorers would be best served with new offerings like temporary exhibits or thorough programming including challenging experiences (Falk, et al., 2007). These avenues can provide more information to the explorer and allow them to better understand the animals on display.

Rechargers at the conservatory are seeking a refreshing experience where they can escape normal life. While it can be challenging to meet the needs of the social Facilitator and tranquil Recharger, zoos and conservatories can do so by creating quiet
areas for reflection and offering programming during times when crowds are smaller (Falk, et al., 2007). The conservatory should consider the atmosphere they create for the visitor. The design of the entrance way, the availability of comfortable seating with backs and adequate signage are all attributes that might seem unimportant to a museum administrator (Hood, 1993), but these qualities are likely important to the Recharger. Any features that help to put the Recharger at ease will allow them to more fully embrace their museum experience.

Professional-Hobbyist visitors at the conservatory are exploring their passion while visiting. The conservatory should consider featuring in depth information along with the basic interpretative information provided for all visitors. Special premium programming how-to workshops, themed events, and behind the scenes tours would likely interest the Professional-Hobbyist (Falk, et al., 2007).

While the most highly rated service quality dimensions were the same at both the zoo and conservatory (reliability and assurance), there are still differences in service quality expectations of the visitors at each location. Visitors to the conservatory scored each of the five service quality dimensions lower than zoo visitors. One potential explanation for the lower service quality scores is that the Recharger and Professional-Hobbyist visitors at the conservatory may just want to be left alone during their visit. These visitors are coming to escape and to explore a subject matter which they are knowledgeable about, which may lead them desire solitude to quietly discover the exhibits.
Zoo visitors scored the five service quality dimensions higher than conservatory visitors. This could suggest that the explorer and facilitators at the zoo expect more from zoo staff. These visitors may be new to the zoo and need assistance or would like to make sure the guests in their party have a good experience. They might expect more from zoo officials to ensure their visit is positive.

Tomas, Crompton, and Scott (2003) point out that zoo visitors are likely to use tangible elements like surroundings, equipment, and the appearance of personnel to evaluate service quality. This is because visitors are unlikely to be exposed to other service quality dimensions like responsiveness (the willingness of staff to help visitors), reliability (performance of promised service), assurance (caring attention by staff), and empathy (polite employees that instill trust and confidence) (Parasuraman, Zeithaml, & Berry, 1988). Tomas, Crompton and Scott (2003) recommend that managers focus on the enhancing the quality of the zoo’s tangible elements.

Conservatory participants held largely Egalitarian-Communitarian worldviews while zoo participants primarily held Hierarchical-Individualism worldviews. Individuals with more egalitarian and communitarian worldviews are more concerned about issues like global warming, nuclear power and pollution (Kahan & Braman, 2006). In general, egalitarian and communitarian worldviews indicate visitors are more sensitive to environmental risks (Kahan et. al., 2007).

Individuals with more Hierarchical and Individualistic worldviews are less concerned about environmental issues like global warming, nuclear power and pollution.
People with Hierarchical-Individualism worldviews are less receptive to claims of environmental risk (Kahan, et al., 2007). People with Hierarchical worldviews perceive assertions of environmental risk as threatening to the competence of public officials (Douglas & Wildavsky, 1982; Wildavsky & Dake, 1990). Individualists dismiss environmental risk claims because it jeopardizes their commitment to the autonomy of markets and private industry (Kahan, et al., 2007).

Understanding the cultural worldviews of visitors is important in order to understand how to better communicate the conservation messages of the conservatory and zoo. Visitors who feel their values are being denigrated are more likely to resist factual information (Kahan & Braman, 2006). In order to persuade members of the public with sound information, it is necessary to do more than simply present the information to them (Kahan & Braman, 2006). Affirming the identities and values of visitors should make them more receptive to information that might otherwise be disregarded (Kahan & Braman, 2006).

Limitations and Assumptions

The exploratory nature of the study provides information that cannot be generalized to the population but can be generalized to the theory. As a result, this study has the following limitations:

1. The study consisted of adult visitors and findings can’t be generalized to all visitors to the zoo or conservatory.
2. The results of this study can’t be extrapolated to other zoos or conservatories, though the findings have implications for all conservation focused organizations.

3. Participation in the study was voluntary and could have resulted in selection bias.

4. Presence of children or other family members could have influenced the speed with which participants completed the instrument.

5. The length of the instrument may have influenced the integrity of the responses.

**IMPLICATIONS**

**Research**

Additional studies of visitor psychographics, including moving beyond the measures used in this study would help to develop a clearer picture of visitors at conservation focused institutions. Further examination on how conservation messages are received by different visitors would be helpful in developing messaging and programming to be used by these organizations.

**Practice**

The two organizations studied during this project, a conservatory and zoo can use this additional knowledge about their visitors to tailor their conservation messages.
and program offerings. A deeper understanding of visitors is valuable as influencing visitor behavior through visitation is “the ultimate goal” (Povey & Spaulding, 2005). Conservation messaging and offerings could help in creating a public engaged in conservation action and behaviors.

Additionally, program planners should understand the differences in visitor profiles at the conservatory and zoo. The visitors at these two conservation focused organizations do have differences and shouldn’t be lumped together simply due to their similar visitation choices. Programming cannot be generically transferred from one type of organization to another because true and meaningful differences in visitors do exist. Simply, a successful educational program at the conservatory may not successful at another organization if it is replicated without regard to visitor characteristics.
ABSTRACT

This study reports on the use of cluster analysis to create statistically meaningful clusters of visitors to conservation mission-driven organizations. Visitors were clustered based on participant’s motivation for visiting, service quality expectations, cultural worldviews as well as several demographic measures. Data were gathered from visitors (n=700) onsite at a zoo and a conservatory in Midwestern United States. Cluster analysis can be useful for prediction (Lorr, 1983) as individuals within a group should have minimal statistical variance while the between group variance is maximized (Ketchen & Shook, 1996).
Results suggested that 4 clusters existed which were differentiated by motivation, religion, sexual identity and gender identity factors. The results provide valuable information for strategies to promote conservation to organization visitors.

**INTRODUCTION**

Organizations are guided by mission statements that are “the operational, ethical, and financial guiding lights of companies. They are not simply mottoes or slogans; they articulate the goals, dreams, behavior, culture, and strategies of companies” (Jones & Kahaner, 1996). The statement serves as the glue that connects the organization through shared values and behaviors (Campbell & Nash, 1992). Internally, the mission statement serves as the starting point for an organization’s planning (Stone, 1996). An organization with a mission statement develops a clear sense of purpose and direction which helps individuals within the organization to find their own roles in carrying out the mission (Bennis & Nanus, 1985).

While mission statements in the for profit sector are primarily used internally, nonprofit organizations share their mission statements widely with their audience and community. Not for profit organizations are in a unique position as their measure of success is not the bottom line, but their ability to carry out their mission. Stone points out that achieving the mission in the nonprofit arena is equivalent to making a profit in the private sector (Stone, 1996).
Conservation focused institutions like zoos and botanical gardens are guided by mission statements that help to shape their operation and goals for the future (Mazur & Clark, 2001). These statements also help to ensure that the ecological, conservation and education values are carried out (Mazur & Clark, 2001). Education, in particular conservation education, is a major focus in zoos and is featured in most zoo mission statements (Patrick, Matthews, Ayers, & Tunnifcliff, 2007). Educational activities revolve around the guidelines and values laid out in an organization’s mission statement (Patrick, Matthews, Ayers, & Tunnifcliff, 2007). Educating and inspiring visitors has become a goal for conservation focused organizations (Ballantyne et al., 2007). Through education and interpretive signage using conservation messaging organizations hope to further conservation efforts by shaping visitor knowledge, attitudes and behaviors (Smith, Broad & Weiler, 2008; Ham & Weiler, 2002; Hughes & Morrison-Saunders, 2005). Such conservation messaging may encourage visitors to care about natural resources, and participate in community actions like restoring and protecting local wildlife habitat (Rabb, 2004).

In fact, establishing a link between visits to conservation focused museums and behavior has become a greater priority (Smith, Broad & Weiler, 2008) as influencing behavior through visitation has been deemed “the ultimate goal” (Povey & Spaulding, 2005). Visitors are encouraged to take action on conservation issues through exhibits that point out simple actions like donations, consumer choices, and contacting legislators via support letters or phone calls (Swanagan, 2000). Visitors have indicated
increased interest in conservation issues after visiting these types of exhibits (Derwin & Piper, 1988; Ogden & Lindburg, 1991). Sharing conservation messages and behaviors with visitors appears to be the first step in creating an engaged and powerful public.

Visitors to conservation focused institutions generally have more knowledge about conservation issues than national survey respondents (Adelman, Falk and James 2000). These visitors view themselves as “choice-makers” and recognize their power and the importance of making choices, which could reduce problems like waste and water pollution (Adelman, Falk & James, 2000). Most visitors have positive values and attitudes about conservation which were reinforced during zoo visits (Falk, et al., 2007).

This study examines visitors at a conservatory and a zoo in the Midwestern United States. The psychographic characteristics examined during the study include participant motivation for visiting, service quality expectations, cultural worldviews as well as several demographic measures. Details about each psychographic measure are provided below.

**Motivation** is a complex sociological and psychological construct made up of multiple sources, including a visitor’s prior knowledge, prior experience with the setting, social relationships, social and cultural meaning s/he gives to the museum, and personal interests and sense of identity (Falk, 2006). Falk (2006) notes that previous research suggests that people have a limited number of reasons for choosing to visit a museum. The five categories of identity-related motivations (Falk, 2006) utilized in this study include:
• *Explorers* are curious and are looking to discover more about the subject matter at the institutions.

• *Facilitators* are socially motivated. They focus on enabling the experience of their accompanying social group, especially children.

• *Professional/Hobbyists* are closely attached to the institution’s content due to their professional or hobbyist passions.

• *Experience Seekers* derive satisfaction from visiting an important site. Their perception that the museum is noteworthy, gives them a “been there, done that” attitude.

• *Rechargers* are seeking a contemplative and restorative experience. They see the museum as a refuge from normal life.

Visitor’s motivations for museum visits seem to directly influence their learning while in the museum (Falk, 2006; Packer & Ballantyne, 2002; Harre & Moghaddam, 2003; Paris, 1997; Falk, Moussouri & Coulson, 1998). Visitors with education as a dominant motivation learned different things than those who held entertainment as a dominant motivation, still both individuals learned (Falk, 2006).

Providing quality service to zoo and conservatory visitors is important as satisfied visitors will become loyal visitors who will return to the destination time and time again. Even further, a satisfied visitor is likely to recommend the museum to others (Cole & Crompton, 2002). Consumers of leisure services have become more
discerning and increased their expectations of their experience. This shift has made it even more important for service providers to assess the quality of the experiences they provide to their guests (Walker, Backman, Backman & Morais, 2001).

**Service Quality** (SQ) is defined by the expectancy-disconfirmation theory, which states that a visitor’s expectancy level creates a baseline from which judgments can be made about levels of performance. These judgments can either confirm or disconfirm the initial expectations of the visitor (Tomas, Crompton & Scott, 2003). The development of the SERVQUAL instrument in 1988 opened the door for researchers to examine the relationships between a customer’s perception of quality and their past, present and future behavior (Walker, Backman, Backman & Morais, 2001). The instrument has been used in many service sectors (Nowacki, 2005; Nyeck, Morales, Ladhari, Pons, 2002), including tourism settings like hotels (Ekinci & Riley, 2001), banking (Brown et al. 1993), fast food restaurants (Lee and Ulgado 1997), retail services (Gagliano and Hathcote 1994). The SERVQUAL model is considered the most comprehensive method to examine and quantify service quality (Nyeck, Morales, Ladhari & Pons, 2002).

**Cultural cognition** describes the tendency of individuals to form beliefs about societal dangers that reinforce their feelings about the ideal society (Kahan, et al., 2007). Culture cognition is formed prior to facts, meaning that citizen’s beliefs about the consequences of policy decisions are derived from their cultural worldview (Kahan & Braman, 2006). Individuals’ acceptance or rejection of claims about controversial
policies is based on their vision of an ideal society (Kahan & Braman, 2006). This is a form of identity-protective cognition, which protects one’s own beliefs and sense of self. This allows individuals to believe that behavior one thinks is dignified also benefits society and that behavior one thinks is poor is also harmful to the society (Kahan, et al., 2007). The cultural cognition scale has primarily been used in a public policy realm to explore issues like gun control, the death penalty, and abortion (Kahan & Braman, 2006).

Cultural cognition is a concern of conservation focused institutions like conservatories and zoos because of the importance of visitors embracing and acting on the conservation missions these organizations put forth. Communicating conservation issues and potential behaviors to visitors is a delicate task. Organizations must consider the framing of the information as it is not sufficient to simply present empirically sound information to visitors (Kahan & Braman, 2006). Instead, the information should be framed in ways that make agreement with it compatible with rather than opposed to the cultural worldview of all visitors (Kahan & Braman, 2006).

The aim of this study was to examine the characteristics that distinguish visitors at one museum from visitors to another. Overarching question for this study was who are the visitors to conservation focused free choice learning institutions? Two sub-questions include:

- Can meaningful visitor clusters be created using cluster analysis?
- What are the characteristics that define the visitor clusters?
METHOD

Study sites

This study was conducted at a zoo and a conservatory in the Midwestern United States. The two sites share strong conservation themes and highlight the importance of conservation in their respective organizations’ mission statement. Because of their conservation focus and strong visitorship these organizations provide suitable locations to explore the research question.

Research Design

A focal sampling method was utilized to intercept visitors as they entered the study area (Harris, 1995). The focal sampling method involves intercepting the first person to cross into the predetermined study area. Once the researcher has finished with this individual, the next person to enter the area is approached. Ultimately, 303 surveys were completed at the conservatory and 400 surveys were completed at the zoo. A booklet style instrument was developed containing the following scales:

Psychographic Measures:

- The motivation scale (Falk, et. al, 2007) uses 20 statements representing four examples from each of the five identity related motivations common to zoo visitors (Falk, 2006). The identity related motivations include
Experience Seeker, Professional/Hobbyist, Recharger, Facilitator and Explorer.

<table>
<thead>
<tr>
<th>Factor</th>
<th>The Experience Seeker</th>
<th>The Professional/Hobbyist</th>
<th>The Recharger</th>
<th>The Facilitator</th>
<th>The Explorer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach’s α</td>
<td>-.030&lt;sup&gt;5&lt;/sup&gt;</td>
<td>.785</td>
<td>.795</td>
<td>.860</td>
<td>.745</td>
</tr>
</tbody>
</table>

Table 13: Reliability of Motivation subscales (Heimlich, et al., 2005).

- The **SERVQUAL instrument** measures service quality by calculating the difference between perceptions and expectations in five dimensions (Parasuraman, Zeithaml, & Berry, 1988). The dimensions include tangibles, reliability, responsiveness, assurance, and empathy (Walker, Backman, Backman, Morais, 2001). The five dimensions are broken down into 22 items. Each of those items is split into two more items, one of

<sup>5</sup> The Experience Seeker has a negative Cronbach’s α value due to the negative average covariance among the items. This result was caused by two of the three The Experience Seeker subscale items which were absolute in terms of responses. For example: “I came a long time ago and want to revisit it” (ES 2) and “I came to this area as a tourist to visit the zoo/aquarium” (ES 5) likely produced opposite response patterns and lowered the reliability score (Technical report).
which measures expectations and the other measures perceptions (Asubonteng, et al., 1996).

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Reliability Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibles</td>
<td>.72</td>
</tr>
<tr>
<td>Reliability</td>
<td>.83</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.82</td>
</tr>
<tr>
<td>Assurance</td>
<td>.81</td>
</tr>
<tr>
<td>Empathy</td>
<td>.86</td>
</tr>
<tr>
<td>Reliability of Linear Combination</td>
<td>.92</td>
</tr>
</tbody>
</table>

(Total-Scale Reliability)

Table 14: SERVQUAL Instrument Reliability (Parasuraman, Zeithaml & Berry, 1988).

- **Cultural cognition scale** contains 32 items (Kahan, et al., 2007) divided into two scales: Communitarianism-Individualism and Egalitarianism-Hierarchy Scale. The Communitarianism-Individualism scale measures concern for the individual opposed to the interests of the collective and how the responsibility for meeting individual’s needs should be divided.
between individuals and the community (Kahan, et al., 2007). The Egalitarianism-Hierarchy Scale measures attitudes about group stratification and deviating from dominant norms and roles (Kahan, et al., 2007).

<table>
<thead>
<tr>
<th>Scale</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communitarianism-Individualism</td>
<td>0.77</td>
</tr>
<tr>
<td>Egalitarianism- Hierarchy</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Table 15: Cultural Cognition Reliability (Kahan et al., 2007).

Demographic Measures

- The five accepted gender identity categories: heterosexual, homosexual, bisexual, transgendered, and asexual (Mertens, Fraser & Heimlich, 2008) were listed in a checklist for participants to select the appropriate response.
- A list of the ten most commonly practiced religions in the United States (Adherents.com, 2007) was used to create a checklist. The religions were first separated in to Christian and Non Christian. Under the Christian option two religions were listed: Catholic and Protestant. Under the Non Christian category the following options were listed: Islam, Nonreligious,
Hinduism, Chinese traditional, Buddhism, Primal-indigenous, Unitarian and other.

- A checklist of six race categories was included using the commonly utilized categories from the US census. The categories include: White, Black or African-American, American Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, Other (U.S. Census Bureau, 2009). Participants were asked to choose the race with which they most closely identified.

- Other single item scales included membership status, frequency of visits, and zip code.

DATA ANALYSIS

Cluster analysis refers to a wide array of statistical techniques used to group entities into homogeneous groups based on their similarities. The result of these analyses is called classes, types, groups, categories or clusters (Lorr, 1983). One main purpose for the use of cluster analysis is data reduction, which is useful for social and behavioral scientists. The taxonomies are produced with minimal loss of information and are often easier understood (Lorr, 1983). Cluster analysis is also helpful for prediction as it can be assumed that the individuals within a group will be similar with regard to predictor dimensions (Lorr, 1983). Cluster analysis is frequently used as a classification tool (Punj & Stewart, 1983).
Cluster analysis was the appropriate statistical technique for this study because the research sought to create groups of similar individuals that were different from the individuals in the other groups. Cluster analysis is designed to take a sample of elements (like organizations) and group them so the statistical variance among the elements grouped together is minimal while the between group variance is maximized (Ketchen & Shook, 1996). Further, the data set for this project was quiet large (N=703) making data interpretation difficult without first grouping similar individuals. Cluster analysis has often been used a general data reduction technique to develop aggregates of data which are more general and more easily managed than individual observations (Punj & Stewart, 1983). Prior to the introduction of cluster analysis, the search for configurations had been focused in the industrial/organization economics field, where groups were often defined by only one or two variables (Hunt, 1972; Porter, 1973; Ketchen & Shook, 1996). Such analyses were too coarse-grained to encapsulate the multidimensionality of the results (Hatten and Hatten, 1987). There are similar data analysis techniques including factor analysis and discriminant analysis. Factor analysis focuses on creating groups based on the similarity of variables, rather than the similarity of individuals within the groups (Lorr, 1983). Cluster analysis doesn’t require any prior assumptions about the differences within the population (Punj & Stewart, 1983). For these reasons, cluster analysis has become an alternative to factor analysis and discriminant analysis (Punj & Stewart, 1983).
There are three general approaches to cluster analysis when using SPSS to analyze data. They include:

- **Hierarchical clustering** has the researcher specify how similarity or distance is defined and how the clusters should be aggregated (divided). The number of clusters is based on how the clusters best suit the data. Hierarchical clustering is appropriate for smaller samples (typically < 250).

- **K-means clustering** allows the researcher to select the number of clusters which forces the algorithm to assign cases to the designated clusters. K-means clustering is preferred when data sets are large (> 1,000).

- **Two step clustering** generates pre-clusters, followed by clustering the pre-clusters using the hierarchical method. Two step clustering works well with large data sets and categorical data or continuous variables. (Garson, 2009).

The Two step clustering method was selected due to the large sample size (N=703). This analysis was more powerful based on the large sample size and allowed SPSS to determine the appropriate number of clusters based on the data.

The Bonferroni Technique (or Test of Inequality) is conducted by SPSS during cluster analysis. It is a method for testing the statistical significance of several comparisons. The Bonferroni technique helps to avoid the increased risk of Type I error which comes with making multiple comparisons (Vogt, 1999).
identifies the variables which determined the cluster arrangements. The findings are described in detail in the cluster descriptions.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Motivation</td>
<td>_</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Identity</td>
<td>.030</td>
<td>_</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Religion</td>
<td>-.036</td>
<td>.031</td>
<td>_</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Sex ID</td>
<td>.000</td>
<td>-.082*</td>
<td>.084</td>
<td>_</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Gender ID</td>
<td>.008</td>
<td>.119**</td>
<td>.074</td>
<td>-.045</td>
<td>_</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Service Quality</td>
<td>.063</td>
<td>-.031</td>
<td>-.063</td>
<td>.064</td>
<td>.087*</td>
<td>_</td>
<td></td>
</tr>
<tr>
<td>7 EgalHier</td>
<td>-.031</td>
<td>.010</td>
<td>-.037</td>
<td>.003</td>
<td>-.008</td>
<td>.326**</td>
<td>_</td>
</tr>
<tr>
<td>8 CommInd</td>
<td>-.077</td>
<td>.007</td>
<td>-.096*</td>
<td>-.068</td>
<td>-.021</td>
<td>.234**</td>
<td>.406**</td>
</tr>
</tbody>
</table>

Table 16: Correlation Matrix of Cluster Analysis Factors

6 * Correlation is significant at the 0.05 level (2-tailed).
7 ** Correlation is significant at the 0.01 level (2-tailed).
FINDINGS

A visitor profile (table 16) was created using the results from each of the scales. As shown in the table there were characteristics that distinguished visitors from each institution based on the scales used in this study. Motivation differed between institutions with conservatory visitors being Rechargers and Professional-Hobbyists while zoo visitors held Explorer and Facilitator motivations. Cultural worldviews also differed between institutions. Egalitarian-Communitarian was the predominant worldview at the conservatory while Hierarchical-Individualism was most common at the zoo. The results from remaining measures were similar between the conservatory and zoo.
<table>
<thead>
<tr>
<th>Visitor Profile</th>
<th>Conservatory</th>
<th>Zoo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
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<td>Facilitator</td>
</tr>
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<td>Reliability</td>
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<tr>
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<td>Assurance</td>
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</tr>
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<td>White</td>
</tr>
<tr>
<td><strong>Religious identity</strong></td>
<td>Protestant</td>
<td>Protestant</td>
</tr>
<tr>
<td><strong>Sex identity</strong></td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td><strong>Gender identity</strong></td>
<td>Heterosexual</td>
<td>Heterosexual</td>
</tr>
<tr>
<td><strong>Membership status</strong></td>
<td>Nonmember</td>
<td>Nonmember</td>
</tr>
<tr>
<td><strong>Visitation frequency</strong></td>
<td>4 times</td>
<td>4 times</td>
</tr>
</tbody>
</table>

Table 17: Visitor Profile
PROFILES OF CLUSTER GROUPS

The percentages expressed in the cluster descriptions describe the percentage of the total, not the percentage of a characteristic within the cluster. For example, in cluster 1, 79% of male participants are in cluster 1, it does not mean that 79% of cluster 1 is male.

Cluster 1

The first cluster contains 103 participants. According to the Bonferroni Adjustment, the three variables which define cluster 1 include sex identity, gender identity and motivation. These values were considered significant in determining the arrangement of this cluster. Religion and racial identity were not considered significant variables in cluster 1. Cluster 1 consisted of individuals with non-dominant motivations (34%), and most individuals who identified as white (26%). The majority of male participants (79%) were placed in cluster 1. Other racial identities were represented in smaller amounts, African American (22%), American Indian or Alaskan Native (50%) and Asian (50%). Cluster one also included 24% of participants who identified as heterosexual and 78% of the participants who identified as a homosexual. Participants who identified as non religious (36%) and all who identified as practicing Hinduism were placed in Cluster 1.
**Cluster 2**

Cluster 2 contains 74 participants. According to the Bonferroni Adjustment, motivation was the only significant variable which defined cluster 2. Gender identity, racial identity, religious identity and sex identity were not considered significant variables in cluster 2. Cluster 2 contains the majority of individuals that were identified as having a single dominant motivation. Explorer (96%), Facilitator (88%), Professional/hobbyist (73%), Experience Seeker (82%) and Rechargers (80%) were all well represented in cluster two. Individuals who identified as Catholics (24%), Protestant (19%), Nonreligious (20%) and other religions (24%) as well as whites (22%), Asians (17%), and African Americans (11%) were placed in Cluster 2. Males (21%), females (20%), heterosexuals (22%), and homosexuals (7%) are present in Cluster 2.

**Cluster 3**

Cluster 3 contains 115 participants. According to the Bonferroni Adjustment, religious identity, sex identity, motivation, and gender identity were all significant variables which defined cluster 3. Racial identity was not considered significant in cluster 3. Cluster 3 contains the majority (39%) of participants who were determined to held a non-dominant motivation. Cluster 3 contains 30% of white participants along with most Catholics (55%), nonreligious (44%), Buddhists (83%), Unitarians (75%) and the majority of participants who identified with other religions (56%). The majority of
female participants (48%) are in cluster 3, while no males were placed in this cluster. Most of the heterosexuals (32%) and bisexuals (89%) are in cluster 3.

Cluster 4
Cluster 4 contains 77 participants. According to the Bonferroni Adjustment, religious identity, sex identity, and motivation were considered significant variables which defined cluster 4. Gender identity and racial identity were not considered significant in cluster 4. Cluster 4 contains 27% of participants who were determined to hold a non-dominant motivation. African Americans (44%) and whites (22%) and Protestants (51%) were represented in Cluster 4. Females (32%), heterosexuals (22%), homosexuals (11%) and all intersex participants were placed in Cluster 4. No males were placed in Cluster 4.

DISCUSSION AND CONCLUSION
Educating and inspiring visitors has become a goal for conservation focused organizations (Ballantyne et al., 2007). Conservation organizations hope that education and signage with conservation messages will further shape visitor knowledge, knowledge, attitudes and behaviors (Smith, Broad & Weiler, 2008; Ham & Weiler, 2002; Hughes & Morrison-Saunders, 2005). These messages may also encourage visitors to participate in conservation action in their community (Rabb, 2004).
In order to communicate and educate visitors it is helpful to first have an understanding of the visitor at conservation focused organizations. In this study, cluster analysis was utilized to create a better understanding of these visitors. The findings revealed though this exploration can be helpful in developing programming and messaging to target the organization’s actual audience rather than the broader audience of potential visitors.

Four meaningful visitor clusters were created using cluster analysis to examine the characteristics that define visitors to conservation focused organizations. Results show that visitors at the two study sites were similar, but had significant differences in key dimensions such as motivation and cultural worldview. Clusters 1, 3 and 4 were characterized by participants with non dominant motivations. Cluster 2 includes the participants who identified a dominant visit motivation. Organizations can design experiences for each of the identity related motivations in order to meet their desired outcomes (Falk, et al., 2007).

- Seating for large groups, changing tables in restrooms, high chairs at food service locations (Hood, 1993) are likely important elements to the Facilitator. Falk et al., (2007) points out that Facilitators are looking for a social experience focused on the satisfaction of someone else. Facilitators need to be offered opportunities for social interaction, like chances to talk with staff or locations where they can rest and process their visit.
An Explorer wants an opportunity to view the collection (animals or plants) and to investigate the interpretative signage (Falk, et al., 2007). To meet the needs of Explorer the zoo should attempt to pique their interests through the exhibits and interpretive signage that complement the wildlife or plants. Explorers would be best served with new offerings like temporary exhibits or thorough programming including challenging experiences (Falk, et al., 2007).

Rechargers are seeking a refreshing experience where they can escape normal life. While it can be challenging to meet the needs of the social Facilitator and tranquil Recharger, zoos and conservatories can do so by creating quiet areas for reflection and offering programming during times when crowds are smaller (Falk, et al., 2007). The organizations should consider the atmosphere they create for the visitor as the design of the entrance way, the availability of comfortable seating with backs and adequate signage (Hood, 1993) are potentially important attributes to the Recharger.

Professional-Hobbyist visitors are exploring their passion while visiting. Interpretative signage that features in depth information along with the basic interpretative information would likely entice the Professional-Hobbyist visitor. Special premium programming how-to workshops,
themed events, and behind the scenes tours would probably interest the Professional-Hobbyist (Falk, et al., 2007).

While visitors come for multiple reasons, the majority of visitors (59.6%) expressed a dominant identity-related motivation. The remaining participants expressed one of the five major identity-related motivations. Zoos and conservatories need to offer many types of experiences in order to appeal to the all visitor motivations and interests.

Understanding the cultural worldviews of visitors is important in order to understand how to better communicate the conservation messages of the conservatory and zoo. In order to persuade members of the public with sound information, it is necessary to do more than simply present the information to them (Kahan & Braman, 2006). Organizations that attract visitors with largely Egalitarian-Communitarian worldviews should understand that these visitors are generally more concerned about issues like global warming, nuclear power and pollution (Kahan & Braman, 2006). The heightened sensitivity to environmental risks (Kahan et. al., 2007) should be recognized and utilized to encourage these visitors to turn their concern into action. Because individuals with Egalitarian-Communitarian worldviews are more concerned about environmental issues it may be easier to encourage them to act on their knowledge and innate concern. These visitors could be considered the early adopters of conservation action because of their higher levels of concern. Visitors with Egalitarian-
Communitarian worldviews could also represent a potential pool of members, volunteers and docents for conservation focused organization.

Organizations which attract visitors with mostly Hierarchical-Individualism worldviews ought to keep in mind that these visitors are generally less concerned about environmental issues like global warming, nuclear power and pollution (Kahan & Braman, 2006). Therefore, these visitors will be less receptive to claims of environmental risk (Kahan, et al., 2007). Claims of environmental risk are threatening to their values and worldviews (Douglas & Wildavsky, 1982; Wildavsky & Dake, 1990; Kahan, et al., 2007) so acknowledging the importance of their viewpoints is a vital step in communication of conservation information (Kahan & Braman, 2006). If visitors feel their values are being criticized they will likely resist factual information (Kahan & Braman, 2006). But if their values are recognized the visitor will be more receptive of information they may otherwise disregard (Kahan & Braman, 2006).

Service quality expectations were measured on five dimensions including tangibles, reliability, responsiveness, assurance, and empathy (Walker, Backman, Backman, Morais, 2001). Participants at the zoo rated all 5 dimensions higher than participants at the conservatory. Four out of five dimensions had significant differences in scores between the two organizations. Managers have choices to improve their service quality through exhibit design, creating a variety of programs and offering different levels of information which allows them to appeal to several audience segments (Kotler and Philip Kotler, 2000).
While it’s important for organizations to know their audience, it could be argued that it’s equally important for them to know who isn’t visiting. (Hood, 1993). Having knowledge about people who aren’t visiting the organizations can assist marketing officials in better targeting the non-visiting audience. Organization planners could work to make the non-visitors comfortable at their site, since many non-visitors resist visiting based on their comfort in the setting (Hood, 1993). Occasional visitors or non-visitors feel comfort level, active participant and ability to share their experience with others are important components of leisure activity (Hood, 1993). Highlighting these aspects of conservation focused organizations may help to make occasional visitors and non visitors more comfortable.

**Limitations and Assumptions**

The exploratory nature of the study provides information that cannot be generalized to the population but can be generalized to the theory. As a result, this study has the following limitations:

1. The study consisted of adult visitors and findings can’t be generalized to all visitors to the zoo or conservatory.

2. The results of this study can’t be extrapolated to other zoos or conservatories, though the findings have implications for all conservation focused organizations.
3. Participation in the study was voluntary and could have resulted in selection bias.

4. Presence of children or other family members could have influenced the speed with which participants completed the instrument.

5. The length of the instrument may have influenced the integrity of the responses.

IMPLICATIONS

Research

Future research could explore the effects of conservation messages and programming created to fit the values of the four clusters. Studies could be conducted to examine participant’s acceptance of messaging that has been tailored to their cluster. Exploration of the effects of “framing” conservations messages and programming around visitor values would be beneficial to the conservation education field. Additional studies could be conducted to examine participant’s processing of messages that are aligned with the different clusters to assess their acceptance of messages developed for their cluster in comparison with messages developed for another cluster.

Practice

Educators could utilize the clusters to create program tailored to the values expressed in each cluster. While the content would be similar, simple changes in
wording to acknowledge the differences in identifying factors could make conservation programming better received.
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Visitors are very important to the Columbus Zoo and Aquarium and we’d like to know more about you!

This study is about visitors to the Columbus Zoo and Aquarium and other conservation focused organizations in central Ohio.

To better understand the visitor we have to ask some questions that may seem odd to you, but they all have a purpose in creating a profile of who you are.

Thank you for agreeing to participate in this study.
Check the 5 that best reflect why you are here today. For those 5 statements only, indicate the importance of the reason. If a statement represents a very important reason you are here today, you would circle a 7. If a statement represents a less important reason you are here today, you would circle a 1.

<table>
<thead>
<tr>
<th>Check 5</th>
<th>Less Important</th>
<th>More Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ I like the types of things I can learn here</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I came a long time ago and want to revisit</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I actively support collection and preservation of wildlife</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ It is one of the best places to visit around here</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I support conservation</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ The many different species fill me with wonder</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ My wife/partner/husband made me come</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I discover things about myself when I come here</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I frequently visit zoos/aquariums when I go on trips</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I get more here than going to the mall or a movie</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ It was my choice for how to spend the day</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I support the mission to study, celebrate and protect animals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ My family/friends have good experiences here</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ This is a good way for my family/friends to share quality time</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I feel at peace in these surroundings</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ My family/friends enjoy themselves here</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ Coming here helps me appreciate nature</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I like to watch the animals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ I like to study animals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>☐ This is an important institution in this community</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Please indicate the extent to which you agree with the following statements. If you **strongly disagree**, circle the number 1. If you **strongly agree**, circle 4. If your feelings are not strong, circle one of the numbers in the middle.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government regulations are almost always a waste of everyone’s time and money.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The government interferes far too much in our everyday lives.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Free markets--not government programs--are the best way to supply people with the things they need.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Too many people today expect society to do things for them that they should be doing for themselves.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>It’s a mistake to ask society to help every person in need.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>The government should stop telling people how to live their lives.</td>
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<td></td>
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<td></td>
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<tr>
<td>Private profit is the main motive for hard work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It’s not the government’s business to try to protect people from themselves.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Society works best when it lets individuals take responsibility for their own lives without telling them what to do.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Our government tries to do too many things for too many people. We should just let people take care of themselves.</td>
<td></td>
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<tr>
<td>Sometimes government needs to make laws that keep people from hurting themselves.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Government should put limits on the choices individuals can make so they don't get in the way of what’s good for society</td>
<td></td>
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<tr>
<td>It’s society’s responsibility to make sure everyone’s basic needs are met.</td>
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<tr>
<td>If the government spent less time trying to fix everyone’s problems, we’d all be a lot better off.</td>
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</tr>
</tbody>
</table>
Please indicate the extent to which you agree with the following statements. If you strongly disagree, circle the number 1. If you strongly agree, circle 4. If your feelings are not strong, circle one of the numbers in the middle.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>It seems like the criminals and welfare cheats get all the breaks, while the average citizen picks up the tab.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>We have gone too far in pushing equal rights in this country.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Society as a whole has become too soft and feminine.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Nowadays it seems like there is just as much discrimination against whites as there is against blacks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>It seems like blacks, women, homosexuals and other groups don't want equal rights, they want special rights just for them.</td>
<td>1</td>
<td>2</td>
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<td>4</td>
</tr>
<tr>
<td>A lot of problems in our society today come from the decline in the traditional family, where the man works and the woman stays home.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>The women's rights movement has gone too far.</td>
<td>1</td>
<td>2</td>
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<td>4</td>
</tr>
<tr>
<td>Discrimination against minorities is still a very serious problem in our society.</td>
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<td>2</td>
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<td>4</td>
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<tr>
<td>It's old-fashioned and wrong to think that one culture's set of values is better than any other culture's way of seeing the world.</td>
<td>1</td>
<td>2</td>
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<td>4</td>
</tr>
</tbody>
</table>
A gay or lesbian couple should have just as much right to marry as any other couple.

We need to dramatically reduce inequalities between the rich and the poor, whites and people of color, and men and women.

Parents should encourage young boys to be more sensitive and less “rough and tough.”

Our society would be better off if the distribution of wealth was more equal.

We live in a sexist society that is fundamentally set up to discriminate against women.

People who are successful in business have a right to enjoy their wealth as they see fit.
Please show the extent to which you think organizations offering cultural arts services should possess the features described by each statement.

If you **strongly agree** that these organizations should possess a feature, circle the number 7. If you **strongly disagree** that these organizations should possess a feature, circle 1.

<table>
<thead>
<tr>
<th>Feature</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>They should have up-to-date equipment.</td>
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<td>Their physical facilities should be visually appealing.</td>
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<td>Their employees should be well dressed and appear neat.</td>
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<tr>
<td>The appearance of the physical facilities of these organizations should be in keeping with the type of services provided.</td>
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<td>When these organizations promise to do something by a certain time, they should do so.</td>
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<tr>
<td>When customers have problems, these organizations should be sympathetic and reassuring.</td>
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<td>These organizations should be dependable.</td>
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<tr>
<td>They should provide their services at the time they promise to do so.</td>
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</tbody>
</table>
They should keep their records accurately.

They shouldn’t be expected to tell customers exactly when services will be performed.

It is not realistic for customers to expect prompt service from employees of these organizations.

Their employees don’t always have to be willing to help customers.
<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>It is okay if they are too busy to respond to customer requests promptly.</td>
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<td>Customers should be able to trust employees of these organizations.</td>
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<td>Customers should be able to feel safe in their transactions with these organizations’ employees.</td>
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<td>Their employees should be polite.</td>
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<td>Their employees should get adequate support from these organizations to do their jobs well.</td>
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<td>These organizations should not be expected to give customers personal attention.</td>
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<tr>
<td>It is unrealistic to expect employees to know what the needs of their customers are.</td>
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<td>It is unrealistic to expect these organizations to have their customers' best interests at heart.</td>
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<td>They shouldn’t be expected to have operating hours convenient to all their customers.</td>
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All About You!

Finally, we need to ask you a few questions about your background. This information, as with all information in this survey, will be used for statistical analysis only and will remain strictly confidential.

Are you a member of the Columbus Zoo and Aquarium? [ ] Yes [ ] No

Before today have you visited the Columbus Zoo and Aquarium within the past 12 months?
  [ ] Yes
  [ ] No
  If yes, ___ time(s): [ ] 1 time, [ ] 2-3 times, [ ] 4 or more times

Zip Code____________________

Do you identify yourself as…?

Are you…?

Christian
  [ ] Catholic
  [ ] Protestant

Non Christian
  [ ] Islam
  [ ] Nonreligious
  [ ] Hinduism
  [ ] Chinese traditional
  [ ] Buddhism
  [ ] Primal-indigenous
  [ ] Unitarian
  [ ] Other: ______________________

Are you…?

Male
Female

Are you…?

Heterosexual
Homosexual
Bisexual
Transsexual
Intersex