ANIMAL ADOPTABILITY AND
VISUALIZATION

A Thesis
Presented
to the Faculty of
California State University, Chico

In Partial Fulfillment
of the Requirements for the Degree
Masters of Arts in Psychological Sciences
in
Psychology

by
Leah Tallchief
Spring 2014ANIMAL ADOPTABILITY AND
VISUALIZATION

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APPROVED BY THE DEAN OF GRADUATE STUDIES
AND VICE PROVOST OF RESEARCH:

E.K. Park

APPROVED BY THE GRADUATE ADVISORY COMMITTEE:

Dr. Linda Kline

Dr. Daniel Worthen
DEDICATION
This thesis is dedicated to my mother. Thank you for your support, encouragement, and patience while I wrote this thesis. To my father, his love and pride were core in my continued

drive to pursue my masters and finish this thesis. They have inspired me all my life to continue my education and look to find things that I am passionate about. Without them, this paper would never be the same.

ACKNOWLEDGEMENTS

Throughout my graduate career, I was heavily supported by many of the staff members of the psychology department; first and foremost being Dr. Brian Oppy. Dr. Oppy originally wrote my letter of recommendation for the program while I received my undergraduate degrees and his teaching led to me wanting to pursue higher education in the field of psychology.

My parents who significantly inspire my love of animals and education through this thesis I was able to explore both.

Brennan Austin for assisting me with creation of the original paper copies of the survey and the image selection.

Butte Humane Society for allowing me to use their images as a part of this thesis. Thanks in particular to photographer Lesli Kostik who takes all the canine adoption photos for the Human Society here in Chico, CA.

Finally, California State University, Chico, my broad experience as an undergraduate afforded me an opportunity to explore many paths and interests, which led me to find a thesis topic I could invest myself fully into.

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ABSTRACT

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California State University, Chico
Spring 2014

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CHAPTER I

INTRODUCTION

In America today, there are millions of homeless animals taken in by shelters across the country. Many of these animals are euthanized or become old and die before they can even be adopted. Currently, approximately 10,000 animals lives are lost in United States animal shelters (PR, 2013).

Shelters struggle with low budgets and overpopulation. Currently, animal shelters across the country experience overcrowding. This leads to high cost for animal upkeep including the food and supplies needed to house them, as well as space issues and lack of volunteers. The in-shelter environment can also have serious mental effects upon the animals. Gourkow, LaVoy, Dean, and Phillips (2014) found that after a week in an animal shelter, cats began to exhibit negative behaviors such as destructive behavior, retreating, and hiding.

One of the largest contributing factors to this issue is the number of homeless animals in the United States, which is leading to overcrowding in shelters and putting a cost burden upon those shelters. This leads to a lower quality of life for those shelter animals and more of a burden upon the local communities and shelters.

With low budgets and high costs, animal shelters need cheap and effective ways to increase adoptability. Modern technology has allowed them to utilize the internet to advertise animals visually using photography and videos. It would be the most cost effective if they could use these tools to help promote animals in order to increase their adoption rates.

Most animal shelters use images of the animals on their websites to help potential owners pick out a new animal before they even arrive at the site. These first impressions people have are a major contributor of whether or not they will even visit the shelter.

The question that this study wants to test is whether or not minor changes to those images can increase animals' adoptability. The study will do this by using three different shelters' photos from across the country and seeing if alterations in color or style of photo impact potential owners view of that animals adoptability.

The purpose of this study is to see if something as simple as color scale in images can effect animal adoptability. This is significant because it would be a simple and cost effective way for animal shelters to increase animal adoptability and decrease the number of homeless animals. The less money humane societies have to put into taking care of the animals they have the more money they can put into other programs such as spaying and neutering to prevent the cycle of homeless animals and into higher quality care for the animals that remain.

In order to see if the imagery could help them accomplish these goals, I began the concept of this study, which is modern and revolutionary in its own right. Even though the topics of animal adoptability and visualization have separately grown in popularity over the last decade they have not been explored in conjunction with one another. This study hopes to extend the present knowledge of both topics and examine them both in a new perspective.

In some sense, this study is an expansion of the work of a photographer named Emily Tanen. She was employed by Animal Care & Control of NYC until she was let go in late 2011 for

taking unauthorized photos of the animals. Tanen theorized that animals would be more likely to be adopted if they were photographed in different settings than the traditional intake photo. Although, she was terminated before her theory could show any results; I wanted to expand upon it and see if even just changing the color of the imagery would impact people's willingness to adopt.

Due to the fact that this is a relatively new topic, the study did run into several limitations. Since this has not been a topic of research before there were not many studies that it could be compared with. It also meant starting many of the materials from scratch. This mainly included a digital picture booklet with various images of canines.

In order to try and keep the booklets consistent and accurate to the real world, I took images from three humane societies located across the country. I used a variety of different species and age groups for the dogs. All of the sample photos were pulled from June 2013.

The photos were then all edited in Adobe Photoshop to keep them consistent in size to avoid extraneous variables. All of the photographs were also converted to a grayscale. With these adjustments, the survey's were made as consistent as possible and the images were all given in the same order. The major differing factor then became if the packet contained all color, all black and white, or the different variations of mixing the packets.

One other possible limitation was the participant pool, many college students are already unwilling or unfocused on potential pet adoption. However, with the varying grade class and age range of participants, this issue may have been adjusted for.

In the future, I would like to replicate this study further into a general population of people who are specifically looking to adopt, but I do hypothesis the imagery should have an impact even on those individuals not currently considering pet adoption.

CHAPTER II

LITERATURE REVIEW

Introduction

Although imagery and canine or animal adoptability are studied frequently, the topics are not often studied together. This literature review will examine factors that effect an animal's adoptability. It will also go into depth on how imagery can influence people and their choices, decision making, or emotions.

This investigation will differ from other studies in this field by looking at an area that has not been fully explored. Many perspectives have examined in terms of what makes an animal adoptable. Visualization has also been explored in depth in terms of it's effects on humans in a

variety of different perspectives.

Effecting an animal's adoptability

Researchers have looked in depth at different factors that influence animal adoption. One question explored by Frank and Carlisle-Frank (2003) was how animal welfare groups influence people in the general population to adopt an animal.

During a protest in 2012, euthanasia technicians in 2012 took a day off to post photos of shelter animals that were scheduled to be euthanised. The number of adoptions increased and around 9,000 animals were saved by one day of photo advertising (PR, 2013).

When examine the failure of an adoption, Shore (2005) found that most pet owners when they returned their pet had several common themes. The most common that she noted was that owners needed more time and thought when it came to picking a pet. A few noted that they solely picked the animal based on what it looked like and did not give enough thought to their behavior or how the animal would fit into their lifestyle.

In a study conducted by Wright, Smith, Daniel, and Adkins (2007), the researchers used videotapes of dogs displaying both aggressive and nonaggressive behavior and had participants rate the animal on their adoptability. They found that viewing the dog as approachable, friendly, intelligent, dangerous, or aggressive all had a significant impact on whether or not the dog was perceived as adoptable.

The researchers also used breed as an impacting factor and used five different breeds to complete the study: German Shepherd, Pointer, Collie, Bloodhound, and a schema German Shepherd. For most of the breeds, the impact of aggressive versus friendly did not actually impact the adoptability of the animal except in the case of the German Shepherd and the schema German Shepherd. The researchers interpreted this as participants being more effected when being given prior negative information of a breed. They also discussed that when a breed has been previously stereotyped as an aggressive breed they are less likely to be deemed as adoptable even when they are perceived in the videos to be friendly.

Imagery and emotion

The idea of imagery and emotion being linked has been studied a little more in depth. Brown and Richardson (2012) examined the effects of distressing imagery and its effects on the persuasiveness of a message. They used distressing images that were either high-resolution color or in two-color images with less outline and detail. They used students who regularly engaged in alcohol use and presented them with anti alcohol messages. Their gazes were tracked as they looked at different images and they found that more gaze time was spent on the

high-resolution images. The ones who viewed the high-resolution color images also reported a lower level of drinking during the course of a three month period following the study.

CHAPTER III

METHODOLOGY

Design

This study is designed to investigate the impact of imagery on animal adoption. In order to accomplish this, I created four surveys: one set of completely color photographs (Survey A); one set of completely black and white photographs (Survey B); a set mixing black and white and color, starting with a black and white photo (Survey C); and a set mixing black and white and color, starting with a color photo (Survey D). After completing part one of the survey, participants also completed a standardized version of the Big Five Inventory (BFI) created by the Berkeley Personality Lab.

Participants

The population utilized for the study was undergraduate students at California State University, Chico. Advertisements for the study were posted on the psychology research board. Students were offered extra credit for use in their undergraduate course work. The study was offered over a course of three days during varying times in the morning and afternoon. During this time, 109 students participated. There were 89 female participants and 20 males. The average age of the participants was 22 years old. The participants included four freshmen, 13 sophomores, 44 juniors, 45 seniors, and 5 that reported their grade level as other.

The tests themselves had varying levels of participation. For survey A, there were 36 participants; survey B included 15 participants; survey C included 13; and survey D had 47. There were no uncompleted surveys.

Materials

Due to the fact this was an introductory study, some of the materials needed to be created. The survey booklets were all created and standardized specifically for this research. The four imagery surveys were created in Google Docs, then converted into Blogger posts. The photos used included images by Emily Tanen as well as photos from three different humane societies websites. Those three humane societies were Butte Humane Society in Chico, CA; Animal Care & Control of NYC; and the Humane Society of Boulder Valley in Colorado. I selected these three specifically to have a coast to coast span of humane society images.

These images were then all standardize to the same size dimensions and pixelation. The images were all initially in color, but for the three surveys that used black and white images

they were all adjusted to the same gray scale standards. The goal was to create the most standardized series of photos.

The photographs used were all of dogs. There were images of various breeds and age ranges from puppies to older dogs. The dogs used were all of dogs available at the three humane societies during the time of collection. The images were collected in July 2013.

After being converted, these images were placed into a randomized order. Four booklets were then created: one set of completely color photographs (Survey A); one set of completely black and white photographs (Survey B); a set mixing black and white and color, starting with a black and white photo (Survey C); and a set mixing black and white and color, starting with color (Survey D). Each survey presented 23 images in the exact same order.

These booklets were created using a Google Document. They were then uploaded to a blogger website along with the Big Five Inventory created by the Berkeley Personality Lab. Other factors that were taken into account were gender, age, major, and their year in school.

[Blackandwhitelab1.jpg][image1]

Figure 1. Dog available for adoption at Butte Humane Society in original color. Photo credit: Lesli Kostiz.

[Blackandwhitelab.jpg][image2]

Figure 2. Dog available for adoption at Butte Humane Society after adjusting the image to grayscale. Photo credit: Lesli Kostiz.

At the end of each images series, the participants also completed the Big Five Inventory created by the Berkeley Personality Lab. The Big Five Inventory measures Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness using 44 questions. Introduced in 1999, the BFI has a high test-retest reliability even on its smaller five and ten-point scales. It also correlates highly with the Ten-Item Personality Inventory, the Five-Item Personality Inventory, and the 240-item inventory of NEO Personality Inventory.

Procedure

In order to take the survey, students came to the Modoc computer lab. Upon entering the lab, participants drew a random letter out of a bowl (A, B, C, or D) this letter designated which survey they were to take. They then logged onto a computer and began with the survey their letter corresponded with on the Blogger website.

When students took the survey, their answers were uploaded to a Google Spreadsheet. There were four different sheets simultaneously collecting the data. After completing the survey all the participants received a digital copy of the description of the study.

CHAPTER IV

FINDINGS AND RESULTS

Analysis Procedures

After the data was collected into the four sheets, it was moved into SPSS. The Big Five Inventory data was run first. The Big Five Inventory measures Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness. Some items were reversed scored so a syntax had to be created. Z-scores were obtained by running descriptive statistics on the data. These were then used to measure the students personality assessment scores.

After the Big Five Inventory, the data was run for the image ratings. The images were scored by the students on a Likert scale with 5 being the most adoptable and 1 being the least adoptable. These scores were then broken down by the mean for each survey as a whole. The mean scores for image ratings between the four surveys was analyzed using an ANOVA in SPSS.

The images were then compared with the different variables of age, gender, and grade level in ANOVA. Post-hoc, Wilks' Lambda was also performed.

This data was then compared with students who scored at outlying ranges on any of the five measures of Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness and their mean scores for adoptability.

Consistently Adoptable Animals

A one-way within subjects (or repeated measures) ANOVA was conducted to compare the effect of the four surveys on the image ratings in grayscale and full color conditions.

Across all four surveys, twelve images were consistently rated as adoptable regardless of color or grayscale: image 1, a traditional full body intake photo from Animal Care & Control of NYC (M = 4.05, SD =.98), F (3, 107) = 5.20, p = .002; image 2, an outdoor full body shot by Humane Society of Boulder Valley in Colorado (M = 3.41, SD = 1.32), F (3, 107) = 3.11, p = .029; image 8, a face shot of an dog behind a cage (M = 4.40, SD = .93), F (3, 107) = 3.57, p = .017; image 10, a face shot from Butte Humane Society (M = 3.08, SD = 1.55), F (3, 107) = .72, p = .002; image 12, a face shot from Butte Humane Society (M = 3.48, SD = 1.37), F (3, 107) = 4.32, p = .006; image 15, an Emily Tanen photo (M = 3.77, SD = 1.33), F (3, 107) = 3.18, p = .027; image 16, an outdoor full body shot by Humane Society of Boulder Valley in Colorado (M = 3.77, SD = 1.23), F (3, 107) = 3.52, p = .018; image 18, a face shot by Humane Society of Boulder Valley in Colorado (M = 3.24, SD = 1.45), F (3, 107) = 2.72, p = .048; image 20, a face shot by Humane Society of Boulder Valley in Colorado (M = 3.79, SD = 1.27), F (3, 107) = 4.62, p = .004; image 21, an outdoor full body shot by Humane Society of Boulder Valley in Colorado (M = 3.54, SD = 1.31), F (3, 107) = 4.25, p = .007; image 22, an

Emily Tanen photo (M = 3.89, SD = 1.19), F (3, 107) = 3.42, p = .020; image 23, an Emily Tanen photo (M = 3.45, SD = 1.35), F (3, 107) = 5.48, p = .002. Every Emily Tanen photograph used was significant across all four surveys. Other than the three images by Emily Tanen, the other 9 photographs differed in age, breed, and location; but were seen as significant across the four surveys regardless of being in color or in grayscale.

Non-Significant Findings

No significant effects were found between the rating of the animals adoptability and the participants' grade level, age, or gender.

In post hoc tests, no significant results were found in any of the combinations of grade level, age, or gender.

After running the reverse scoring and the analysis of the Big Five Inventory, it was found that not enough students had outlying personality characteristics to run any significant data against the adoptability ratings.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This concluding section should summarize the entire research effort. A sufficiently comprehensive overview should enable the intended audience to understand the entire study. At this point, it is appropriate to reacquaint the reader with the conceptual framework, the design of the investigation, the methodology, and the results of the study. This section should include the significance of the study and its conclusions, the limitations and weaknesses of the study, implications for future research, and recommendations.

The four surveys created for this study

Participant pool may have been a large limitation of the study, many college students are already unwilling or unfocused on potential pet adoption.

In the future, this study may have stronger results if replicated with a general population of people who are specifically looking to adopt. It also may be beneficial to lessen the number of variables. Perhaps even completely removing the grayscale factor and only examining the types of imagery used such as close up or far away. On the other hand, it may be more effective to keep all the images close up and similar in order to get a clearer idea of whether or not the grayscale has an impact.

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