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The Influence Of Priming On College Students' Financial Valuation Of Art

Lenetta Choate

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THE INFLUENCE OF PRIMING ON COLLEGE STUDENTS'
FINANCIAL VALUATION OF ART

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Lenetta Kay Choate
November 25, 2014

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ABSTRACT

The purpose of this study was to determine the effect of priming on college students' financial valuation of six artworks (i.e., three landscapes and three abstracts). This research study examined the independent variables of priming, gender, number of art courses completed, college class status, and college major on the dependent variable of college students' financial valuation of art. The sample for this study included 422 undergraduate students from a Midwestern university. Three research questions were examined. First, a t-test with an alpha of .05 was used to examine the difference in college students' financial valuation of art between college students who received priming and college students who did not receive priming. Priming was found to be a significant influence in that higher financial values were placed on all of the landscapes used in the study but only one of the abstracts. Second, a stepwise multiple linear regression was used to determine whether any of the other independent variables, besides priming, had a significant effect on the financial valuation of art. Gender and the number of art courses completed were significant effects for valuation of the landscapes. Third, the effect of the type of art was examined with a Pearson correlation coefficient to answer whether any of the artworks had a significant correlation. The highest positive correlation was within the landscapes and the most negative correlation was between the landscape and the abstract artworks. Priming may influence financial valuations about art when combined with types of art that are generally preferred, such as landscapes.

Priming may have little effect on types of art that are not generally preferred, such as abstracts. Further, this study has implications for art dealers, art faculty, and art students and deeper structural issues regarding ethical concerns and preference for art. The findings of this study could possibly be used for art dealers to extend current sales of landscapes and for art faculty and students to spend more time in the classroom on abstract art.

CHAPTER I

INTRODUCTION

Overview

What matters in one's evaluation of art? Art educators accept, as research suggests, that formal art training, such as college courses in the fine arts increases a student's overall appreciation of art (Hekkert & Van Wieringen, 1996; Shaw, 1980). Art educators continuously assert that education serves as one of the most crucial developmental tools for college students to gain appreciation for art. Evaluation of art is enhanced through art courses by engaging individuals in the interpretation of what they observe and the exploration of why they make certain decisions about a particular artwork. Art courses expand individuals' minds and are a major reason why individuals who have an art background tend to rely on formal art characteristics for evaluating art (Hekkert & Van Wieringen, 1996). Thus, education contributes to decision-making in evaluation of art.

At the same time, studies and commentaries have repeatedly indicated that aesthetics and evaluation of art are subjective processes (e.g., Leder, 2001; Russell, 2003). Evidence suggests that subtle, indirect messaging through priming influences aesthetic responses to visual material that is not considered art (e.g., Sleeth-Keppler & Wheeler, 2011). Therefore, the ability of priming to influence evaluation of art may overcome influences in areas such as demographics and education.

If these statements hold true, the question is: Can an external influence in the form of some subtle, indirect messaging influence an individual's evaluation of art? Like previous studies on visual material, this study pushes the academic dialogue on indirect influences regarding aesthetics and evaluation, but it examines the indirect influences on art by introducing an unstudied, subtle, indirect influence known as priming. Priming relies on an environmental cue to influence an individual's decisions without his or her knowledge (Bargh, 2006). Priming has been examined and found to be a significant influence on the evaluation of subject matter outside of art (e.g., Sleeth-Keppler & Wheeler, 2011). However, to this researcher's knowledge, studies have not explored the effect of priming on evaluation of art, although the subtle cues indeed might affect one's judgment or decision, even when one has an education in art—a factor that has typically predicted one's evaluation of art (White, 2005). Because the effect of priming on the evaluation of art is unknown, this study examined whether priming, through a subtle, indirect message of high financial value, may be more of an influence in college students' decision-making on the evaluation of art for financial value than the knowledge they acquired through education.

Statement of the Problem

The ways in which subjects evaluate art, including art appreciation, social and cultural value, and financial value, have been examined in a number of studies (e.g., Augustin & Leder 2006; Borghese, 2013; Cupchik & Gebotys, 1988; Fritzke, 2008; Furnham & Walker, 2001a; Lyengar, 2008, 2012; Millis, 2001; Winston & Cupchik, 1992). These studies have found that individual characteristics and experiences of

individuals make a difference in how they evaluate art in terms of art appreciation, social and cultural value, and financial value. These individual characteristics and experiences have included the subject's gender, level of formal education or training (e.g., art-trained—exposure to college art courses—or non-art-trained—no exposure to college art courses), or the type of information subjects received about the art before they evaluated the art (e.g., Furnham & Walker, 2001a; Winston & Cupchik, 1992; Millis, 2001). Art appreciation can be defined as an individual's judgment, personal preference or opinion of what constitutes beauty, and assessment of an artwork (e.g., Pelowski & Akiba, 2011; Hekkert & Van Wieringen, 1996). For example, in studies on the evaluation of art in terms of art appreciation, Cupchik and Gebotys (1988), Bernard (1972), and Furnham and Walker (2001a) found gender can make a difference in the distinct styles or types of art that subjects appreciated when evaluating art. Further, in terms of art appreciation, formal education in art provided subjects with a more sophisticated approach in evaluation of art than was exhibited by subjects who did not have formal training in art (Neperud, 1986; Winston & Cupchik, 1992). Similarly, studies on the evaluation of art in terms of its social and cultural value reported that similar individual characteristics and experiences, such as the subject's demographics, participation in art activities, and level of formal educational training, can influence the evaluation the subject places on art (see, e.g., Lyengar, 2008, 2012). Likewise, information reported on the evaluation of art in terms of financial value conveys that individual characteristics and experiences influence the financial value subjects place on art and are willing to pay for artworks (Borghese, 2013; Fritzke, 2008). Therefore, the literature indicated that individual characteristics and experiences are influences that contribute to how subjects evaluate art.

These studies on evaluation of art have all explored direct and indirect influences on a subject's evaluation of art. Direct influences are identified with the subjects and tend to occur in terms of level of formal educational training, and other characteristics of the subject such as demographics (e.g., Furnham & Walker, 2001a; Lyengar, 2008, 2012). An indirect influence is associated with a subject's current experience, for example, the type of information a subject received about an artwork right before he or she evaluated it (e.g., Millis, 2001). A subtle, indirect influence is a current experience that is so slight, the subject is unaware of it (e.g., Bargh, 2006).

Based on this researcher's review of the literature, no studies have examined how college students' financial evaluation of art changes when the subjects are presented with subtle, indirect influences in the form of priming. Graham, Friedenber, McCandless and Rockmore (2010) conducted one of the few recent studies of financial value of art using an indirect influence. Graham et al. (2010) used an indirect influence by providing non-art-trained subjects with a financial value (i.e., selling price of artworks at an auction) and not a subtle, indirect influence (i.e., priming). The researchers asked subjects to rate their most preferred and least preferred artwork. Graham et al. (2010) found that an indirect influence of providing financial value to subjects did not influence subjects' evaluation of art because most subjects expressed a preference for the same type or style of artwork regardless of what the artwork sold for at auction. The researchers left a gap in the literature, however, because they did not examine evaluation of art through financial value by using a subtle, indirect influence.

Examining subtle, indirect influences in the form of priming on college students' financial evaluation of art is important because knowing this effect may induce faculty to teach students how priming can affect evaluation of art without their awareness. If evaluation of art can be easily influenced by priming, more information regarding these influences could be given to students. For instance, an art instructor may want to inform students about the ways subtle, indirect influences may alter an individual's evaluation of art regardless of one's education in art. Although research has suggested that direct and indirect stimuli can influence subjects' evaluation of art, the question of whether a subtle, indirect influence in the form of priming could make a difference in college students' evaluation of art seems to be unanswered.

Indeed, subtle, indirect influences on the evaluation of art have been overlooked in prior studies, in particular as regards the influence of priming on college students' financial valuation of art.

Statement of the Purpose

As presented in the Problem Statement, research on evaluation of art focuses primarily on direct and indirect influences; less is known about subtle, indirect influences on evaluation of art. Research on priming in areas not connected to art evaluation has revealed that subjects can be subtly, indirectly influenced by stimuli without their awareness (Bargh, 2006). Priming has been shown to be a subtle, indirect influence in financial evaluation studies relating to real estate, furniture, and automobiles (e.g., Sleeth-Keppler and Wheeler, 2011; Mandel and Johnson, 2002). It would be reasonable to assume priming might also influence subjects' financial evaluation of art.

Therefore, it is relevant to determine if priming also influences financial evaluation in the context of college students' evaluations of art.

College students have been the subjects of various research studies to determine influences that affect their individual judgments, decision-making, or preferences for specific artworks or types of art in their evaluation of art (e.g., Augustin & Leder, 2006; Millis, 2001; Russell, 2003; Winston & Cupchik, 1992). Virtually all of these studies have determined that one or more direct or indirect influences affected choices in evaluation of art regarding specific artworks or types of art. Subtle, indirect influences have been shown to affect college students' choices in financial evaluations, though not specifically involving art (e.g., Mandel & Johnson, 2002). Priming research exists in evaluations outside the study of art. Because of a lack of priming research in the evaluation of art, a new area has opened for examination about how priming might affect college students' financial evaluations of art.

Thus, the purpose of this study is to determine the effect of priming on college students' financial valuation of art.

Research Questions

The main research question is: Is there a statistically significant difference in college students' financial valuation of art between college students who received priming and college students who did not receive priming? Second, the study asks, do the other independent variables have any significant effect or not? Third, does the type of art have an effect? The three research questions are numbered and organized into a list.

1. Is there a statistically significant difference in college students' financial valuation of art (Y) between college students who received priming (X₁) and college students who did not receive priming (X₁)?
2. Do the other independent variables, number of art courses completed (X₂); college class status (X₃); college major (X₄); and gender (X₅) have any significant effect or not on college students' financial valuation of art (Y)?
3. Does the type of art have an effect on college students' financial valuation of art?

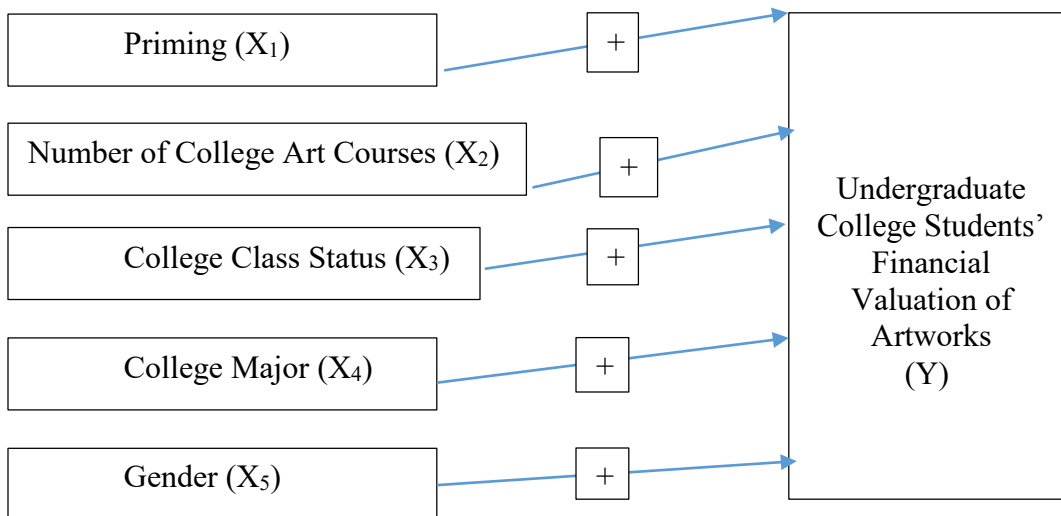


Figure 1. Conceptual framework variables.

Study Design and Methods

As stated in the overview, this study examined a subtle, indirect influence in the form of priming on college students' financial valuation of art. To test the priming effect, this study examined whether college students who, before they evaluated artworks, were briefly exposed to an image projected on a screen of a classic car and designer fashion (each signaling high financial value), would then place a higher value on artworks than college students who were not exposed to the priming effect (see Appendix A). The

hypothesis was that students who experienced the priming effect would place a higher financial value on the artworks than students who were not exposed to priming.

This study also sought to compare the effect of the individual experiences of the subjects, including the number of college art courses completed, college class status (i.e., freshman, sophomore, junior, or senior), college major, and gender. In addition, the study sought to compare the effect of the type of art. A subtle, indirect influence such as priming that is brief or quick may have a more significant influence on the subjects' financial valuation of art than do other independent variables.

A stepwise multiple linear regression (MLR) model was used to examine the effects of priming on the financial valuation of art by using the following independent variables and dependent variable. The stepwise MLR model included priming (X_1), number of college art courses completed (X_2), college class status (X_3), college major (X_4), and gender (X_5) as independent variables. The financial value rating of the artworks (Y) was the dependent variable. A stepwise MLR model research design was used to evaluate the relationship between each of the independent variables and the dependent variable. The independent variables were entered sequentially to determine the significance of the relationship between the independent variables. This study used a stepwise MLR model to learn the effects of the independent variables on the dependent variable, the financial valuation of art, and on the other independent variables.

Significance of the Study

This study contributed to the literature in three ways. First, it expanded the literature on evaluation of art by studying the effects of subtle, indirect influences in the form of priming as they relate to one's financial valuations of art. Prior studies of

evaluation of art have found that characteristics of the subject, such as demographics and level or type of formal educational training, serve as direct influences, and the kind of information received about art before it was evaluated served as an indirect influence in subjects' evaluation of art.

Second, subtle, indirect influences of evaluation of art, such as the concept of priming, have, to this researcher's knowledge, been overlooked in prior studies and could make a difference in college students' evaluations of the financial values of art. This is significant because this study could possibly help determine how students' critical thinking about art can be influenced by priming. The study also can reveal how priming affected the way judgments are formed and how inputs such as social influences and biases affected financial judgments about art.

Third, this study investigated this topic using a quantitative analysis that is more detailed than the analyses prior studies have used. This study used a stepwise MLR model to determine the influence of each variable on the response, a method that can determine which variables have the most effect on the response. Prior studies used methods such as correlational analysis (see, e.g., Furnham & Walker, 2001a) and a Mixed Analysis of Variance (ANOVA) Model (see, e.g., Millis, 2001). Building off prior studies, this study provides substantial insight into the effect of priming on college students' financial valuation of art.

Delimitations of the Study

There were two delimitations of this study. The first delimitation was that it included only two types of art (e.g., abstract and landscape) to reduce variability in the scoring. However, Komar and Melamid (1997) found that overall the general public

preferred landscapes over abstract artworks. This cultural predisposition of preference for a type of art perhaps limited subjects' definition of what they considered worthy of high financial value.

The second delimitation was that this researcher used convenience sampling by drawing upon students from one Midwestern university. It reduced the variability of students from different institution types and locations by controlling the effects of students by one institution.

Organizational Road Map of the Study

To explore the effects of priming on college students' financial valuation of art, this study is organized into five chapters. Chapter I introduces the study, and describes the problem and statement of purpose, as well as other components of the research. Chapter II reviews three categories of study-related literature. Chapter III includes the study design and methods that were used for data collection and analysis. Chapter IV presents the results from the data collection gathered by this researcher. Chapter V discusses findings and implications of the study.

CHAPTER II

LITERATURE REVIEW

Overview

The literature on evaluation of art was examined in terms of its usefulness for application in constructing this study's investigation of individual influences on one's evaluation of art. Evaluation of art is complex because of the diverse characteristics that make up art. One objective of this literature review was to summarize and synthesize relevant literature from different approaches and sources to examine ways researchers have studied what influences subjects' evaluation of art. This literature review discusses direct and indirect influences that were used as independent variables to examine evaluation of art, and the subtle, indirect influences termed priming as used as independent variables in some studies, but not in studies on evaluation of art.

The literature review is in three parts. Part I discusses past approaches to evaluation of art. Part II discusses direct and indirect influences used as variables in previous studies of evaluation of art. Part III reviews studies of priming as a subtle, indirect influence in other areas outside of art.

Part I: Past Approaches to Evaluation of Art

Evaluation of Art Through Art Appreciation

Studies have examined evaluation of art in different ways, using different variables. One significant and often cited discussion is in terms of art appreciation. For

example, art appreciation studies have used different types of artworks, such as different styles of art and/or content or subject matter, as a variable to evaluate art (e.g., Cupchik & Gebotys, 1988; Furnham & Walker, 2001a). In art appreciation studies, the artistic style of an artwork is a variable that refers to the technique or manner in which the artwork was created by the artist. For example abstract is an artistic style that contains non-recognizable imagery, and representational is an artistic style that contains recognizable imagery. Generally, studies have found subjects evaluate different styles of art differently, depending on a subject's familiarity with formal characteristics of art (e.g., Winston & Cupchik, 1992). Whether or not a subject is familiar with formal characteristics of art or an artwork is a variable that directly influences how subjects evaluate art (Augustin & Leder, 2006). Studies have examined subjects' familiarity of art by asking them to rate their most familiar and least familiar artwork, or their most preferred or least preferred artwork, among other questions (e.g., Furnham & Walker, 2001a). Another variable used in art appreciation studies pertains to the subject's amount of art exposure or experience. Studies have found a subject's amount of art exposure or experience acts as a direct influence, because subjects who do not have exposure to art generally evaluate art differently than subjects who have exposure to art (e.g., Hekkert & Van Wieringen, 1996).

Art appreciation studies are relevant to evaluation of art because the researchers presented different variables, such as familiarity with formal characteristics of art, and amount of art exposure or experience, that directly influenced subjects' evaluation of art, especially on different types of art and artistic styles.

Evaluation of Art Through Social & Cultural Value

Studies have examined how subjects evaluate art in terms of its social and cultural value by using some of the same variables that have been used to evaluate art for art appreciation as well as introducing new variables to consider. There is literature regarding the perceived social and cultural value of art derived from an examination of one of the largest surveys of individual participation in the arts. Lyengar (2012) led a national study for the National Endowment for the Arts (NEA) in order to examine ways individuals engage and/or participate in the arts in the United States. The study used categories such as attending art events and activities, reading books and literature about art, learning through arts education, art making by creating or performing, and accessing art through electronic media, including television, radio, handheld mobile devices, the Internet, DVDs, and other devices. The researchers also used demographic variables such as age, race, ethnicity, gender, and educational attainment. Lyengar (2012) found that nearly half of American adults surveyed attended at least one type of arts activity in 2012; more than half read at least one art-related book; roughly half had received some type of arts education; about half of the adults surveyed created art of various types; and more than two-thirds accessed art through an electronic media device. The findings of the NEA study have implications for demand for the arts and interest in the arts. This study examined characteristics of subjects to determine their preferences for particular types of art activities. Variables such as gender, marital status, and socioeconomic status influenced participation in the arts. For example, Lyengar (2012) found that females are more likely than males to visit an art museum or gallery; and the relationship between

formal educational training and art participation was much higher for subjects who had a college or graduate degree.

In another national study, the Russian artists Komar and Melamid (1997) commissioned public opinion research professionals to conduct a survey to determine subjects' artistic preferences. Overall, the study revealed that subjects preferred landscapes over abstract artworks. The published findings of their study was entitled "Painting By Numbers," due to the fact that Komar and Melamid (1997) used the findings of subjects' preferences to create and paint two paintings. One painting they entitled "America's Most Wanted," because it brought together all the factors that subjects indicated they liked with the result producing a landscape painting. The other painting they created they entitled "America's Most Unwanted," because it brought together all the factors that subjects indicated they did not like with the result producing an abstract painting. The study was representative and statistically valid and included over 1,000 Americans of different gender, race, and socioeconomic status. Subjects were asked more than one hundred questions about what they preferred in artwork. Komar and Melamid (1997) asked questions similar to these, among others:

What colors do you prefer to see in a painting?

Do you prefer modern or traditional-styled artwork?

Do you prefer indoor or outdoor scenes?

Do you prefer rural scenes or city scenes?

Which season do you prefer?

Do you prefer hard or soft texture?

Do you prefer animals in their natural setting?

Do you prefer persons fully clothed and at their leisure?

Komar and Melamid's study found that Americans preferred the following items in a painting:

The color blue

A traditional-styled artwork

An outdoor scene in a rural setting

Of the seasons, Fall

Soft, blended colors and lines

Animals in their natural setting

Fully clothed persons

Thus, the commissioned study done by Komar and Melamid (1997) found that Americans preferred realistic, representational-styled landscapes with blue skies, blue water, and outdoor scenes. The landscapes could also include famous or ordinary people or wild animals in their natural setting. They used these findings to paint their artworks entitled "America's Most Wanted" and with the findings of what the subjects did not like, they created the opposite: "America's Most Unwanted." Komar and Melamid (1997) have now expanded their study to include other countries besides the United States, and remarkably, every country surveyed except Holland preferred similar items found in landscape paintings over those found in abstract paintings.

The National Endowment for the Arts study led by Lyengar (2012) provided information to gauge demand for art experiences, and is relevant to evaluation of art because it examined direct influences on subjects' art participation by using different variables such as gender, formal educational training, and others. The national study

conducted by Komar and Melamid (1997) is also relevant to evaluation of art because it provided information about subjects' cultural predisposition of preferences for a type of art, landscape over abstract.

Evaluation of Art Through Financial Value

The evaluation of art in terms of financial value has been examined somewhat differently from evaluation of art in terms of art appreciation and social and cultural value. In the first place, literature on the financial value of art is not as readily available from analytical, academic studies that have used independent and dependent variables. Artists create artworks using artistic mediums (e.g., drawing or painting) to be sold in art galleries. Therefore, studies are a less direct method to learn about the financial value of art than are records on sales of art, for example, a listing of the selling prices of art at auctions or galleries on web pages and other locations (e.g., Borghese, 2013; Fritzke, 2008; Gilbert, 2013).

The following study is one of the few on evaluation of art that includes financial value. Graham et al. (2010) used an indirect influence by providing subjects with the selling price that each painting had recently sold for at an auction. Graham et al. (2010) used only subjects who had no formal educational training in art, and asked subjects to rate their most preferred painting and their least preferred painting. Even though subjects were aware of the selling price of the artwork sold at auction, that information essentially had no influence on their judgment, because most subjects selected the same painting as their most preferred painting. Even though the researchers' article did not publish the selling price that was given to subjects, this study suggested that non-art-trained subjects were not indirectly influenced by the selling price of the artwork, because most subjects

preferred the same type or style of artwork, regardless of what the artwork sold for at auction.

Thus, Graham et al. (2010) contributed to the literature by identifying how an indirect influence of financial value affected non-art-trained subjects in their art preferences when evaluating artworks. However, Graham et al. (2010) did not examine a subtle, indirect influence on financial evaluation of art, using both non-art-trained and art-trained subjects.

Summary and Conclusion of Part I

In Part I of this chapter, the literature discussed how studies in evaluation of art were conducted. The literature informed readers that evaluation of art involves making judgments of art through art appreciation, social and cultural value, and financial value. These studies present a common pattern in which they have been constructed. Consistently, these studies have been organized so as to investigate the influence of variables such as the subject's level of art education and past educational experiences. These variables reflect direct influences on the subject. Commonly used variables in evaluation of art are presented in Part II.

Part II: Direct and Indirect Influences Used as Variables in Previous Studies on Evaluation of Art

Predisposing Information About the Artworks to Subjects

Studies have examined indirect influences on evaluation of art by selectively disclosing information to subjects about the artworks they are evaluating. One way information has been selectively disclosed to subjects about artworks is through the use of titles. Millis (2001) specifies the purpose of his study was to examine how selected

information disclosed to subjects in the form of a title influenced their evaluation of art. Millis (2001) provided information to subjects about artworks using one of three different types of titles: descriptive, metaphorical, or no title. The descriptive title described the content depicted in the artwork in a literal, short sentence such as “a woman planting flowers.” The metaphorical title was a short, non-literal description of the artwork such as “one day at a time.” Other artworks were presented to subjects with no title. The sample consisted of subjects who viewed representational artworks from books on art, design, and photography (Millis, 2001). Subjects were asked to respond to questions on a Likert scale. The questions asked how well the subjects understood the artwork and their level of interest and to what extent the artwork elicited emotion and thinking. Millis (2001) concluded that when subjects evaluated artworks with metaphorical titles instead of descriptive titles or no titles, their overall evaluations of the artworks were higher.

Using a similar approach, Russell (2003) examined whether disclosing three different types of selected information to subjects would increase evaluation of art ratings by using an instrument termed “meaningfulness and pleasantness.” Subjects were given one of three different types of information: (1) no information, (2) the title of the artwork with the name of the artist, or (3) a short description of an artwork that included the title and the name of the artist. To evaluate “meaningfulness,” subjects were instructed to consider how meaningful the artwork was to them and to what extent they were able to understand and make sense of it. For “pleasantness,” subjects were instructed to consider how pleasing the artwork was to them and to what extent they found looking at the artwork a pleasing experience (Russell, 2003). In the Control Group, subjects were shown the artwork with no information (Russell, 2003). The results for

“meaningfulness” indicated that a short description of the artwork including title and the name of the artist increased subjects’ evaluations of meaningfulness. The overall effect of “pleasantness” did not vary significantly when subjects were provided with a title and name of the artist (Russell, 2003).

Russell (2003) conducted a second, similar study in which the same artworks were viewed by subjects divided into two groups. Russell gave the Control Group no information about the artwork, whereas the Experimental Group was provided with the title, the name of the artist, and a description of the artwork. Overall, the results indicated a significant increase in meaningfulness and pleasantness ratings when subjects were provided with information in the form of a description, title, and name of the artist.

In another study, Leder (2001) examined selected information disclosed to subjects about artworks to evaluate how much they liked an artwork. A nine-point Likert scale was used and ranged from (1) I do not like it at all to (9) I like it very much. Leder (2001) used one of three variations of information disclosed to subjects about artwork by the famous artist, Vincent Van Gogh. In the first variation, the artworks were described as reproductions of artworks painted by Van Gogh. In the second variation, the artworks were described as possible fakes not painted by Van Gogh. In the third variation, the artworks were described as reproductions that experts had proven to be fake and not painted by Van Gogh (Leder, 2001). Subjects who were familiar with Van Gogh gave the highest evaluation to artworks described as reproductions painted by Van Gogh and the lowest evaluation to artworks described as reproductions that experts had found to be fakes and not painted by Van Gogh (Leder, 2001). Enhancing the prestige of an artwork,

by disclosing to subjects that artworks were painted by a famous artist and were not fake, resulted in higher ratings (Leder, 2001).

The results of the above studies indicate that information accompanying art is relevant to examine in the evaluation of art because subjects' evaluations of art were indirectly influenced, depending on the type of information they received about the art.

Formal Education: College Art Courses

Studies have examined direct influences on evaluation of art through subjects' level of exposure to college art courses dividing subjects into two groups: Art-Trained, that is, exposure to college art courses, and Non-Art-Trained, no exposure to college art courses. Studies have found that subjects who had exposure to college art courses evaluated art differently than did subjects with no exposure to college art courses (e.g., Augustin & Leder, 2006; Hekkert & Van Wieringen, 1996; Neperud, 1986; Nodine, Locher, & Krupinski, 1993; O'Hare, 1976; Winston & Cupchik, 1992). Exposure to college art courses has been linked to differences in evaluation of art, especially in terms of art appreciation. For example, Augustin and Leder (2006) compared subjects, referred to as art-trained and non-art-trained, in terms of how they categorized art. The researchers used paintings from the past forty years by well-known artists. Subjects were individually instructed to put the paintings into the category of art the subject determined was the most appropriate. Augustin and Leder (2006) found the art-trained subjects used formal art categories, such as abstract, to label the art in terms of, for example, the artistic style, while the non-art-trained subjects chose formal art categories less often.

Hekkert and Van Wieringen (1996) examined the direct influence of exposure to art through formal art training by comparing the ratings of art-trained and non-art-trained

subjects. The researchers used computer software to make different versions of the same artworks. They used twelve original, unaltered artworks with color, and then made twelve black-and-white versions and twelve distorted versions in color and black-and-white by abstracting some of the imagery and making the artwork appear less representational. The subjects were not given the artist's name or informed the artworks were original or that they had been altered. Each subject scored all the different versions of the same artworks on their overall liking of and preference for the artworks. Hekkert and Van Wieringen (1996) found that non-art-trained subjects scored original artworks more highly if they were in color and not altered by distorting the imagery to make them appear more abstract. However, more experienced or art-trained subjects scored black-and-white and distorted abstract versions more highly than the original artworks. Hekkert and Van Wieringen's (1996) results suggested that non-art-trained subjects generally preferred realistic artworks in color over the black-and-white. Art-trained and non-art-trained subjects showed differences in their ratings in evaluation of art. Both of the previous studies found that art-trained and non-art-trained subjects evaluated art differently. This finding is significant because the variable (amount of formal educational training in art) was found to be a direct influence on evaluation of art.

Nodine, Locher, and Krupinski (1993) were also examining the influence of the variable, amount of formal training in art, when they recorded subjects' eye movements while they viewed artworks to determine whether there was a difference in art-trained and non-art-trained subjects' viewing patterns of the artworks. They found that non-art-trained subjects focused on and spent more time viewing representational content or

subject matter in the center of the artwork, whereas art-trained subjects spent more time viewing stylistic qualities in the background.

The previous studies are relevant to evaluation of art because they examine the variable of a subject's level of formal educational training in art (i.e., art-trained or non-art trained) and conclude that the level of formal educational training in art directly influences subjects' evaluations of art.

Formal Education: College Major

Studies have suggested that a subject's college major has a direct influence on evaluation of art. For example, Winston and Cupchik (1992) examined whether two different college majors affected subjects' evaluation of art. The researchers examined art and psychology majors and asked subjects to choose which paintings they preferred. The paintings were categorized in two groups, as either High Art (e.g., artworks in major museums) or Popular Art (e.g., wildlife or country scenes). Winston and Cupchik (1992) determined that art majors preferred high art; whereas psychology majors preferred popular art. They also concluded that psychology majors formed their evaluation of art on the content or subject matter of the artwork, whereas art majors formed their evaluation of art on the artistic style of the artwork.

O'Hare (1976) conducted a similar study with subjects from the same two college majors, art and psychology, to determine whether college major affected subjects' evaluation of art. The researcher examined art and psychology majors' preferences for style of art (i.e., landscape paintings). O'Hare (1976) found that art majors preferred landscapes that were abstract in style; whereas psychology majors preferred landscapes that were recognizable as a realistic landscape and not abstract.

In another study, Neperud (1986) compared the effect of two different college majors, art and elementary education, on subjects' evaluation of art using representational and abstract artworks. The results showed that art majors scored abstract artworks higher than did elementary education majors. Neperud (1986) suggested that exposure to art courses provides information about different types of art, which results in differences in the way subjects evaluate art.

These studies examined the variable of college major on evaluation of art. The researchers provided evidence that college major was a direct influence on evaluation of art. The variable of college major is relevant to evaluation of art because art majors evaluated art differently than did other college majors.

Formal Education: College Class Status

Another subset of formal education, college class status, is also a variable that has been used to explore direct influences on evaluation of art. Furnham and Walker (2001b) examined the relation between college class status (i.e., seniors) and evaluation of art by using three different styles of art: abstract, pop, and representational. The researchers found that seniors were more likely to prefer representational art than abstract or pop art. Furnham and Walker (2001b) posit it was possible that seniors were more familiar with the representational paintings than with abstract or pop art, since other studies have shown familiarity linked with increased liking and preference in evaluation of art. However, the researchers did not study freshmen, sophomores, or juniors.

The previous studies examined evaluation of art through formal education and determined that college art courses, college major, and college class status functioned as direct influences in subjects' evaluation of art.

Gender

Gender is another variable that has been associated with influencing evaluation of art. Gender is referred to as a direct influence since it is a role of the subject. Gender has been examined to determine if there are differences between the way males and females evaluate art. Studies have examined gender differences by the type or style of art males or females like or prefer. Gender differences have varied in the following studies on evaluation of art.

In an early study, Frumkin (1963) examined males and females to determine if there was a difference on evaluation of art related to gender. The researcher asked male and female subjects to rate their preference for paintings by well-known artists from different styles of art. Frumkin (1963) found that females scored their preference for the style of art classified as modern art higher than did males. The study does not disclose whether or not the subjects had exposure to art, just that, overall, males and females in the study preferred different styles of artworks. Frumkin (1963) stated that, in general, subjects from both genders preferred artworks with which they were familiar.

Another early study, this one by Bernard (1972), examined gender to determine if there were differences in evaluation of art. The researcher did not ask subjects to rate their preference or make other judgments about artworks; instead he examined which reproductions of famous artworks males and females purchased from an art gallery. Bernard (1972) found females bought more reproductions of artworks that were classified as Impressionistic in style, while males purchased more artworks classified as abstract; females did not purchase any artworks that were classified as abstract. Bernard's (1972)

results showed that gender made a difference in the type or style of art males and females purchased.

Polzella (2000) requested male and female subjects who did not have prior exposure to art training to rate different styles of artworks in terms of their complexity, interestingness, pleasantness, and beauty to determine if gender made a difference in evaluation of art. The researcher found that males and females differed in how they scored a particular style of art known as Impressionism. The results indicated that females scored Impressionist artwork as more pleasing and interesting to them than did males, and females also scored Impressionist artwork as more beautiful than did males.

Nonetheless, not all studies have found gender differences on evaluation of art. For example, Lindauer (1990) examined males and females with and without exposure to art training and asked them to rate how much they liked each artwork, ranging from the most liked to the least liked, to determine if gender made a difference in evaluation of art. Lindauer (1990) did not find a difference in the ratings; males and females either liked or disliked the artworks evenly. Despite the findings of Lindauer (1990), other studies examined in this section indicate males and females do evaluate particular styles or types of art differently.

Summary and Conclusion of Part II

The different variables used to examine influences on subjects' evaluation of art suggest that the study of art is complex. The studies described in Part II attempt to explain influences on evaluation of art. However, these studies have focused on only a narrow set of influences, specifically direct and indirect influences. In the next section,

this chapter explores an inquiry into examining *subtle, indirect influences* as another possible variable to explore.

Part III: Studies of Priming as a Subtle, Indirect Influence In Other Areas Outside of Art

Research is sparse in the area of subtle, indirect influences on evaluation of art; in fact, there is little, if any, research on subtle, indirect influences in the area of art. For that reason, this researcher is looking at the application of subtle, indirect influences in other areas to establish a foundation for applying subtle, indirect influences to the evaluation of art.

Studies have looked at priming as a form of subtle, indirect influence in evaluation of subject matter presented for consideration. Therefore, the effects of priming will be examined on subjects' evaluations of subject matter in other areas outside of art. Priming research findings support priming as a significant influence on subjects' evaluations of subject matter (Schacter & Buckner, 1998).

Priming as a Subtle, Indirect Influence

Schacter and Buckner (1998) describe priming as an occurrence in which certain environmental cues trigger an individual's memory or neural activity and affect or influence his or her actions or perceptions without conscious awareness. Priming has been studied with a variety of different types of tasks that do not require conscious awareness of previous experience or recollection of the priming effect (Schacter & Buckner, 1998). Priming studies use brief, indirect, subtle effects, which are disguised in such a way that the subject is most likely unaware he or she is being primed. In psychology, a basic proposition of priming is that a subject's reactions to stimuli are

triggered by undisclosed or indirect, subtle cues in the environment of which subjects are unaware. Priming occurs when subtle, indirect exposure to information influences subjects' judgments or responses (Guggenheim, 2012).

Priming Through Word Manipulation Tasks

Priming has been examined in a variety of word manipulation tasks in order to prime subjects with particular frames of reference without their awareness. One type of a word manipulation task is a word completion task. For example, a priming experiment might use a word completion task in which subjects are given a series of words as a priming effect and then, after a delay, asked to complete a three-letter word fragment. They are given three letters of the beginning of a word (fragment) and asked to form a word from that fragment, for example, "mot__" for the target completion word of "motel" (Schacter & Buckner, 1998). Priming would be said to have occurred if the subjects came up with the target completion word more often for words that had been studied earlier in the word manipulation tasks than for words not studied previously (Schacter & Buckner, 1998).

An early priming study involved another type of a word manipulation task, known as the Stroop Color Test. In the Stroop Color Test (1935), colors were presented to subjects in the form of written words (e.g., "blue"). Subjects were instructed to name the color in which the word was written while ignoring the word's meaning. Words would either match or not match the color of the writing, for example "blue" written in blue ink or "blue" written in red ink. Stroop (1935) found that when the color was not written in the color of the word, it became harder and took more time for the subject to name the color than when the word was written in the same color, because the subject was actually

paying attention to the meaning of the word while trying to name the color. The original Stroop Color Test (1935) has since been modified and used for more recent priming studies (MacLeod, 1991).

Studies have used other types of priming effects with word manipulation tasks, such as the following example of exposing subjects to descriptive words or adjectives. Illustrating this point, Higgins, Rholes, and Jones (1977) examined the effects of priming with a word manipulation task that used descriptive words, classified as positive or negative, about a person, for example “neat and persistent” or “aggressive and reckless.” Subjects were informed they were participating in a two-part study on memory and reading comprehension, to hide the priming effect. In the first part of the study, subjects were shown a series of ten slides containing ten different words on different-colored backgrounds that contained either positive or negative terms. The subjects were also shown a few neutral terms to avoid revealing the true purpose of the study. Subjects were then asked to name the color of the background and to repeat the term from memory. In the second part of the study, subjects read a paragraph about the behavior of a person named Donald and were asked to rate how desirable they considered Donald to be on a Likert scale, ranging from extremely desirable to extremely undesirable. Subjects who had previously been exposed to the positive terms scored Donald as more desirable than did subjects who had been exposed to negative terms. Higgins et al. (1977) concluded that subjects’ impression of another person was influenced by their exposure to a word manipulation task through priming.

Similarly, in another study, the effect of priming through a word manipulation task examined whether subjects would take action by interrupting a private conversation

in order to gain access to a room, instead of waiting until the conversation ended. Bargh, Chen, and Burrows (1996) examined the effects of priming with a word manipulation task that used descriptive words classified as either polite or rude. Subjects were presented with words in a scrambled order and were instructed to make sentences out of them. Subjects were told it was for a language study, to hide the priming effect. Subjects were given scrambled words that included either polite or rude words. After the subjects finished making the words into sentences, they were instructed to come out into the hall and come into the researchers' office, to receive the next set of instructions. However, when a subject came out into the hall to go into the researchers' office, two people were intentionally blocking the doorway while engaged in a conversation. This conversation intentionally prevented subjects from entering the researchers' office. Subjects were unaware this was part of the experiment. Bargh et al. (1996) noted the amount of time it took a subject to interrupt the conversation and try to enter the office. The researchers found that subjects who had been primed to arrange sentences with words that were deemed rude words were much more likely to interrupt the conversation than were those primed with polite words. After being debriefed, subjects reported not being aware of the words being in categories of polite or rude. Bargh et al. (1996) determined priming through the use of a word manipulation task with descriptive words classified as polite or rude was able to influence subjects' responses toward another person.

In a second study, Bargh et al. (1996) examined priming with a word manipulation task that requested subjects to make sentences from one of two sets of scrambled words to determine if words stereotypical of the elderly would affect the way subjects exited a building, for example by walking slower. Subjects were told they were

taking part in a language study, to hide the priming effect. The sets of scrambled words contained either words that were stereotypical of elderly persons (i.e., “old,” “retired,” “gray,” and others) or neutral words. After completing the sentence task, Bargh et al. (1996) observed subjects leaving the room and recorded the amount of time it took the subjects to walk down the hall to leave the building. Subjects who had to make sentences from words describing the stereotypical behavior of the elderly walked slower exiting the building than subjects who had to make sentences out of the neutral words. Bargh et al. (1996) concluded that priming influenced subjects’ responses through a word manipulation task using words stereotypical of the elderly.

Larson (2007) examined the effects of priming with a word manipulation task by asking subjects to list words that described artists, in order to determine if the words they chose would affect the amount of monotonous work they were willing to do for someone else. Subjects were art majors and non-art majors and were asked to write down words that described artists, as the priming effect. Overall, the art majors described artists as sociable and good at networking, while the non-art majors described artists as socially inept but creative. Next, each subject was instructed to find words in a word search. The words were homographs, meaning they could seem to be either related or unrelated to art. For example, the word *canvas* could be an artist’s material or canvass to support a political candidate and solicit votes. After the word search, each subject was asked to perform a long and monotonous task involving circling odd numbers in matrices, to benefit another subject who would continue the study. The art majors who were primed to think of themselves as sociable and good at social networking, were more willing to work on the long, monotonous task. The non-art majors who were primed with words

describing artists as socially inept, showed less pro-social behavior, being less willing to engage in the long, monotonous tasks.

Although the subject matter of those studies is not art, the effects of priming through word manipulation tasks are relevant to the present study, because the cited studies indicate that subjects' evaluations of subject matter can be subtly, indirectly influenced by priming.

Priming Through Environmental Cues

Sleeth-Kepler and Wheeler (2011) examined the effect of priming in influencing judgment of financial value in a study of determining the value of homes. In this study, subjects were primed by exposing them to items listed for sale, either at a luxurious retail store selling antiques or at a thrift store, before being asked to rate the financial value of homes. The researchers concluded that subjects who had been primed with items listed for sale at a luxurious antique store scored the financial value of homes higher than subjects who had been primed with items that had been listed for sale in a thrift store. In another study on priming and financial value, Mandel and Johnson (2002) asked subjects to choose which sofa they would prefer to purchase. Subjects were primed to consider sofas in the categories as either comfortable, less expensive, or neither (not primed), by exposing subjects to advertisements that included one of three types of background images. Subjects who were primed for comfort were more likely to cite comfort as the deciding variable for their purchase of the sofa, and subjects who were primed for price were more likely to cite price as their reason to purchase the sofa. In a similar, second study, Mandel and Johnson (2002) asked subjects to make a choice about which automobile they would prefer to purchase. Subjects were primed with categories of

automobiles as either safe, less expensive, or neither (not primed) by exposing subjects to advertisements that included one of three types of background images. Subjects who were primed for safety were more likely to cite safety as the deciding variable for their purchase of the car, and subjects who were primed for price were more likely to cite price as their reason to purchase the car. Mandel and Johnson's (2002) findings reinforce the conclusion that priming can influence subjects' evaluations.

Proffitt (2006) examined the influence of priming through the environmental cue of music on subjects' perceptions of the steepness of a hill and the level of effort required to climb the same hill. During the study, subjects listened to one type of music classified as either happy or sad and were presented with a photograph depicting the slope of the hill from the bottom going up. Both groups of subjects were asked to indicate the steepness of the hill and the level of effort it would require to climb the hill. Subjects who listened to the sad music scored the steepness of the hill and climbing the hill as more difficult than did subjects who listened to happy music (Proffitt, 2006). Subjects did not associate the music in the room as part of the experiment. Proffitt (2006) concluded that priming through the environmental cue of particular types of music influenced subjects' perceptions of the steepness of a hill and the level of difficulty to climb the hill.

Bateson, Nettle, and Roberts (2006) examined the effect of priming through an environmental cue by using a small picture of a pair of human eyes to simulate being watched, in order to determine if priming would make a difference in the amount of money an office worker would put in a collection jar to pay for his or her coffee consumption. The priming effect consisted of a small picture of a pair of human eyes

taped to the very top border of an eight-by-eleven-inch sign. The sign listed the cost of a cup of coffee. The sign and coffee machine were located in a private area that was not visible to the rest of the office area. The subjects, office workers, were instructed to put money in the jar for the cost of the coffee if they took a cup of coffee. The researchers found that subjects put nearly three times more money in the collection jar when the eyes were subtly shown on the sign than they did when there were no eyes shown but just the sign. Bateson et al. (2006) asked subjects about the sign, and they reported not noticing the eyes on the sign. Bateson et al. (2006) concluded that subjects were unaware of the priming effect, which influenced the amount of money subjects put into a collection jar to pay for their coffee consumption.

Summary and Conclusion of Part III

In sum, priming as a subtle, indirect influence has been examined in different ways. These uses of priming include word manipulation tasks and environmental cues. As these studies indicate, priming has been shown to influence subjects' evaluations or responses.

Summary of Chapter II

This literature review began by presenting an overview of literature related to direct and indirect influences on evaluation of art. Part I described past approaches to evaluation of art through art appreciation, social and cultural value, and financial value. Part II described direct and indirect influences used as variables in previous studies of evaluation of art, including disclosing information about the artworks to subjects, formal educational training through college art courses, college major, college class status, and gender. Part III defined priming as a subtle, indirect influence and discussed studies

outside of art that examined priming through word manipulation tasks and environmental cues. The literature review presented different approaches and/or ways art has been evaluated by examining direct and indirect influences on evaluation of art. While attempting to put forward literature to establish the foundation to examine priming and college students' financial valuation of art, different variables were reviewed and discussed in this literature review. These variables have been influential in the creation of the present study. Previous research has demonstrated that in areas outside the realm of art, priming can influence evaluations. Therefore, we might suspect that priming would influence subjects in a study involving art. However, the association between priming as a subtle, indirect influence and college students' financial valuation of art remains to be examined.

CHAPTER III

RESEARCH DESIGN AND METHODS

Overview

Chapter III presents information about the quantitative study design and methods. As stated in Chapter I, the purpose of this study was to determine the influence of priming on college students' financial valuation of art. The data were collected using an individually designed survey instrument (see Appendix B). A description of the research questions and conceptual framework is followed by a description of the methods that were used to administer the survey, collect and analyze the data, and the sample population involved. In addition, the methods that were used to treat the data and analyze the results are also discussed in this chapter.

Research Questions

As stated in Chapter I, the main research question is: Is there a significant difference in college students' financial valuation of art between college students who received priming and college students who did not receive priming? Second, the study asked, do the other independent variables have a significant effect on the financial valuation of art? Third, does the type of art have an effect on the financial valuation of art? The research questions were guided by the conceptual framework presented in Figure 2.

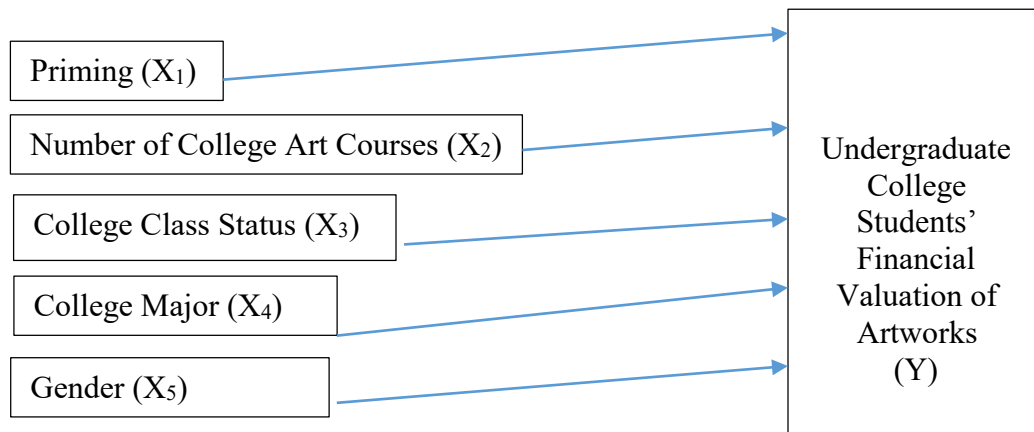


Figure 2. Conceptual framework.

Independent Variables

The study contained five independent variables. The independent variables were labeled (X₁) priming; (X₂) number of college art courses completed; (X₃) college class status; (X₄) college major; (X₅) gender. The independent variable of priming indicated whether the subject was primed in the Experimental group or whether he or she was part of the Control Group. The number of college art courses completed, college class status, college major, and gender were collected for all subjects in the study. Gender (male or female) is an individual role that is cultural and not referred to as biological sex (Publication Manual of the American Psychological Association [APA], 2011).

Dependent Variable

The study contained one dependent variable. The dependent variable was labeled (Y) financial valuation of artworks for each of the six artworks.

Study Table of Variable Definitions

The pilot study tested the relationship between the dependent variable and the priming effect after accounting for the independent variables. Table 1 reports the relationship of all of the variables that were in the pilot study model.

Table 1. Pilot Study Table of Variable Definitions.

Name of Variable	Variable Type	Symbol	Possible Values
Value Judgment of Three Artworks	Dependent	Y	Five-Point Likert Scale: Extremely Inexpensive, Moderately Inexpensive, Moderate, Moderately Expensive, Extremely Expensive
Priming	Independent	X1	1 = Experimental Group 2 = Control Group
Gender	Independent	X2	Male, Female, or Transgender
Number of College Art-Related Courses	Independent	X3	0, 1, 2, 3, 4, 5, 6, or > 6
College Class Status	Independent	X4	Freshman, Sophomore, Junior, Senior
College Major	Independent	X5	Business, Education and Liberal Arts, Engineering and Sciences, or Other

The pilot study model was then adjusted in the following ways: There are six artworks instead of three for the financial valuation of artworks (see Appendix F). Instead of only the sum of the artworks for the financial valuation, each artwork was entered separately and then also summed by the type of art, Landscape and Abstract. A ten-point numerical Likert-type scale was used instead of a five-point worded Likert scale, ranging from extremely inexpensive to extremely expensive, to examine financial valuation. In order to include an appropriate distribution of males and females, the role of gender was in two categories, instead of three. The rest of the variable definitions remained the same for the study. Table 2 shows the adjusted variables.

Table 2. Adjusted Study Table of Variable Definitions.

Name of Variable	Variable Type	Symbol	Possible Values
Financial Valuation of Six Artworks	Dependent	Y	Ten-Point Likert-Type Scale
Priming	Independent	X1	1 = Experimental Group 2 = Control Group
Gender	Independent	X2	Male or Female
Number of College Art-Related Courses	Independent	X3	0, 1, 2, 3, 4, 5, 6, or > 6
College Class Status	Independent	X4	Freshman, Sophomore, Junior, Senior
College Major	Independent	X5	Science and Health, Business, Ed, Human Services, Public Affairs, Art and Humanities, Undecided

Pilot Study

In November 2012, this researcher conducted a pilot study (see Appendix G). The purpose of the pilot study was to test the influence of priming on college students' financial valuation of art. Based on the pilot study, this researcher was able to identify and adjust the following details on the survey in order to ensure a well-grounded approach for the study. The type of financial value was more clearly defined. The pilot survey questionnaire (see Appendix G), was adjusted from the five-point Likert scale ranging from the descriptive words of extremely inexpensive to extremely expensive, to a ten-point numerical Likert-type scale, from one to ten. The number of artworks scored for financial value was adjusted from three to six. The original priming image (see Appendix G) was changed to depict a classic car and designer fashion signaling high

financial value in order to use an image that college students might be more likely to relate to, in that cars and fashion provide a more familiar context of high financial value. (See Appendix A for the new priming image.) The academic college associated with subjects' major was dropped. The role of gender was adjusted to two categories, male or female. The Priming Group was not asked a verbal question about the priming image. Lastly, the presentation of the survey questionnaire was adjusted to include a more professional business style.

Survey Instrument

The survey instrument was created based on the conceptual framework and includes the following explanation about the survey to examine college students' financial valuation of art. This researcher used a ten-point numerical Likert-type scale to increase the probability of ending up with an ordinal evaluation or ranking of numerical scores, instead of a five-point Likert scale with words ranging from not expensive to extremely expensive. Page one of the questionnaire began by asking subjects to circle their perceived financial valuation of three artworks (Landscapes) from the ten-point Likert-type scale. Page two of the questionnaire also asked subjects to circle their perceived financial valuation of the next three artworks (Abstracts) from the ten-point Likert-type scale. Since gender has been found to affect evaluation of art (e.g., Polzella, 2000), page three of the survey began by asking subjects to circle their gender as male or female. Next, subjects were asked to circle the number of college art courses they had completed, because studies have found differences on evaluation of art depending on the level of exposure to college art courses (e.g., Augustin & Leder, 2006). Then, subjects were asked to circle their college class status in order to determine if their college class

status made a difference on evaluation of art (e.g., Furnham and Walker, 2001b). Last, subjects were asked to write their college major, because studies have found major-related differences on evaluation of art, especially for art majors (e.g., Winston and Cupchik, 1992).

Table 3. Research Used to Design the Survey Instrument for Financial Value.

Question	Scale	Research Article	Concept
Subjects were primed with image of automobiles primed as inexpensive or expensive and then were asked to rate the price of automobiles on a Likert scale, ranging from extremely inexpensive to extremely expensive.	Price Categories Extremely Inexpensive Moderately Inexpensive Moderate Moderately Expensive Extremely Expensive	Herr, P. M. (1989). Priming Price: Prior Knowledge and Context Effects. <i>Journal of Consumer Research</i> , 16 (1), 67–75.	Subjects who were primed with expensive automobiles, scored moderately priced automobiles as more expensive.
Subjects were primed with items for sale in a luxurious antique store, or a thrift store, and then were asked to estimate the value of a home.	Subjects were asked to estimate the value of a home in U.S. dollars.	Sleeth-Keppler, D., & Wheeler, S. (2011). A Multidimensional Association Approach to Sequential Consumer Judgments. <i>Journal of Consumer Psychology (Elsevier Science)</i> , 21(1), 14–23.	Subjects who were primed with items for sale in the luxurious antique store, estimated the value of a home, higher, in U.S. dollars, than subjects who were primed with items for sale in a thrift store.

Survey Questionnaire

Subjects were requested to circle only one answer for each question. The three-page questionnaire was a pen/pencil and paper survey. Page one and two collected the financial valuation of six different artworks on a ten-point Likert-type scale. Page three collected subjects' gender, number of college art courses, and college class status, by selecting from options. The last question on the survey asked subjects to print their

college major. The survey forms were printed on white paper with black print for both the Experimental and Control priming groups. The survey questionnaire was designed in a simple manner to allow subjects to comprehend and complete it in a timely manner.

Reliability and Validity

Reliability and validity are two important parts in the assessment of a survey instrument (LoBiondo-Wood & Haber, 2010). Reliability is a measure of consistency and the likelihood of getting the same results over and over again (Trochim, 2005). Validity is the extent to which an instrument measures research questions accurately (Trochim, 2005).

A pilot study was used to test a survey instrument and to identify potential practical problems before conducting a larger study (LoBiondo-Wood & Haber, 2010). This researcher conducted a pilot study in order to determine the reliability, validity, and any practical problems of the created instrument that was used to examine the influence of priming on college students' financial valuation of art.

In order to examine the reliability of the instrument for the pilot study, Cronbach's alpha coefficient was calculated. The financial valuations of the three artworks for the Priming Group were in the calculation, which resulted in an overall reliability of 0.16. Since this alpha score is lower than 0.70, the reliability of the instrument, according to LoBiondo-Wood and Haber (2010), was not statistically significant. The low reliability score could be a reflection of the small pilot study (n=97).

The Cronbach's alpha for the present study was calculated at 0.49 for the six different artworks for the primed subjects. The Cronbach alpha score did improve from the pilot study and is going in the right direction. There are research studies where no

validated instrument exists for a given topic, as is the case in new, innovative areas of research, such as the present study explores. The reliability of the instrument must, therefore, be validated in a more practical approach.

A practical approach to address the lack of internal consistency in this study and a possible reason that Abstract Artwork #4 and Abstract Artwork #6 did not show priming as a significant factor in the subjects' financial valuation of the artworks can be explained through the findings published by Komar and Melamid (1997) that overall, the American general public preferred landscapes over abstract artworks. Going further, that study found that the general public disliked artworks that are "different-looking" and portray "imaginary objects"; that primarily use the colors "gold, orange and peach"; that keep the "colors separate (do not use blending)"; that use "bold stark designs"; that use "geometric patterns" and that use "darker shades." Virtually all of these factors are present in Abstract Artwork #4 of the study. Likewise, Abstract Artwork #6 also has similar characteristics to the type of painting the general public dislikes the most, because it portrays "geometric shapes," has "dark colors," uses a "bold stark design," is "different-looking," and portrays what could be an "imaginary object." The fact that these two artworks deviated from what would have been the internal consistency of the study actually supports the findings of the Komar and Melamid (1997) study. Finally, Abstract Artwork #5, which did show significant results for the priming effect (although it was not given as high a financial value by the subjects as the landscapes), differs from the other two abstract artworks in the study in that it has fewer of the characteristics found by Komar and Melamid (1997) to be disliked by the general public. It does not appear to be

an image of anything, is not “geometric in design,” does not primarily use “dark colors,” and is not a “bold stark design.” It is just “different-looking.”

Research Setting

The setting for this study was a research room located in a Midwestern university. Currently, the university has over 20,000 students. The Midwestern university was chosen based on the proximity to this researcher.

Data Collection Procedures

Protocol Used to Conduct the Survey

The procedures section in a research study describes how the study will be conducted (Trochim, 2005). This study was conducted in the following manner: Research subjects were randomly assigned to either an Experimental (Priming) or Control (No Priming) Group. At the beginning of class, after they were seated, subjects were reminded that participation was completely voluntary and there was no identifying information on the survey sheets. The subjects in the Priming Group listened to this researcher give directions to them before they began page one of the survey while the priming image was projected on a nine-foot-by-nine-foot screen in front of them for two minutes. The directions were also written on the survey information sheet that was distributed to subjects. All subjects in the Priming Group were exposed to the priming image for the same amount of time. In the Priming and No Priming Group, there was a verbal start signal to let all subjects know at the same time when they could begin the survey. In both groups subjects were asked verbally to put a letter “T” at the top right hand corner if they had taken the survey before. In both groups, subjects were given two minutes to answer each question about the financial value of the artworks, with a total of

fifteen minutes to complete the entire survey. After subjects in the Priming Group completed page one, the priming image was projected on the screen in front of them again for 30 seconds before they began page two of the survey. The priming image consisted of an image of a classic car and designer fashion signaling high financial value (see Figure 3). By contrast, subjects in the No Priming Group were seated in the research room at the beginning of class for two minutes with nothing projected on a screen in front of them (i.e., no priming effect) while they were listening to directions before they began the survey. The Priming and No Priming Groups viewed and scored the same six artworks. After rating the artworks for financial value, both groups answered four other survey questions consisting of the number of art courses they had completed, their college class status, college major, and gender. Subjects were asked to turn their surveys over when they finished and sit quietly. Subjects who came in late were not allowed to take the survey. After all the subjects completed the survey, they were asked to pass them to the right, while this researcher collected them. The subjects received no compensation. The only form of reward was a random drawing at the end of each session for a twenty-dollar gift card to the university book store. If subjects wanted a chance to win a twenty-dollar gift card from the university book store, they could put their name on an index card that was provided by this researcher. This researcher collected the index cards and then put them in a plastic container before subjects took the survey. As soon as the surveys were collected, a name was randomly pulled out of the container to win a twenty-dollar gift card. This researcher emptied the names from the container in the trash before leaving the research room, in order to keep the survey responses anonymous.



Figure 3. Priming image.

Advertisement and Participation for the Study

Assistance in promoting participation in the study was sought through faculty members at the Midwestern university. Advertisements were used in the form of an invitation sent by email to various undergraduate-teaching faculty members, asking if they would allow time during class for subjects to participate in the study. The email informed faculty the research was being conducted by a doctoral student from the University of North Dakota and also contained information about the study for potential subjects. This researcher informed subjects about the research by handing out an information sheet that emphasized that participation was voluntary and explained what subjects were asked to do for the study. Faculty were asked to leave the room to ensure that subjects were not pressured or coerced by faculty to participate. Each subject's participation was voluntary, and since they were not asked to disclose any personal identifying information, subjects were not asked to provide a written consent to participate.

Protection of Subjects Through the Institutional Review Board

An Institutional Review Board (IRB) is a board or a specific group of people that review research proposals and studies to ensure that guidelines of ethical standards are in

place for the protection of the research subjects (LoBiondo-Wood & Haber, 2010; Trochim, 2005).

This researcher followed the guidelines of two IRBs to ensure protection of the subjects. This researcher submitted proposals to the Midwestern university where the study was conducted and the University of North Dakota (UND). The Midwestern university accepted the IRB policies of UND, since this researcher is fulfilling requirements for a doctoral degree from UND in the department of Educational Leadership. This researcher was a part-time faculty member at the same Midwestern university where the research was conducted, and was, therefore, required to complete their IRB requirements as well as UND's. Both of the IRB boards approved this researcher's request to conduct research on the Midwestern university's campus.

Priming Image

The priming image used in the pilot study (see Appendix G) depicted items of high financial value being auctioned. However, this researcher determined that this was an image of an experience with which most undergraduate college-aged students were not likely to be familiar, especially in regard to connecting it with high financial value. Thus, it was determined to change the priming image in order to use an image that college students might be more likely to relate to and assign a context of high financial value.

Landscape and Abstract Artworks for Financial Valuation of Art

Six artworks (paintings) were selected for financial valuation from two different styles of art, landscape and abstract (see Appendix E). The artworks were selected because the type of art, landscape and abstract, has been used in other evaluation of art studies (e.g., Leder, 2001; Furnham & Walker, 2001a). These two styles of art were

selected because they are opposite in style and are easily distinguishable. The first three artworks shown to subjects depict the representational subject matter of landscapes (Artworks #1, #2, and #3 in Appendix F) and the second group of three artworks shown to subjects depict nonrepresentational or abstract subject matter (Artworks #4, #5, and #6 in Appendix F). These artworks were shown to subjects in the order that they appear in Appendix F.

Finally, these artworks were selected because their unfamiliarity and difference in style of art (landscape or abstract) might better demonstrate if priming and/or the type of art could have an effect on college students' financial valuation of art. Two distinct types of artworks were used in the study because studies have found that subjects evaluate different styles of art differently, depending on a subject's familiarity with formal characteristics of art (e.g., Winston & Cupchik, 1992). Thus, it was necessary to be able to differentiate between the influence of the priming effect and the effect of the type of art.

Sample

The completed sample size consisted of 422 subjects in its entirety. Four hundred and thirty subjects actually took the survey. However, five surveys were not counted due to invalid information such as circling more than one answer for the financial valuation of an artwork or leaving a question blank. Three other surveys were discarded because they were marked with a "T" at the top, indicating that the subjects had taken the survey previously. Therefore, the actual sample size consisted of 422 subjects who completed the survey in its entirety, with a total of 209 males (49.53%) and 213 females (50.47%).

A sample in a research study is the group of people who are actually in the study or selected to be in the study from a larger population (Trochim, 2005). In this study, the sample was selected from certain segments of the undergraduate student population from a Midwestern university and who were enrolled in various majors. This researcher randomly selected courses from each subject of the undergraduate course schedule and then sampled students from courses in which faculty would allow this researcher access to their students during class time. An undergraduate student sample was chosen because they were the largest group on campus, making them more available to participate in research. The sample of 422 was approximately 2.4 percent of the total undergraduate student population of over 17,000 students.

Research Design

A survey-based research method was chosen, since it is economical and has a rapid turnaround time for data collection. This study used quantitative methods in order to test the research questions regarding financial valuation of artworks. In order to answer Research Question One, the examination of the results began with a *t*-test to answer whether there was a difference in the mean scores on the financial valuation of art between the Priming Group and the No Priming Group. In order to answer Research Question Two, a stepwise MLR model was used for the analysis of the data, in order to determine the effect of the independent variables on the dependent variable. The independent variables were entered sequentially to determine the significance of the relationship between the independent variables and the dependent variable. The stepwise MLR model included priming (X_1), number of college art courses completed (X_2), college class status (X_3), college major (X_4), and gender (X_5) as independent variables.

The financial value rating of the artworks (Y) was the dependent variable. In order to answer Research Question Three, the artworks were correlated, to determine if the type of art had an effect on the financial valuation of art.

Variable Coding

The categorical variables used in the analysis, including priming, number of art courses, college class status, college major, and gender, were all coded as dummy variables in the MLR models. That is, dummy variables were used to indicate which level of the categorical variable was being represented. For instance, a dummy variable was used to indicate whether the subject was part of the Priming Group or the No Priming Group. If a subject was part of the Priming Group or the reference, the dummy variable for priming was set to one. If the subject was not primed, the dummy variable for priming was set to zero. Since the gender effect also had only two levels, a dummy variable was created for gender to indicate if the student was female with a one, and a zero for the male students and the reference level. College class status was treated in a similar fashion as it had only two levels. For categorical variables with three or more levels, such as the number of art courses completed and college major, the number of dummy variables needed for each effect is always the number of levels minus one.

Summary of Chapter III

Chapter III began by presenting information about the research design and methods, survey instrument, and data collection procedures of this study. Survey data were collected and analyzed in order to examine the influence of priming on college students' financial valuation of art. The analysis of the data and the results are reported in Chapter IV.

CHAPTER IV
FINDINGS AND ANALYSIS

This chapter presents the findings and analysis of the data. As stated earlier, the purpose of the study was to determine the effect of priming on college students' financial valuation of art. As also stated earlier, the three research questions were the basis for the data analysis: Is there a statistically significant difference in college students' financial valuation of art between college students who received priming and college students who did not receive priming? Second, do the other independent variables have a significant effect or not? Third, does the type of art have an effect? In response to the purpose and the research questions, data were collected with the survey questionnaire and then analyzed. The data collected for each research question allowed for inference of financial valuations. The results are presented in the order of the survey questionnaire, then the findings for each research question are presented.

Table 4. Frequency and Percentage of Priming.

Priming	Frequency	%
No	210	49.76
Yes	212	50.24

Priming: Frequency and Distribution

The study consisted of two groups, the No Priming and Priming groups. In other words, there were two groups in the study: the control (No Priming) and experimental (Priming) group. Table 4 reports the frequency and percentage of the subjects who were in the No Priming and Priming groups. The sample consisted of 210 subjects (49.76%) in the No Priming Group and 212 subjects (50.24%) in the Priming Group.

Figure 4 shows each group had an approximately evenly distributed number of subjects.

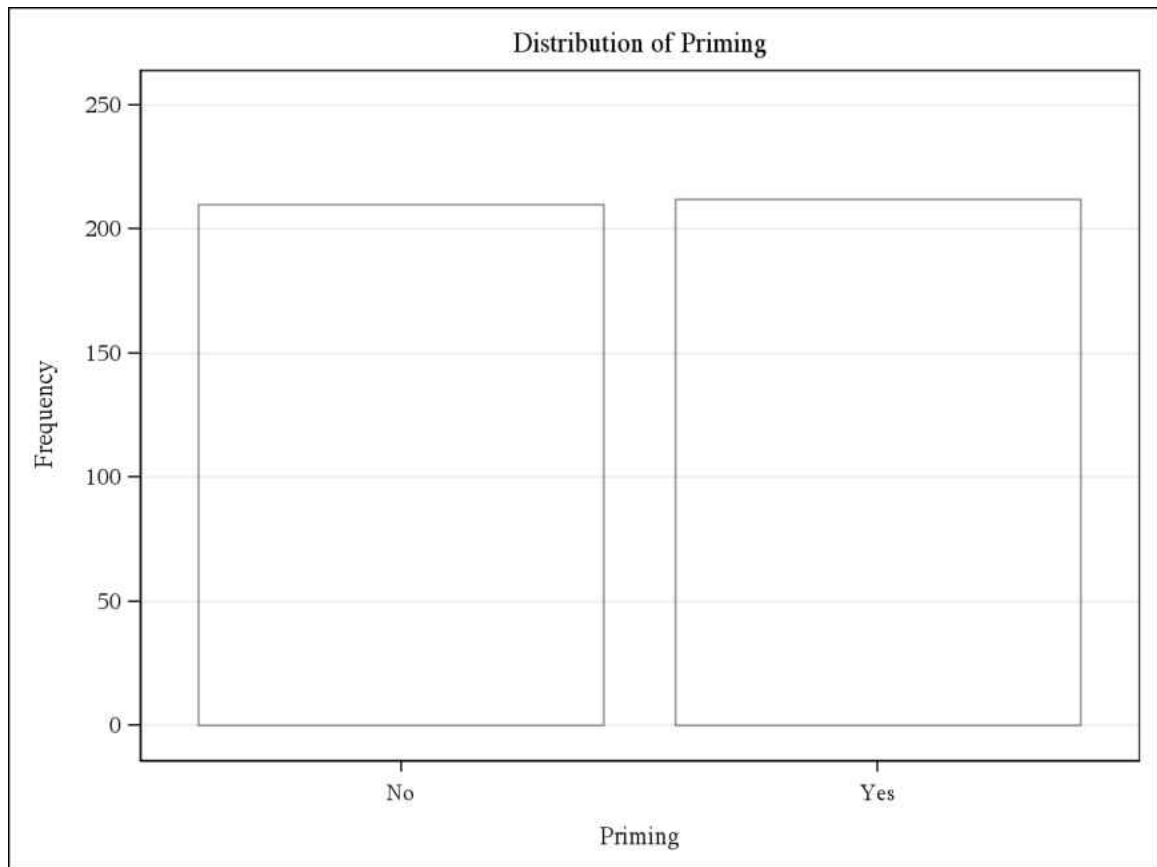


Figure 4. Distribution of Priming.

Gender: Frequency and Distribution

Item one of the survey asked subjects to identify their gender. Table 5 reports the frequency and percent of respondents who responded as male or female. Of the respondents, 209 subjects reported being male (49.53%) and 213 subjects reported being female (50.47%).

Table 5. Frequency and Percent of Gender.

Gender	Frequency	%
Male	209	49.53
Female	213	50.47

Figure 5 shows there was an approximately even distribution between the two genders.

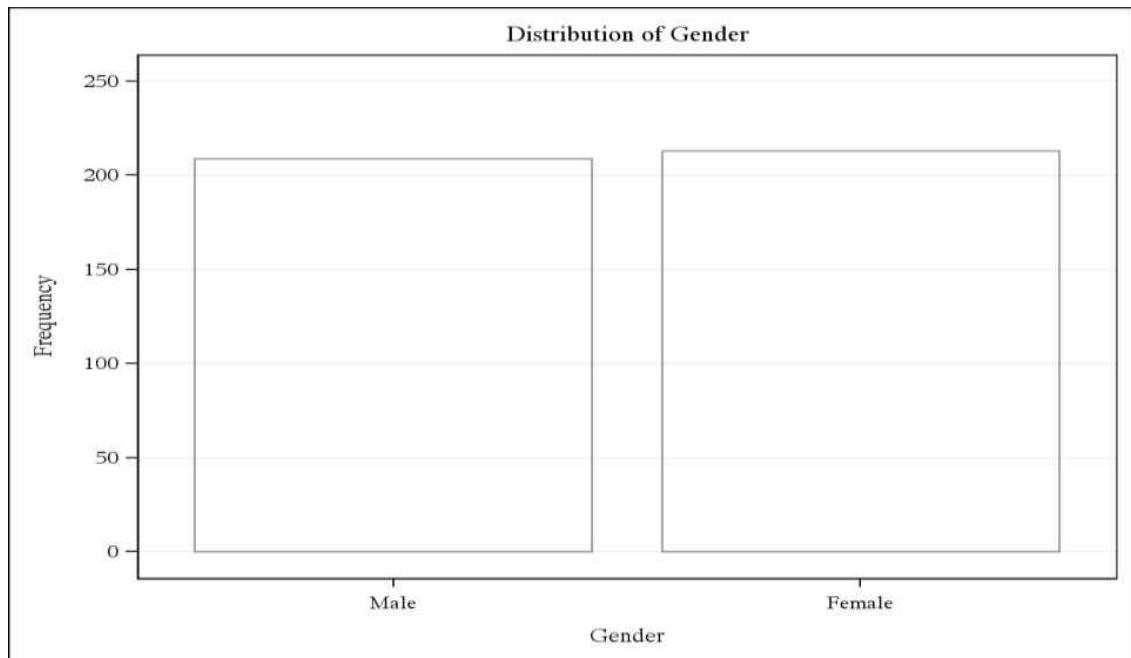


Figure 5. Distribution of gender.

Table 6 reports the frequency and percent of priming by gender. The No Priming Group consisted of 103 males (24.41%) and 107 females (25.36%). The Priming Group consisted of 106 males (25.12%) and 106 females (25.12%).

Table 6. Frequency and Percentage of Priming by Gender.

Priming Frequency %	Gender		
	Male	Female	Total
No	103 24.41	107 25.36	210 49.76
Yes	106 25.12	106 25.12	212 50.24
Total	209 49.53	213 50.47	422 100.00

Figure 6 shows there was roughly an equal number of males and females in the experimental and control group.

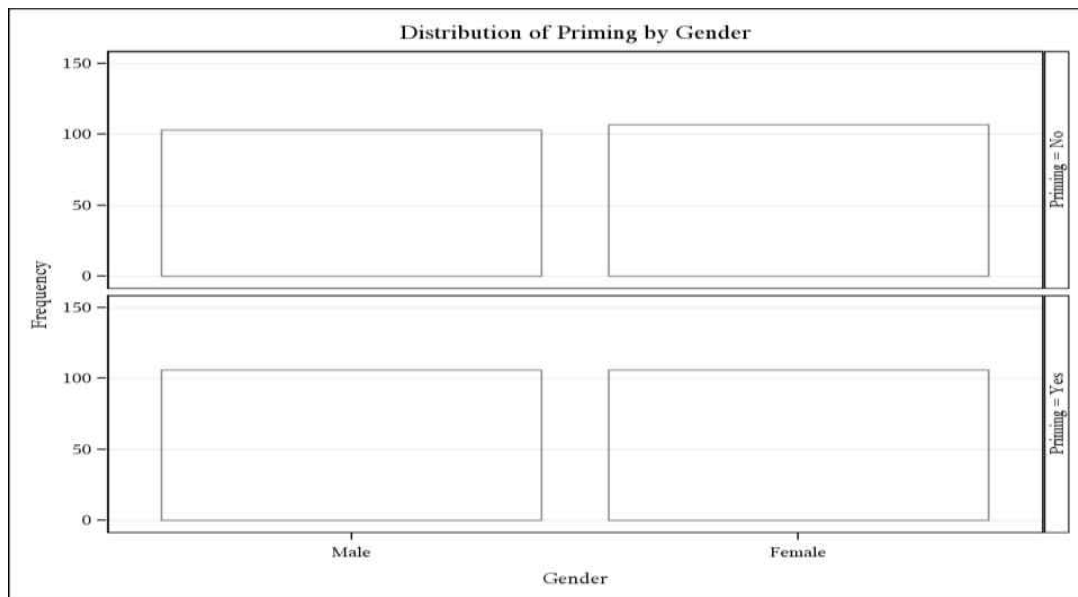


Figure 6. Distribution of priming by gender.

The Number of Art Courses Completed: Frequency and Distribution

Item two of the survey asked subjects to report the number of art courses they had completed using a scale consisting of no art classes to more than six. Because few respondents had taken between two and more than six courses, I collapsed the responses so if a subject circled two or more art courses, their response for item two was entered as two. To accurately capture the effect of the number of art courses in the multiple linear regression models, the number of art courses was simply summarized into three intervals or categories. Table 7 reports the data were captured into the categories or intervals of those subjects who did not report an art course, those who reported one art course, and those who had completed two or more art courses.

Table 7. Frequency and Percentage of the Number of Art Courses Completed.

Number of Art Courses	Frequency	%
No Art Courses	247	58.53
One Art Course	80	18.96
>= 2 Art Courses	95	22.51

Figure 7 shows the distribution of the number of art courses completed by subjects.

Table 8 reports the frequency and percentage of the number of art courses completed by subjects in the No Priming and Priming groups. The distribution of the number of art courses by group in Figure 8 reports that there were similar numbers of subjects in each of the groups.

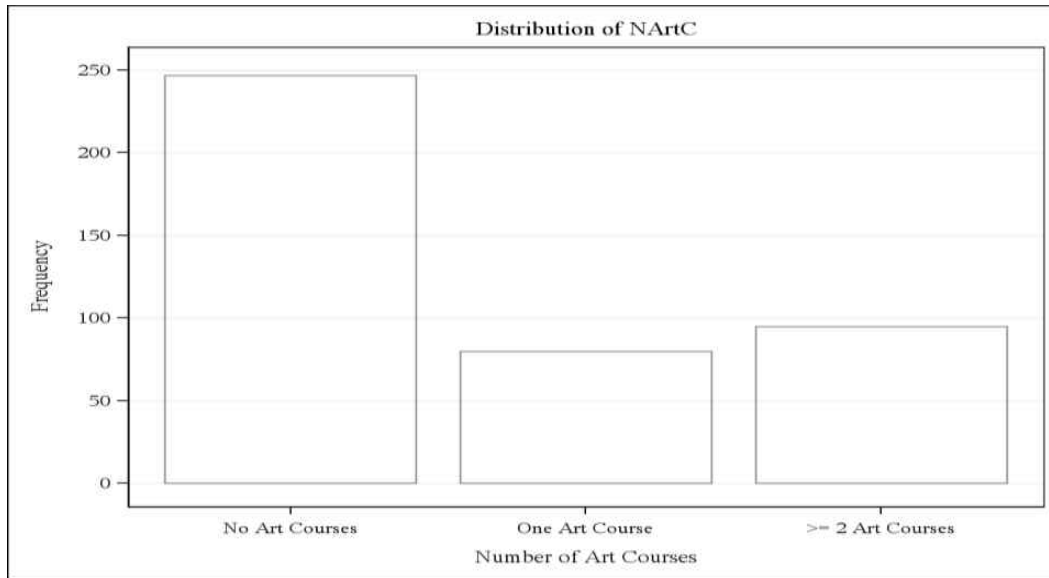


Figure 7. Distribution of the number of art courses completed.

Table 8 reports that 131 (31.04%) subjects in the No Priming Group, and 116 (27.49%) subjects in the Priming Group had not completed any art courses. Thirty-two (7.58%) in the No Priming Group and 48 (11.37%) in the Priming Group had completed one art course. Forty-seven in the No Priming Group and 48 in the Priming Group had completed two or more art courses.

Table 8. Frequency and Percentage of the Number of Art Courses Completed by Priming Group.

Priming	Number of Art Courses			Total
	No Art Courses	One Art Course	≥ 2 Art Courses	
Frequency				
%				
No	131	32	47	210
	31.04	7.58	11.14	49.76
Yes	116	48	48	212
	27.49	11.37	11.37	50.24
Total	247	80	95	422
	58.53	18.96	22.51	100.00

Figure 8 reports the distribution of the number of art courses by the Priming and No Priming groups.

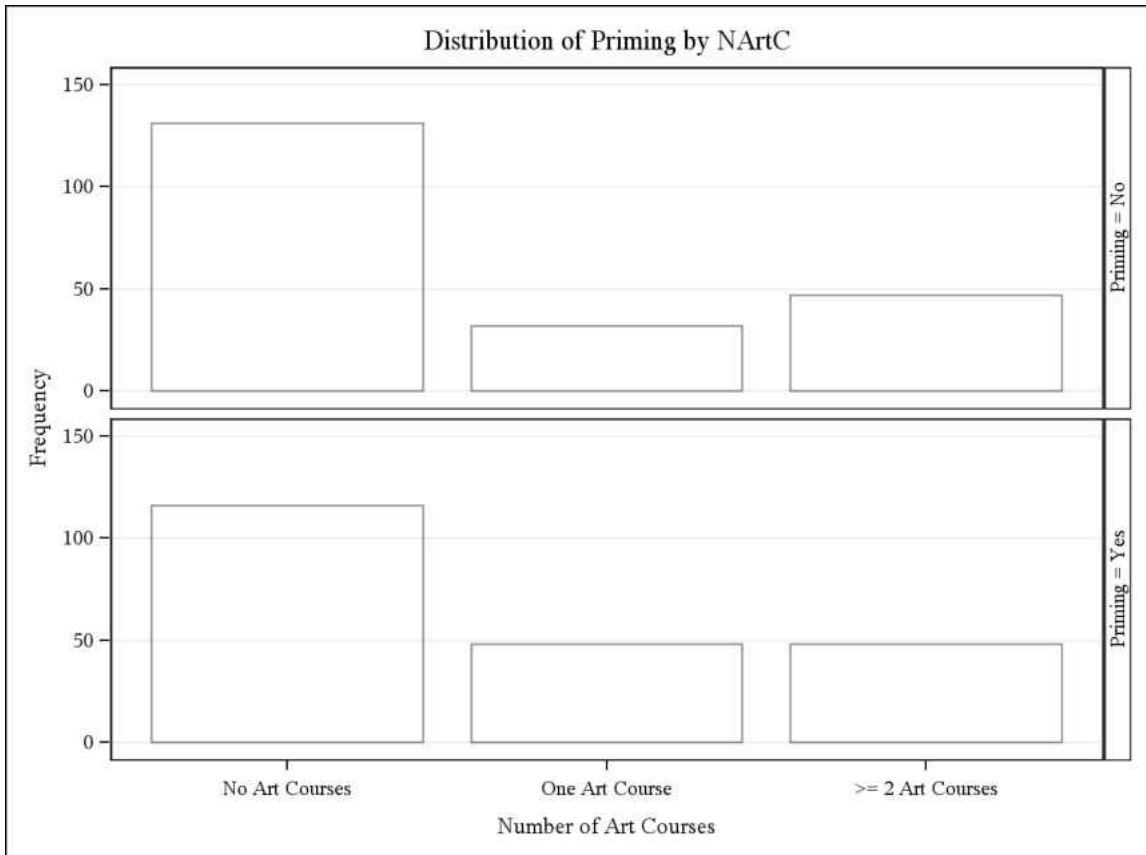


Figure 8. Distribution of the number of art courses completed by priming group.

College Class Status: Frequency and Distribution

Item three of the survey asked subjects to identify what most closely resembled their college class status from among the choices of freshman, sophomore, junior, or senior. To capture accurately the effect of class status in the multiple linear regression models, college class status was collapsed into two categories: those subjects who were lower class persons (e.g., freshmen and sophomores) and those who were upper class persons (e.g., juniors or seniors).

Table 9, and Figure 9 report the frequency and percentage of subjects' college

class status.

Table 9. Frequency and Percent of College Class Status

College Class Status	Frequency	%
Lower Class Persons	177	41.94
Upper Class Persons	245	58.06

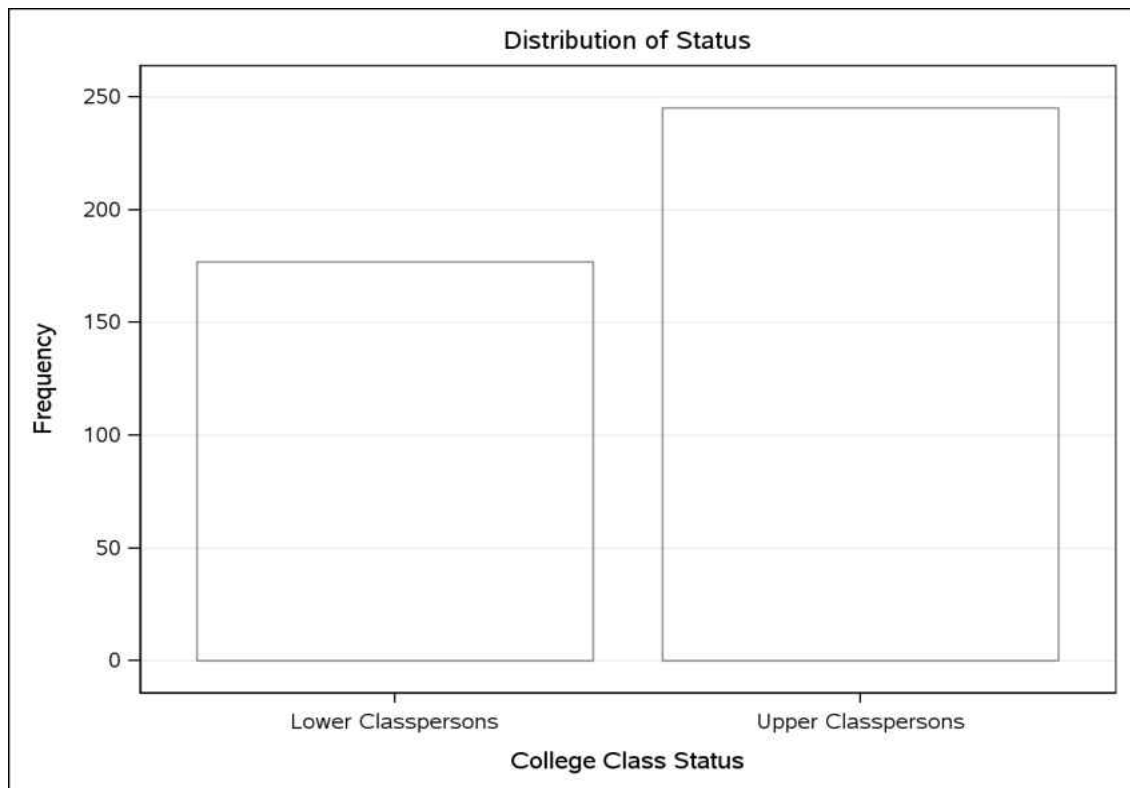


Figure 9. Distribution of college class status.

Table 10 reports that the frequency and percentage of college class status for the No Priming and Priming groups were similar.

Figure 10 shows the distribution of college class status in the Priming and No

Priming groups.

Table 10. Frequency and Percentage of College Class Status by Priming.

Priming	College Class Status		
	Lower Class Persons	Upper Class Persons	Total
No	84 19.91	126 29.86	210 49.76
Yes	93 22.04	119 28.20	212 50.24
Total	177 41.94	245 58.06	422 100.00

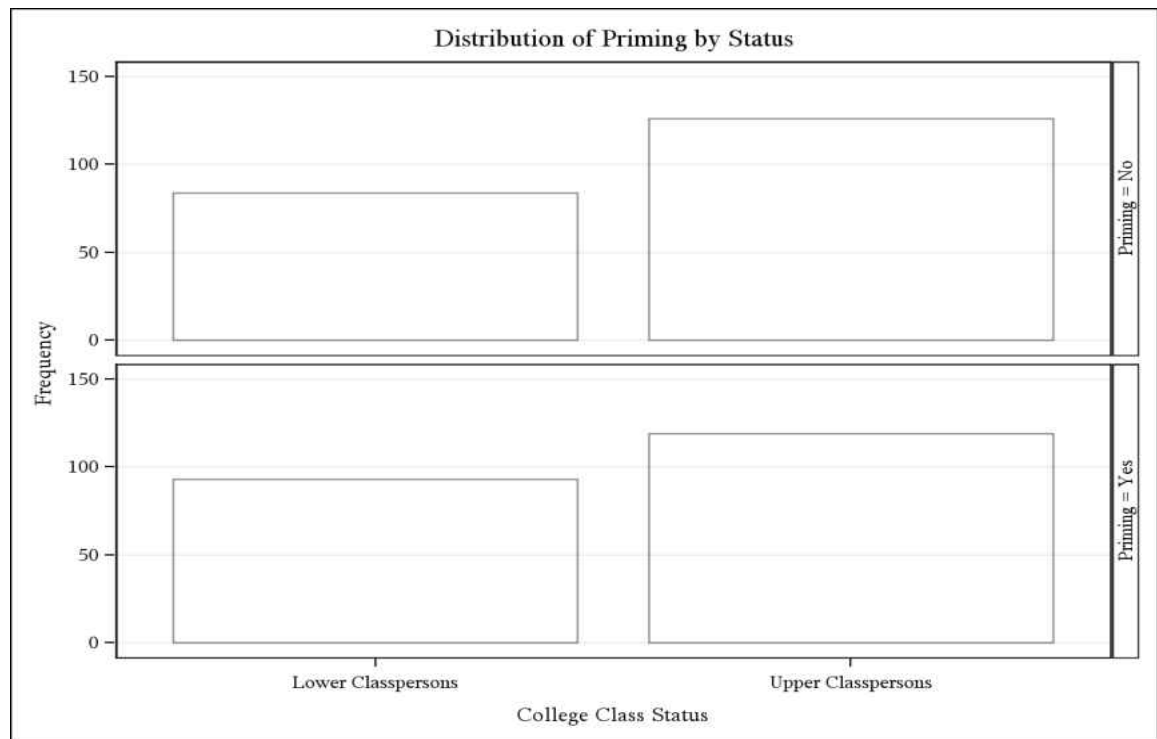


Figure 10. Distribution of college class status by priming.

College Major: Frequency and Distribution

Item four of the survey asked subjects to state their college major. Rather than list every possible identified major, the majors were grouped into meaningful categories based on similar major types, with, for instance, education and human services placed in one category. The majors were grouped into five categories: science and health; business; education, human services, and public affairs; art and humanities; and undecided.

The groupings of the majors are listed in Table 11 with their corresponding frequencies and percentage.

Table 12 reports the frequency and percentage of the college majors between the No Priming Group and the Priming Group.

Summary of Statistics for the Landscape Artworks (Artworks #1, #2, #3) and the Abstract Artworks (Artworks #4, #5, #6)

For each artwork displayed, subjects were required to state the expected financial value of the artwork. Table 13 reports the summary statistics including the number of observations, along with the mean, standard deviation, and the minimum and maximum score allowed for the financial value of each artwork. The number of observations (*N*) or the sample size for the study was 422 for the Priming Group and the No Priming Group together.

Table 11. Frequency and Percentage of College Major Categories.

College Major	Frequency	%
Science and Health	116	27.49
Business	110	26.07
Education, Human Services, Public Affairs	103	24.41
Art and Humanities	88	20.85
Undecided	5	1.18

Figure 11 shows the distribution of the college major categories.

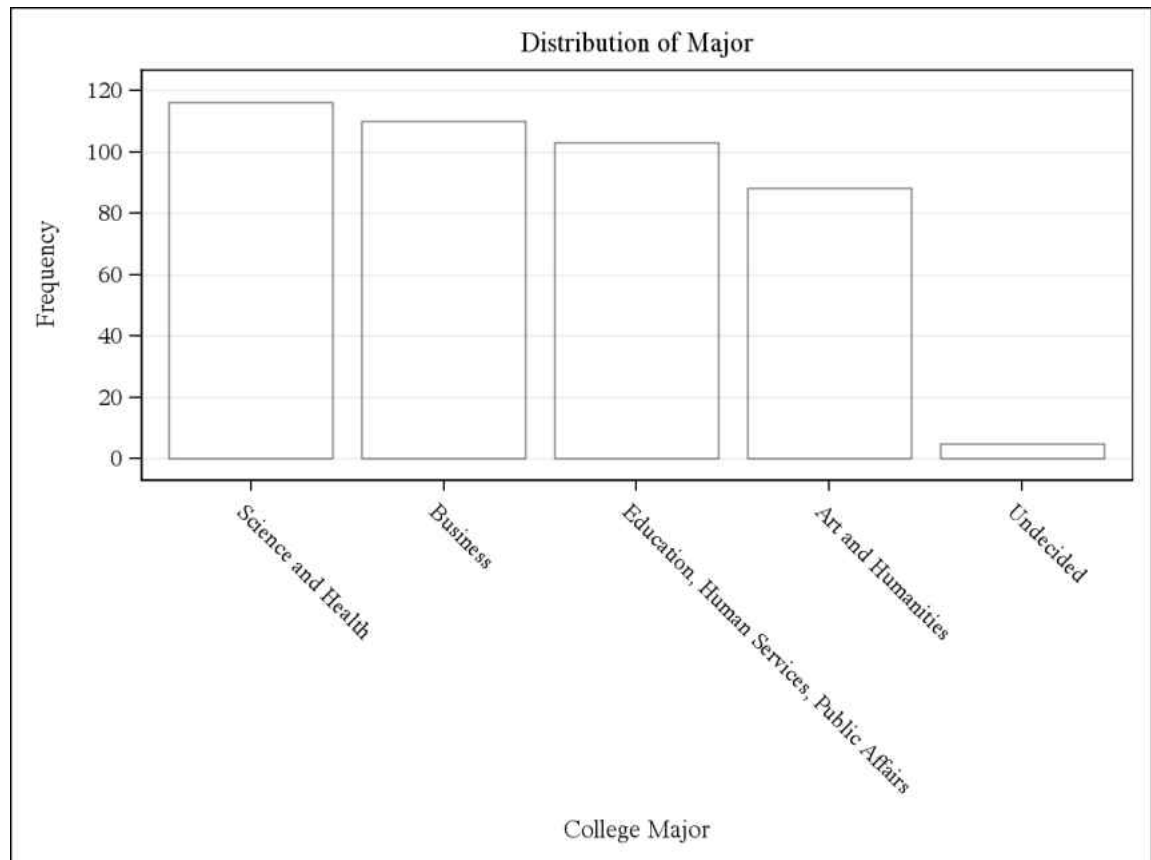


Figure 11. Distribution of college majors.

Table 12. Frequency and Percentage of College Major by Group.

Priming	College Major					Total
	Science and Health	Business	Education, Human Services, Public Affairs	Art and Humanities	Undecided	
Yes	68 16.11	31 7.35	53 12.56	56 13.27	4 0.95	212 50.24
No	48 11.37	79 18.72	50 11.85	32 7.58	1 0.24	210 49.76
Total	116 27.49	110 26.07	103 24.41	88 20.85	5 1.18	422 100.00

Figure 12 reports the distribution of college major by group.

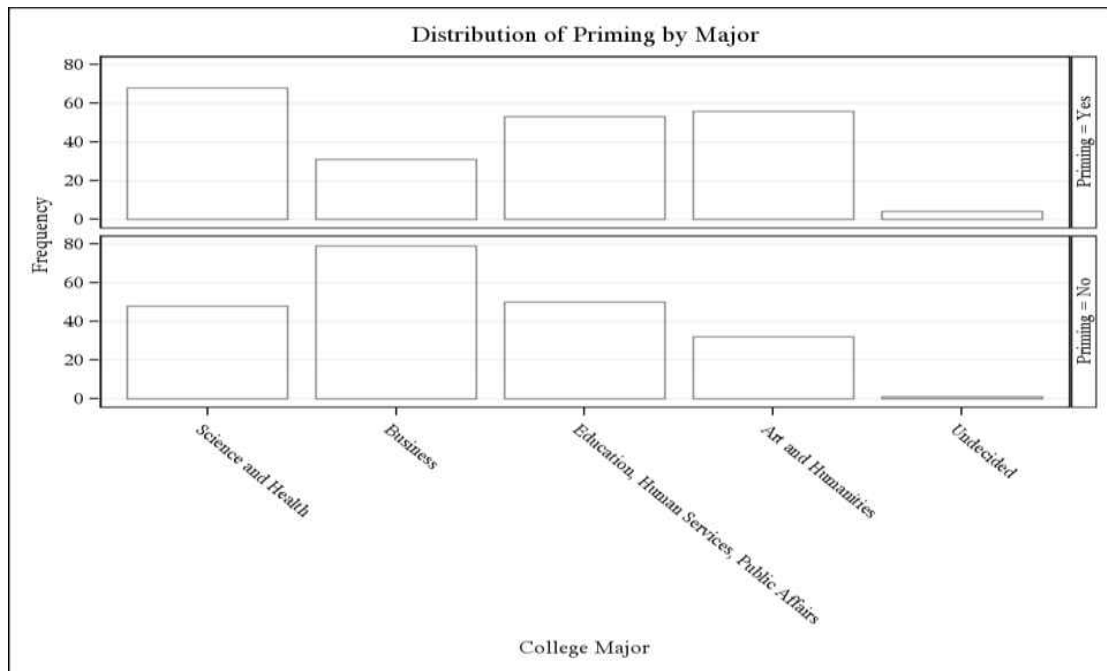


Figure 12. Distribution of college major by group.

Table 13. Summary Statistics for the Landscape and Abstract Artworks.

Variable	N	Mean	Std Dev	Minimum	Maximum
Artwork 1	422	6.13	1.91	1	10
Artwork 2	422	7.16	2.44	1	10
Artwork 3	422	6.18	1.94	1	10
Artwork 4	422	5.28	2.24	1	10
Artwork 5	422	3.47	2.18	1	10
Artwork 6	422	5.62	2.22	1	10

The mean is the average of all the responses for each artwork or the average score for each artwork (LoBiondo-Wood, & Haber, 2010). Page one and two of the survey questionnaire asked subjects to circle the financial value for all six artworks using a ten-point Likert-type scale: (Not Expensive) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (Very Expensive). According to Table 13, Abstract Artwork #5 received the lowest mean valuation of the six artworks while Landscape Artwork #2 had the highest mean valuation.

To better understand the subject's financial valuations and examine the results for outliers, the standard deviation (Std Dev) was computed. The financial valuations were approximately two standard deviations within the mean for each artwork. No observations were removed for outliers. Figure 13 was included as a reminder.

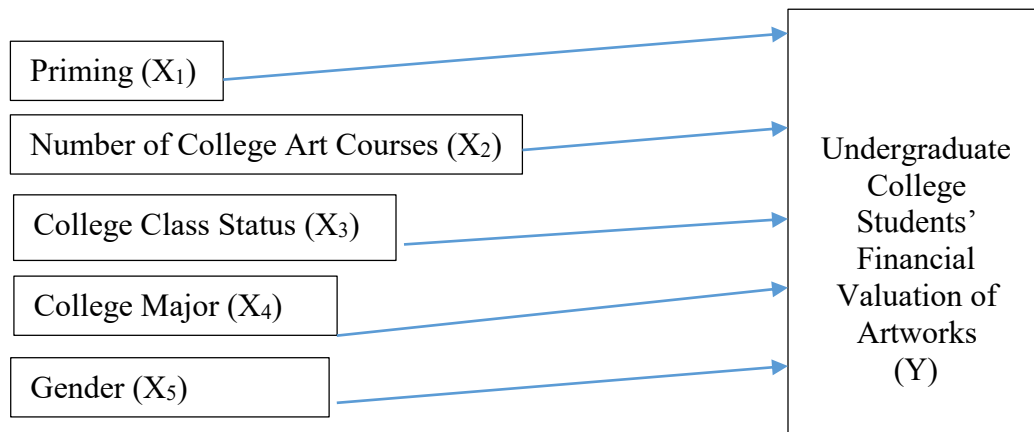


Figure 13. Conceptual framework.

Research Question One Results: Difference in Financial Valuation of Artwork by Priming

Research Question One

Is there a statistically significant difference in college students' financial valuation of art between college students who received priming and college students who did not receive priming?

For the most part, the answer to research question one is yes. This conclusion is derived from the results of a *t*-test. The *t*-test reported a statistical difference in the financial valuation of art between college students who received priming and college students who did not receive priming. Priming was found to be statistically significant for the financial valuation of four of the six artworks in this study at an alpha level of .05 based on the *t*-test. The results, as presented in Tables 14, 15, 16, and 18, report that the landscape artworks (Artworks #1, #2, #3) and Abstract Artwork #5 all showed significant differences in college students' financial valuations between the two groups. Tables 14, 15, 16, 17, 18, 19, 20, and 21 report the mean, standard deviation, 95 percent confidence limit of the mean at an alpha level of .05, and the *p*-value for the financial valuation of

the landscape and abstract artworks for the No Priming Group, the Priming Group, and the difference between the two groups in the financial valuation they selected.

Table 14 reports the mean, standard deviation, 95 percent confidence limit of the mean at an alpha level of .05, and the p -value for the financial valuation of Landscape Artwork #1 for the No Priming Group and the Priming Group. It also reports the difference between the two groups in the financial valuation they selected.

The p -value is the probability of a difference under the null hypothesis occurring by chance (LoBiondo-Wood & Haber, 2010). A t -test was used to test if the average financial valuation of the Priming Group was the same average financial valuation for the No Priming Group for Landscape Artwork #1. Using a t -test to determine if the two group means were different, the comparison between the two groups reports that priming was statistically significant for the financial valuation of Landscape Artwork #1 ($t = 4.23$). The average difference in financial valuation between the Priming Group and the No Priming Group was $M=0.77$ (p -value $<.0001$) for Landscape Artwork #1.

Figure 14 reports the distribution of the financial valuations of Landscape Artwork #1. The distribution of the data were approximately normal for the subjects who were in the No Priming Group and the Priming Group.

Table 15 reports the mean, standard deviation, 95% confidence limit of the mean at an alpha level of .05 and the p -value for the financial valuation of Landscape Artwork #2 for the No Priming Group and the Priming Group. It also reports the difference between the two groups in the financial valuation they selected.

Table 14. Financial Valuation Mean Difference Between No Priming and Priming for Landscape Artwork #1.

Priming	Method	Mean	Std Dev	95% CL of Mean	p-value	
No Priming		5.75	1.92	5.49	6.01	
Priming		6.52	1.81	6.27	6.76	
Diff Between Priming & No Priming	Pooled	0.77	1.87	0.41	1.12	<.0001***

Note: * p<.05, ** p<.01, *** p<.001

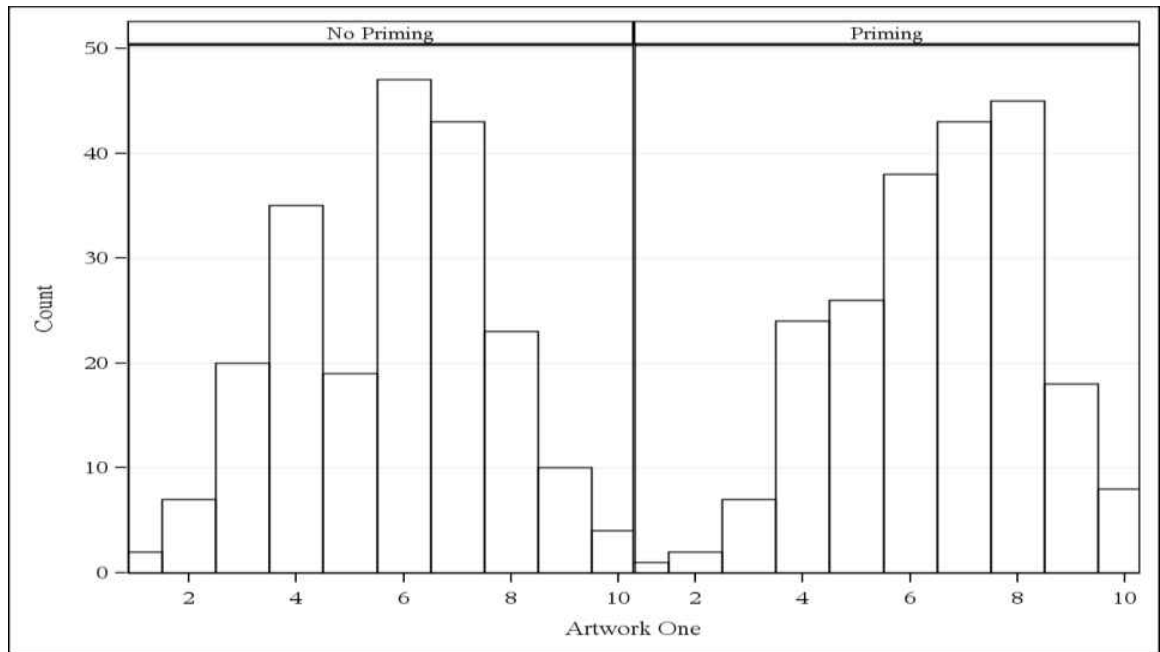


Figure 14. Distribution of financial valuation between no priming and priming for landscape artwork #1

A *t*-test was used to test if the average financial valuation of the Priming Group was the same average financial valuation for the No Priming Group for Landscape Artwork #2. Using a *t*-test to determine if the two group means were different, the

comparison between the two groups reports that priming was statistically significant for the financial valuation of Landscape Artwork #2 ($t = 3.69$). The average difference in financial valuation between the Priming Group and the No Priming Group was $M=0.87$ (p -value =.0003) for Landscape Artwork #2.

Table 15. Financial Valuation Mean Difference Between No Priming and Priming for Landscape Artwork #2.

Priming	Method	Mean	Std Dev	95% CL of Mean		p-value
No Priming		6.72	2.59	6.37	7.08	
Priming		7.59	2.21	7.29	7.89	
Diff Between Priming & No Priming	Pooled	0.87	2.41	0.40	1.32	<.0003***

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 15 reports the distribution of the financial valuations of Landscape Artwork #2. The distribution of the data were approximately normal for the subjects who were in the No Priming Group and the Priming Group; however, the valuations for Landscape Artwork #2 were slightly skewed to the right or seemed to have a ceiling effect.

Table 16 reports the mean, standard deviation, 95% confidence limit of the mean at an alpha level of .05, and the p -value for the financial valuation of Landscape Artwork #3 for the No Priming Group and the Priming Group. It also reports the difference between the two groups in the financial valuation they selected.

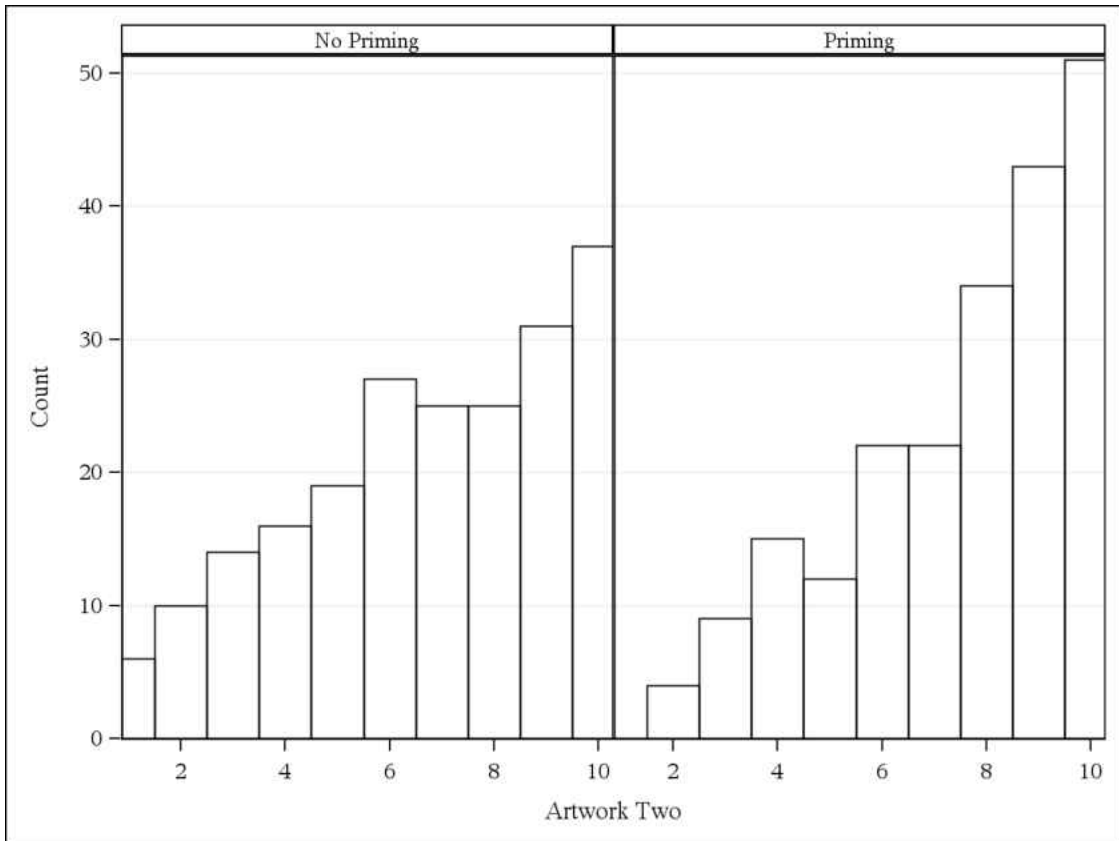


Figure 15. Distribution of financial valuation between no priming and priming for landscape artwork #2.

Table 16. Financial Valuation Mean Difference Between No Priming and Priming for Landscape Artwork #3.

Priming	Method	Mean	Std Dev	95% CL of Mean	p-value
No Priming		5.98	1.96	5.71 6.25	
Priming		7.59	1.91	6.11 6.63	
Diff Between Priming & No Priming	Pooled	0.38	1.93	0.40 0.75	<.0411*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

A *t*-test was used to test if the average financial valuation of the Priming Group was the same average financial valuation for the No Priming Group for Landscape Artwork #3. Using a *t*-test to determine if the two group means were different, the comparison between the two groups reports that priming was statistically significant for the financial valuation of Landscape Artwork #3 ($t = 2.05$). The average difference in financial valuation between the Priming Group and the No Priming Group was $M=0.38$ (p -value = .0411) for Landscape Artwork #3.

Figure 16 reports the distribution of the financial valuations of Landscape Artwork #3. The distribution of the data were approximately normal for the subjects who were in the No Priming Group and the Priming Group.

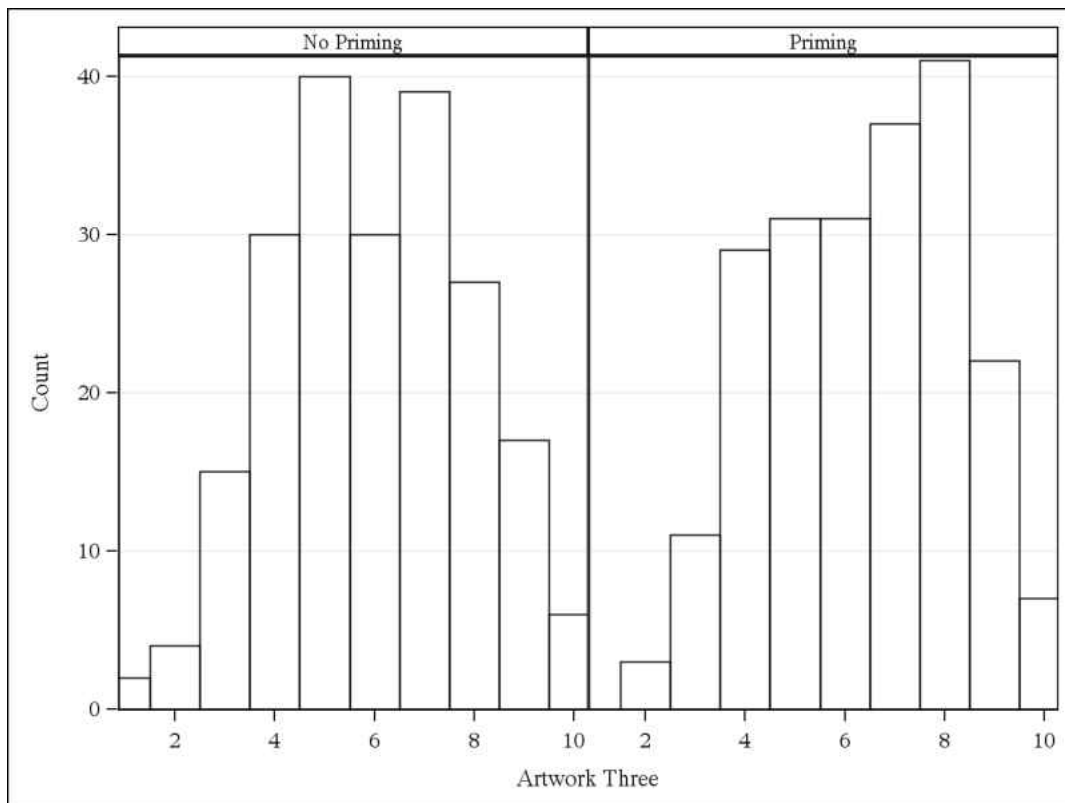


Figure 16. Distribution of financial valuation between no priming and priming for landscape artwork #3

Table 17 reports the mean, standard deviation, 95% confidence limit of the mean at an alpha level of .05, and the *p*-value for the financial valuation of Abstract Artwork #4 for the No Priming Group and the Priming Group. It also reports the difference between the two groups in the financial valuation they selected.

A *t*-test was used to test if the average financial valuation of the Priming Group was the same average financial valuation for the No Priming Group for Abstract Artwork #4. Using a *t*-test to determine if the two group means were different, the comparison between the two groups reports that priming was not statistically significant for the financial valuation of Abstract Artwork #4 ($t = 1.27$). For this study, the average difference between the Priming Group and the No Priming Group was $M = -0.28$ ($p\text{-value} = .2035$) for Abstract Artwork #4.

Table 17. Financial Valuation Mean Difference Between No Priming and Priming for Abstract Artwork #4.

Priming	Method	Mean	Std Dev	95% CL of Mean		p-value
No Priming		5.42	2.18	5.12	6.25	
Priming		5.14	2.28	4.83	6.63	
Diff Between Priming & No Priming	Pooled	-0.28	2.23	0.01	0.75	<.2035

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 17 reports the distribution of the financial valuations of Abstract Artwork #4. The distribution of the data were approximately normal for the subjects who were in the No Priming Group and the Priming Group

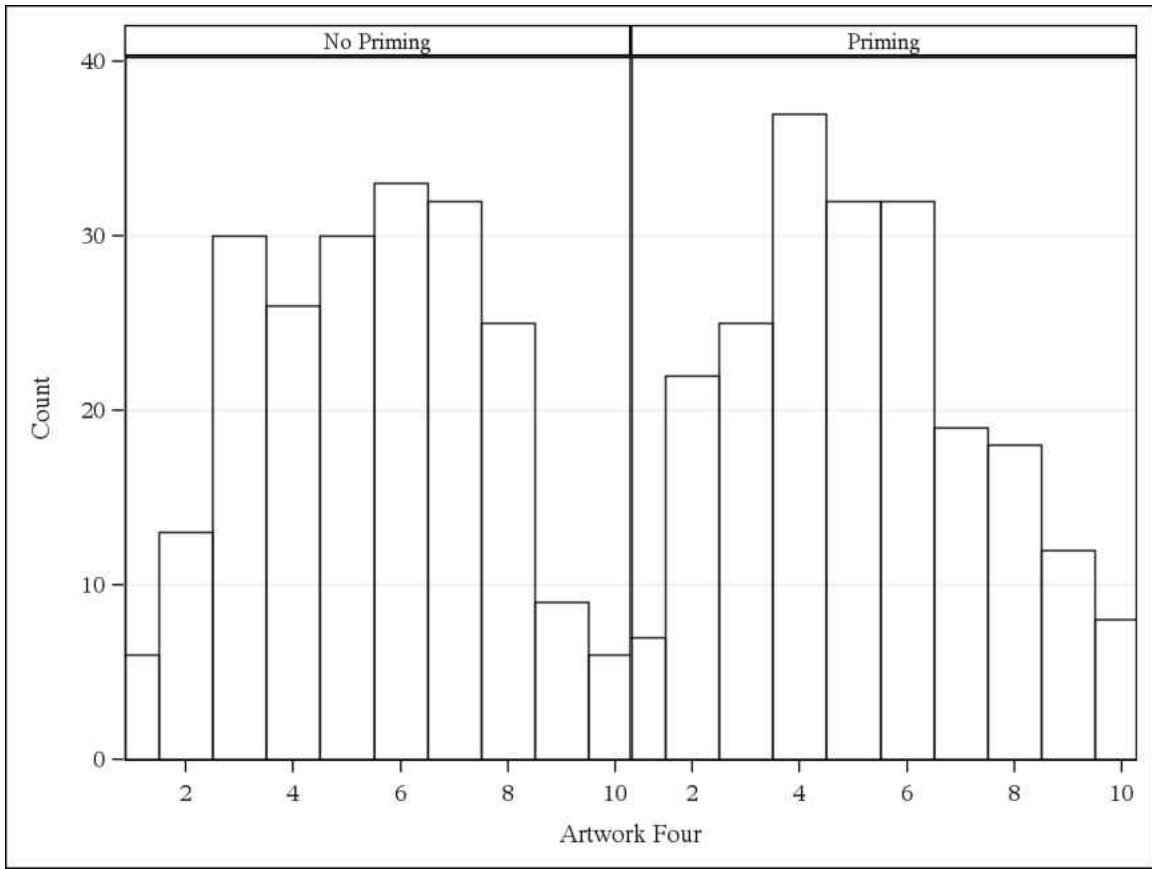


Figure 17. Distribution of financial valuation between no priming and priming for abstract artwork #4

Table 18 reports the mean, standard deviation, 95% confidence limit of the mean at an alpha level of .05, and the *p*-value for the financial valuation of Abstract Artwork #5 for the No Priming Group and the Priming Group. It also reports the difference between the two groups in the financial valuation they selected.

A *t*-test was used to test if the average financial valuation of the Priming Group was the same average financial valuation for the No Priming Group for Abstract Artwork #5. Using a *t*-test to determine if the two group means were different, the comparison between the two groups reports that priming was statistically significant for the financial valuation of Abstract Artwork #5 ($t = 2.56$). The average difference in financial

valuation between the Priming Group and the No Priming Group was $M=0.54$ (p -value $=.0107$) for Abstract Artwork #5.

Table 18. Financial Valuation Mean Difference Between No Priming and Priming for Abstract Artwork #5.

Priming	Method	Mean	Std Dev	95% CL of Mean		p-value
No Priming		3.20	1.97	2.93	3.46	
Priming		3.74	2.34	3.42	4.05	
Diff Between Priming & No Priming	Pooled	0.54	2.16	0.12	0.95	<.0107**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 18 reports the distribution of the financial valuations of Abstract Artwork #5. The distribution of the data were approximately normal for the subjects who were in the No Priming Group and the Priming Group, although both distributions tend to be a skewed to the left with a possible floor effect. After looking at the distribution of Abstract Artwork #5, it appears as the students liked this artwork the least.

Table 19 reports the mean, standard deviation, 95% confidence limit of the mean at an alpha level of .05, and the p -value for the financial valuation of Abstract Artwork #6 for the No Priming Group and the Priming Group. It also reports the difference between the two groups in the financial valuation they selected.

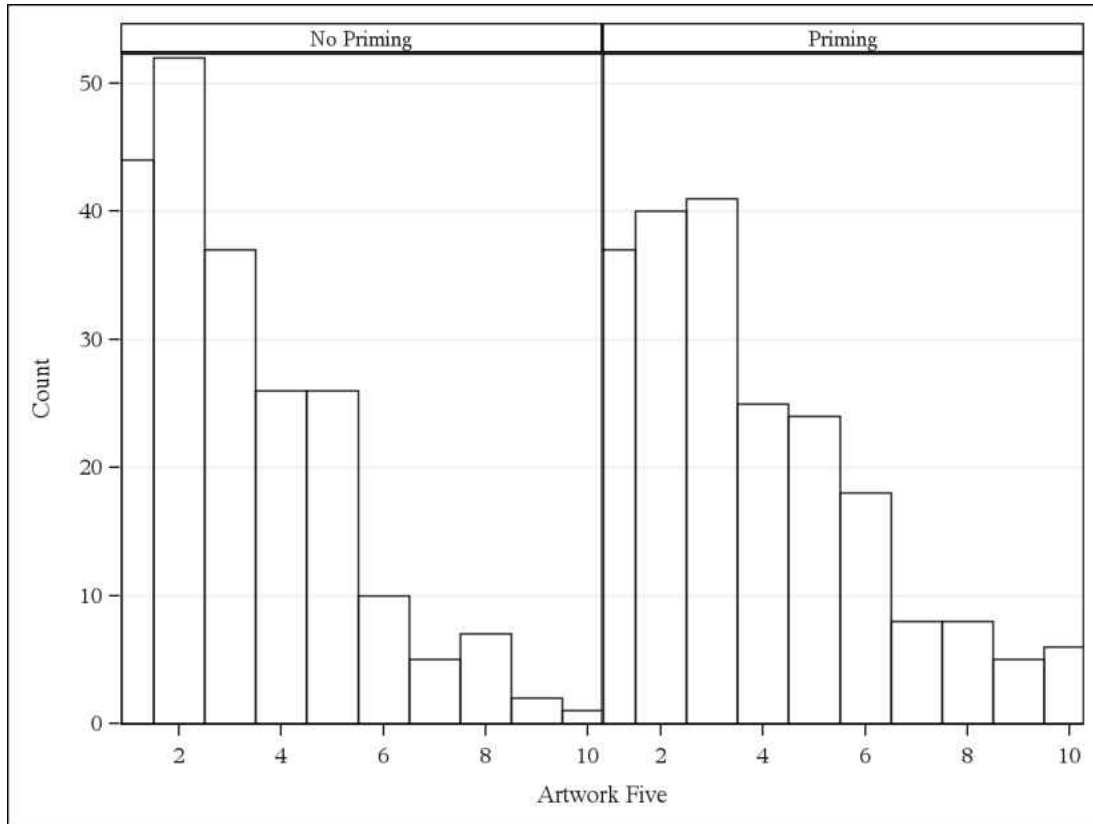


Figure 18. Distribution of financial valuation between no priming and priming for abstract artwork #5.

Table 19. Financial Valuation Mean Difference Between No Priming and Priming for Abstract Artwork #6.

Priming	Method	Mean	Std Dev	95% CL of Mean	p-value	
No Priming		5.61	2.01	5.34	5.89	
Priming		5.63	2.42	5.30	5.96	
Diff Between Priming & No Priming	Pooled	0.02	2.23	0.40	0.44	<.9349

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

A *t*-test was used to test if the average financial valuation of the Priming Group was the same average financial valuation for the No Priming Group for Abstract Artwork #6. Using a *t*-test to determine if the two group means were different, the comparison between the two groups reports that priming was not statistically significant for the financial valuation of Abstract Artwork #6 ($t = 0.08$). In this sample, the average difference in financial valuation between the Priming Group and the No Priming Group was $M=0.02$ ($p\text{-value} = .9349$) for Abstract Artwork #6.

Figure 19 reports the distribution of the financial valuations of Abstract Artwork #6. The distribution of the data were approximately normal for the subjects who were in the No Priming Group and the Priming Group.

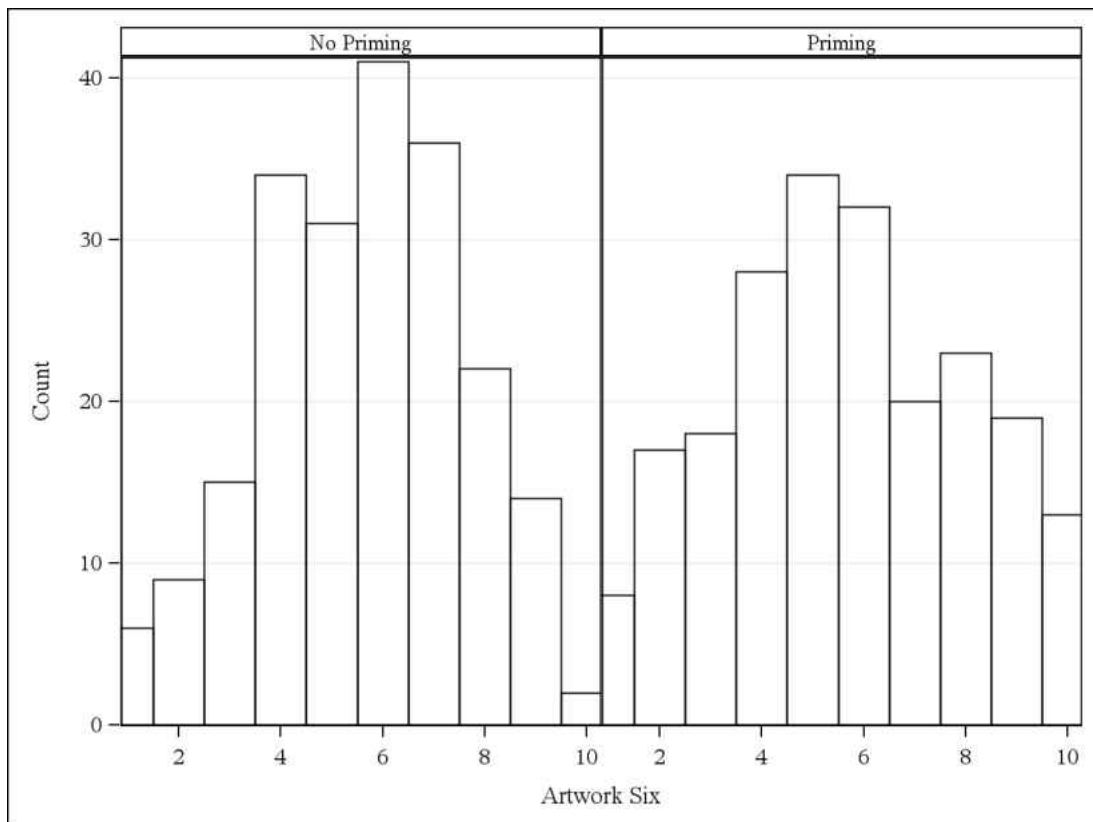


Figure 19. Distribution of financial valuation between no priming and priming for abstract artwork #6.

The financial valuation of the landscape artworks was calculated as the sum of Artworks #1, #2, and #3. Table 20 reports the mean, standard deviation, 95% confidence limit of the mean at an alpha level of .05, and the *p*-value for the financial valuation of the landscape artworks for the No Priming Group and the Priming Group. It also reports the difference between the two groups in the financial valuation they selected.

A *t*-test was used to test if the average financial valuation of the Priming Group was the same average financial valuation for the No Priming Group for the landscape artworks. Using a *t*-test to determine if the two group means were different, the comparison between the two groups reports that priming was statistically significant for the summed financial valuation of the landscape artworks ($t = 5.06$). In this sample, the Priming Group scored the artworks higher than did the No Priming Group. For this study, the average difference in financial valuation between the Priming Group and the No Priming Group was $M=2.02$ (p -value $<.0001$) for the landscape artworks.

Table 20. Financial Valuation Mean Difference Between No Priming and Priming Calculated as the Sum of the Landscape Artworks (Artworks #1, #2, #3).

Priming	Method	Mean	Std Dev	95% CL of Mean		p-value
No Priming		18.47	4.37	17.87	19.06	
Priming		20.49	3.83	19.97	21.00	
Diff Between Priming & No Priming	Pooled	2.02	4.10	2.81	1.23	<.0001***

Note. * $p<.05$, ** $p<.01$, *** $p<.001$

Figure 20 reports the distribution of the financial valuations calculated as the sum of the landscape artworks (Artworks #1, #2, #3). The distribution of the data were approximately normal for the subjects who were in the No Priming Group and the Priming Group.

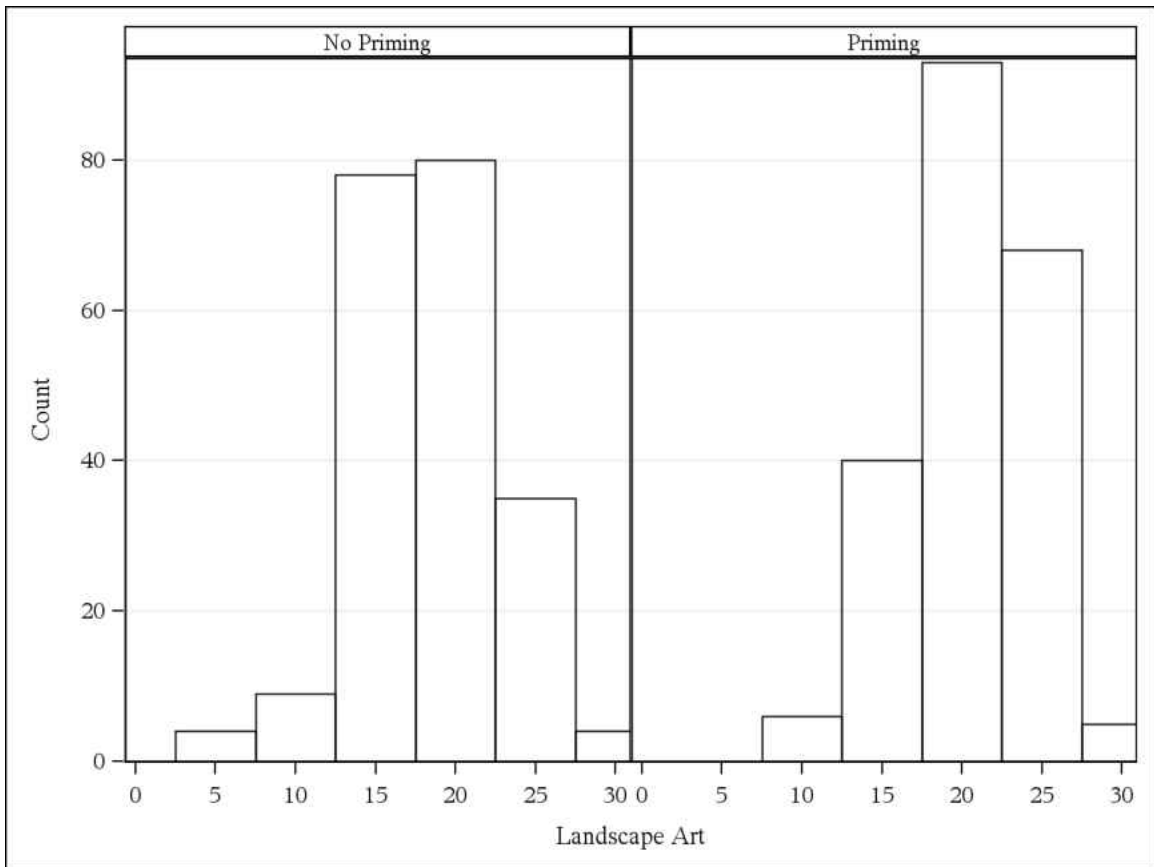


Figure 20. Distribution of financial valuation between no priming and priming calculated as the sum of the landscape artworks (artworks #1, #2, #3).

The financial valuation of the abstract artworks was calculated as the sum of Artworks #4, #5, and #6. Table 21 reports the mean, standard deviation, 95 percent confidence limit of the mean at an alpha level of .05, and the *p*-value for the financial valuation of the abstract artworks for the No Priming Group and the Priming Group. It

also reports the difference between the two groups in the financial valuation they selected.

A *t*-test was used to test if the average financial valuation of the Priming Group was the same average financial valuation for the No Priming Group for the abstract artworks. Using a *t*-test to determine if the two group means were different, the comparison between the two groups reports that priming was not statistically significant for the summed financial valuation of the abstract artworks ($t = 0.60$). For this sample, the average difference in financial valuation between the Priming Group and the No Priming Group was $M=0.28$ and was not found to be statistically significant (p -value 0.5) for the abstract artworks.

Table 21. Financial Valuation Mean Difference Between No Priming and Priming Calculated as the Sum of the Abstract Artworks (Artworks #4, #5, #6).

Priming	Method	Mean	Std Dev	95% CL of Mean		p-value
No Priming		14.24	4.48	13.63	14.85	
Priming		14.52	5.13	13.82	13.82	
Diff Between Priming & No Priming	Pooled	0.28	4.81	1.20	1.20	<.5500

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 21 reports the distribution of the financial valuations calculated as the sum of the abstract artworks (Artworks #4, #5, #6). The distribution of the data were approximately normal for the subjects who were in the No Priming Group and the Priming Group.

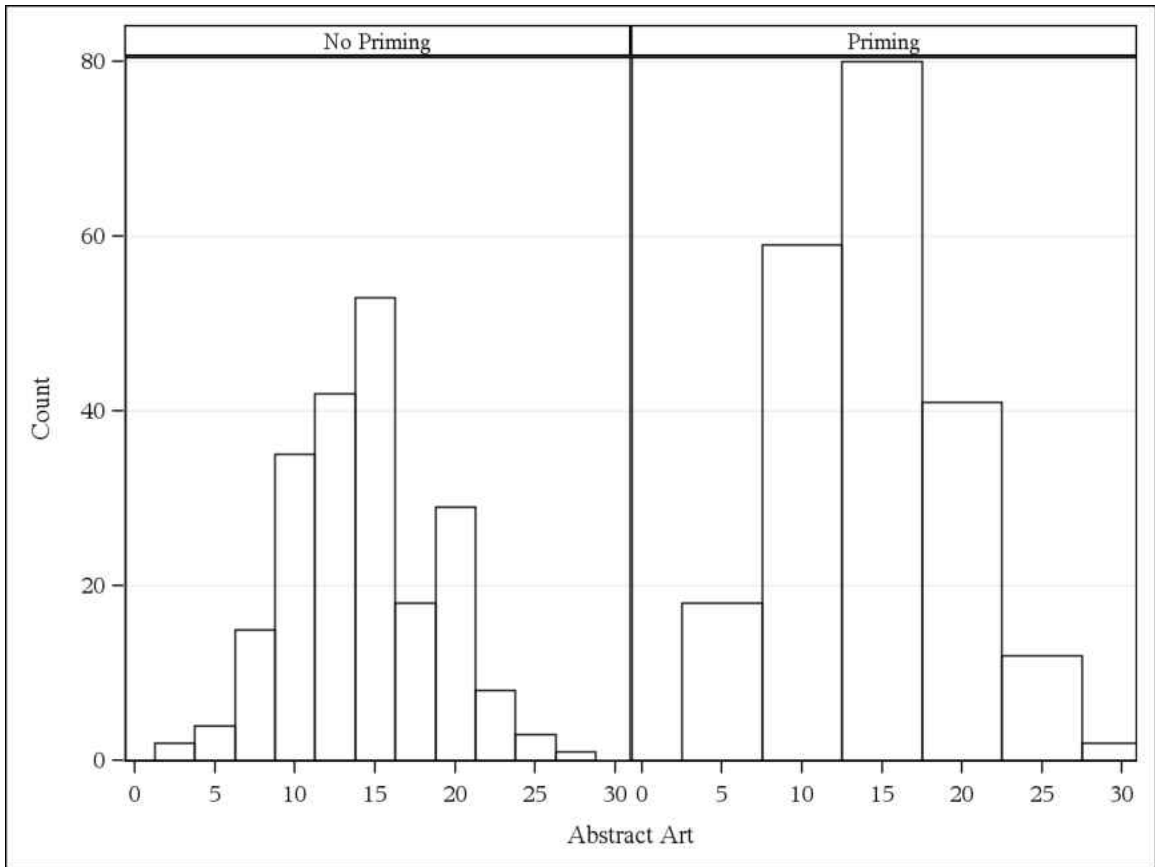


Figure 21. Distribution of financial valuation between no priming and priming for the abstract artworks (artworks #4, #5, #6).

Research Question Two Results: Difference in Financial Valuation of Artwork By the Effect of Independent Variables

Research Question Two

Do the other independent variables have a significant effect or not?

For some of the independent variables, the answer to research question two is yes.

This conclusion is derived from the results of a stepwise multiple linear regression (MLR) model. The stepwise MLR model reported a statistical difference in the effect of the independent variables: priming, gender, and the number of art courses completed.

The categorical priming effect was found to be a statistically significant effect for the

financial valuation of three of the six artworks in this study at an alpha level of .05, based on the stepwise MLR model. The categorical gender effect, that is the dummy variable for female, was found to be a statistically significant effect for two of the six artworks. The number of art courses effect completed was found to be a statistically significant effect for one of the six artworks. The results reported in this section indicate that the landscape artworks and one of the abstract artworks had a significant statistical difference in the effect created by at least one independent variable.

Stepwise Multiple Linear Regression Model for the Artworks

Research question two speculates whether independent variables other than priming have any significant effect on the financial valuation of art. In order to distinguish the effect of priming on the financial valuation of art, it was necessary to determine if other independent variables also affected the financial valuation of art. A stepwise MLR model was used to determine if any of the independent categorical variables had a significant effect on the financial valuation of art. The stepwise MLR model separated the independent categorical variables or effects that had a significant effect on the financial valuation of art into an Effects Table for each artwork. The independent categorical effects were entered into the stepwise MLR model one at a time in the following group order for each artwork: priming, gender, number of art courses completed, college class status, and college major.

For Landscape Artwork #1, priming was entered into the stepwise MLR model on the first step through the data and gender was then entered on the second step. For Landscape Artwork #1, priming and gender effects were determined by the model to have a statistically significant effect on the financial valuation of art for this study. The other

independent variables of college class status, college major, and the number of art courses completed were determined by the model not to have a statistically significant effect on the financial valuation of the art, after accounting for priming and gender effects.

Table 22 reports the significant effects for Landscape Artwork #1 as priming and gender.

Table 22. Effects on Financial Valuation for Landscape Artwork #1.

Landscape Artwork #1	Stepwise MLR Model
Effects:	Priming, Gender

Parameter Estimates

After the stepwise MLR model indicated there was a significant priming effect and a significant gender effect on the financial valuation for Landscape Artwork #1, the parameter estimates were calculated. Because this study used a ten-point Likert-type scale to determine financial value, the estimated average change is in terms of Likert-type scale points. Table 23 reports that if the subjects were in the No Priming Group, their estimated mean difference in their financial valuation was 0.77 (p -value $<.0001$) lower than the financial valuation made by subjects in the Priming Group which was selected as the reference level. Table 23 reports that the difference between genders was statistically significant and the parameter estimate for the female gender was 0.85 (p -value $<.0001$). That is, females scored Landscape Artwork #1 on average 0.85 units higher than did males, after accounting for whether they were primed or not.

Table 23. Parameter Estimates for Landscape Artwork #1.

Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	6.09	0.15	39.66	<.0001
No Priming	-0.77	0.17	-4.38	<.0001
Priming	0	.	.	.
Gender Female	0.85	0.17	4.80	<.0001
Gender Male	0			

Table 24 reports that the stepwise MLR model selected the independent variables of priming and the number of art courses completed as significant effects on the financial valuation of Landscape Artwork #2. Priming was entered into the stepwise MLR model on the first step through the data, and the number of art courses completed was selected on the second step. The other independent variables of gender, college class status, and college major were not designated by the model because they were not found to have a statistically significant effect on the financial valuation of Landscape Artwork #2.

Table 24. Effects on Financial Valuation for Landscape Artwork #2.

Landscape Artwork #2	Stepwise MLR Model
Effects:	Priming and Number of Art Courses Completed

Table 25 shows the parameter estimates as reported by the stepwise MLR model for the financial valuation of Landscape Artwork #2. The parameter estimate for the No

Priming Group was -0.87 (p -value < .0001). The No Priming Group scored Landscape Artwork #2 an estimated average 0.87 units lower than did the Priming Group. This difference was significant because the p -value was less than .05. The number of art courses the subject completed also was significant for the financial valuation of Landscape Artwork #2. There was a difference between the subjects who took two or more art courses because they scored the artwork an estimated 1.36 (p -value = .0002) units higher than did those who had only one art course. It is interesting to note that when subjects had one or no art courses, the difference in financial valuations was not statistically significant (p -value = 0.8679).

Table 25. Parameter Estimates for Landscape Artwork #2.

Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	7.25	0.28	26.04	<.0001
No Priming	-0.87	0.23	-3.76	<.0001
Priming	0	.	.	.
>=2 Art Courses	1.36	0.36	3.80	.0002
No Art Courses	0.05	0.30	0.17	.8679
One Art Course	0			

Table 26 reports that the stepwise MLR model selected gender as the only independent variable to have a significant effect on the financial valuation of Landscape Artwork #3. The other independent variables of priming, college class status, number of

art courses completed, and college major were determined by the stepwise MLR model not to have any statistical significance on financial valuation of Landscape Artwork #3.

Table 26. Effects on Financial Valuation for Landscape Artwork #3.

Landscape Artwork #3	Stepwise MLR Model
Effects:	Gender

Table 27 shows the parameter estimates as reported by the stepwise MLR model for the financial valuation of Landscape Artwork #3. The parameter estimate for the females was 0.72 (p -value = 0.0001). That is, the females scored Landscape Artwork #3 an estimated 0.72 units higher than did males. This result is similar to the findings regarding Landscape Artwork #1, where females also scored the artwork higher than did the males. Previously, in Table 16 for Landscape Artwork #3, the t -test indicated that there was a significant difference for those subjects who were primed or not, with a p -value of .0411 on the financial valuation. In the MLR setting, the gender effect was more significant than the priming effect, which was not found to be significant after gender was included in the model.

Table 28 reports that the stepwise MLR model determined there were no effects that were statistically significant on the financial valuation of Abstract Artwork #4. The stepwise MLR model determined that there was no significant variation in financial valuation for Abstract Artwork #4 when any of the independent variables were selected.

Table 27. Parameter Estimates for Landscape Artwork #3.

Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	5.82	0.13	43.90	<.0001
Gender Female	0.72	0.19	3.84	<.0001
Gender Male	0			

Table 28. Effects on Financial Valuation for Abstract Artwork #4.

Landscape Artwork #4	Stepwise MLR Model
Effects:	None

Table 29 reports the stepwise MLR model selected the independent variable of priming as a significant effect on the financial valuation for Abstract Artwork #5.

Priming was entered into the stepwise MLR model on the first step through the data, and no other independent variables were selected by the model. The other independent variables were not selected by the model because they were not found to be statistically significant on the financial valuation of Abstract Artwork #5.

Table 29. Effects on Financial Valuation for Abstract Artwork #5.

Landscape Artwork #5	Stepwise MLR Model
Effects:	Priming

Table 30 shows the parameter estimates as reported by the stepwise MLR model for the financial valuation of Abstract Artwork #5. The parameter estimate for the No Priming Group was -0.54 (p -value = 0.0108). The No Priming Group scored Abstract Artwork #5 an estimated 0.54 units lower than did the Priming Group, and the difference was significant because the p -value was less than .05.

Table 30. Parameter Estimates for Abstract Artwork #5.

Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	3.74	0.15	25.13	<.0001
Gender Female	-0.54	0.21	-2.56	.0108
Gender Male	0			

Table 31 reports that the stepwise MLR model determined there were no statistically significant effects on the financial valuation of Abstract Artwork #6. The stepwise MLR model determined that there was no significant variation in financial valuation for Abstract Artwork #6 when any of the independent variables were selected.

Table 31. Effects on Financial Valuation for Abstract Artwork #6.

Landscape Artwork #6	Stepwise MLR Model
Effects:	None

Table 32 reports that, for the landscapes artworks (Artworks #1, #2, #3), priming was entered into the stepwise MLR model on the first step through the data, gender was

entered on the second step, and the number of art courses completed was entered on the third step. For the financial valuation of the landscape artworks (calculated as the sum of the financial valuation of Artworks #1, #2, #3), the effect of priming, gender, and the number of art courses completed were statistically significant effects on the financial valuation of art. The other independent variables of college class status and college major were determined by the model not to be statistically significant effects on the financial valuation of the art—after accounting for the effects of priming, gender, and number of art courses.

Table 32. Effects on Summed Financial Valuation of the Landscape Artworks (Artworks #1, #2, #3).

Landscape Artworks	Stepwise MLR Model
Effects:	Priming, Gender, and Number of Art Courses Completed

Summed Parameter Estimates

In Table 32, the stepwise MLR model indicated that priming, gender, and the number of art courses completed had a significant effect on the summed financial valuation of the landscape artworks (Artworks #1, #2, #3). The parameter estimates were calculated and reported in Table 33. If the subjects were in the No Priming Group, their estimated mean financial valuation was 2.05 (p -value $<.0001$) lower than that of the subjects in the Priming Group.

Table 33 reports that the difference between genders was statistically significant, and the parameter estimate for the female gender was 1.98 (p -value $<.0001$). That is,

females scored the landscape artworks (Artworks #1, #2, #3 summed) at 1.98 units higher than did the males, whether they received priming or not. The number of art courses the subject completed also yielded significant findings for the financial valuation of the artworks. There was a mean estimated difference between the subjects who had taken two or more art courses. These subjects scored the artworks an estimated 2.10 (p -value = .0005) units higher than did those who had taken only one art course. For this sample, it is interesting to note that the difference in financial valuations between subjects who had taken one art course or no art courses was not statistically significant (p -value = 0.7932).

Table 33. Parameter Estimates for the Summed Financial Valuation of Landscape Artworks (Artworks #1, #2, #3).

Parameter	Estimate	Standard Error	t Value	Pr > t
Intercept	18.95	0.48	39.37	<.0001
No Priming	2.05	0.38	-5.40	<.0001
Priming	0			
Gender Female	1.98	0.38	5.17	<.0001
Gender Male	0			
>=2 Art Courses	2.10	0.60	3.52	.0005
No Art Course	0.13	0.50	0.26	.7932
One Art Course	0			

Table 34 reports that the stepwise MLR model did not determine any statistically significant effects on the financial valuation of the abstract artworks (Artworks #4, #5, and #6) summed. The stepwise MLR model also found no significant variation in

financial valuation for the abstract artworks (Artworks #4, #5, and #6) when any of the independent variables were selected.

Table 34. Effects on Summed Financial Valuation of the Abstract Artworks (Artworks #4, #5, #6).

Abstract Artworks	Stepwise MLR Model
Effects:	None

Research Question Three Results: Difference in Financial Valuation of Artwork by Effect of the Type of Art

Research Question Three

Does the type of art have an effect?

For the most part, the answer to research question three is yes. This conclusion is derived from the results of a Pearson correlation coefficient at an alpha of .05. The Pearson correlation coefficient reported that there was a correlation between the two types of art, landscape and abstract. Table 35 reports there was a positive correlation between the landscape artworks (Artworks #1 and #2). There was also a positive correlation between the abstract artworks (Artworks #4, #5, and #6). Overall, however, there was a negative correlation between the two different types of art: landscape and abstract.

The Effect of the Type of Art, Landscape or Abstract

To determine if the type of art had an effect on the financial valuation of art, it is necessary to know how the artworks were related and correlated.

Six different artworks were selected for this study. The landscape artworks

(Artworks #1, #2, #3) were similar to each other because they portrayed landscapes. The abstract artworks (Artworks #4, #5, #6) were similar to each other because they were abstracts. Landscapes and abstract artworks are considered to be different types of artwork.

Research question one determined that priming did affect the financial valuations of some of the artworks. Although priming did not affect the financial valuations of two of the abstract artworks—namely, Artworks #4 and #6— it significantly affected the financial valuations of all three of the landscape artworks in the study as well as of Abstract Artwork #5. Therefore, priming had a significant effect on the financial valuation of four out of the six artworks, and it appears that priming was more significant for the landscape artworks.

Correlation of the Landscape Artworks (Artworks #1, #2, #3) and The Abstract Artworks (Artworks #4, #5, #6)

Correlation is the degree of relationship or association between two variables (LoBiondo-Wood & Haber, 2010; Trochim, 2005). The correlation among Artwork #1, #2, #3, #4, #5, and #6 is different from the results of the *t*-test and the stepwise MLR model because a correlation can be any relationship. For research question three, Table 35 reports the correlation of the financial valuation for each artwork from the total sample (N = 422). A positive correlation means if one variable goes up, the other variable goes up. A negative correlation means if one variable goes up, the other variable goes down. Table 35 is a correlation matrix of all six artworks. To calculate the correlation of the financial valuations of the artworks, a Pearson correlation coefficient, or the Pearson *r*, was used. In Table 35, the top number in each box is the Pearson correlation coefficient

and the bottom number is its significance in terms of the probability value or (*p*-value). If a *p*-value is less than .05, the correlation is statistically significant.

Table 35 reports the correlations of financial valuations between Artwork #1 through Artwork #6 ranged between -0.017 and approximately 0.299. This indicated that some of the artworks had statistically significant correlations, and that some of the artworks' financial valuations were not correlated. For example, there was a positive correlation between Landscape Artworks #1 and #2. That is, as a subject's financial valuation for Landscape Artwork #1 increased, the financial value for Landscape Artwork #2 also increased. The correlation was significant for Landscape Artworks #1 and #2 because the *p*-value (.0001) was lower than .05. Landscape Artwork #1 was also positively correlated with Landscape Artwork #3 and Abstract Artworks #4 and #5, but it had a slight negative correlation with Abstract Artwork #6. The landscapes had a tendency to have the highest correlation with other landscapes and the most negative correlation with abstract artworks.

Summary of Chapter IV

The purpose of the study was to determine the effect of priming on college students' financial valuation of art. Three research questions were posed. Statistical analyses were used to determine the answers to the research questions. The study indicates that certain independent variables did have a statistically significant effect on the financial valuation of art, though the magnitude and variation of the effect of the independent variables varied for all six artworks.

Table 35. Correlation of the Landscape Artworks (#1, #2, #3) and the Abstract Artworks (#4, #5, #6).

	Pearson Correlation Coefficients, N = 422 Prob > r under H0: Rho=0				
	Artwork One	Artwork Two	Artwork Three	Artwork Four	Artwork Five
Artwork Two	0.25 <.0001				
Artwork Three	0.29 <.0001	-0.03 0.7176			
Artwork Four	0.09 0.0472	0.08 0.0995	0.11 0.0160		
Artwork Five	0.10 0.0311	0.21 <.0001	0.16 0.0009	0.36 <.0001	
Artwork Six	-0.01 0.8545	-0.01 0.9834	0.14 0.0031	0.26 <.0001	0.22 <.0001

Summary of the Findings for Research Question One

Research question one: Is there a difference in college students' financial valuation of art between college students who received priming and college students who did not receive priming? The examination of the results for research question one began with a *t*-test at an alpha level of .05 to answer whether there was a difference in the mean scores on the financial valuation of art between the Priming Group and the No Priming Group. According to the *t*-test, priming was statistically significant for the landscape artworks (Artworks #1, #2, #3) and Abstract Artwork #5. Abstract Artworks #4 and #6 were not statistically significant between the two groups. It is interesting to note that priming was significant for all three of the landscape artworks, but for only one of the three abstract artworks.

When the financial valuation of the artworks was summed for the landscape artworks and then also summed for the abstract artworks, both analyses reported that the subjects who were primed valued the artworks higher. However, the effect of priming was statistically significant only for the landscape artworks and not the abstract artworks.

Summary of the Findings for Research Question Two

Research question two: Do the other independent variables have any significant effect or not? The examination of the results for research question two began with a stepwise MLR model to answer whether any of the independent variables had a significant effect on the financial valuation of art. According to the stepwise MLR model, priming was statistically significant for Landscape Artworks #1 and #2 and Abstract Artwork #5. Gender was statistically significant for Landscape Artworks #1 and #3. The number of art courses completed was statistically significant for Landscape Artwork #2. The other independent variables of college class status and college major were not found to be significant effects by the stepwise MLR model. It is interesting to note that only one of the abstract artworks (#5) had an independent variable with a significant effect on its financial valuation.

When the effects of the financial valuation of the artworks was summed for the landscape artworks (Artworks #1, #2, #3) and then also summed for the abstract artworks (#4, #5, #6), the analysis reported that priming, gender, and the number of art courses completed had significant effects on the financial valuation only of the landscape artworks. However, none of the independent variables had a significant effect on the financial valuation of the abstract artworks.

Summary of the Findings for Research Question Three

Research question three: Does the type of art have an effect? The examination of the results for research question three began with a Pearson correlation coefficient to answer whether any of the artworks had a significant correlation. According to the Pearson correlation coefficient, as the subjects' financial valuation of Landscape Artwork #1 increased, their financial valuation of Landscape Artworks #2 and #3 also increased. This correlation or relationship seems reasonable, because Artworks #1, #2, and #3 are similar in that they are all landscapes. As the subjects' financial valuation of Abstract Artwork #4 increased, their financial valuation of Abstract Artworks #5 and #6 also increased. This relationship also seems reasonable, because Artworks #4, #5, and #6 are similar in that they are all abstracts. The highest positive correlation was within the landscape artworks and the most negative correlation was between the landscape and the abstract artworks.

The interpretation of the findings, implications, and future research are discussed further in Chapter V.

CHAPTER V
**INTERPRETATION OF THE FINDINGS, IMPLICATIONS,
AND FUTURE RESEARCH**

Introduction

This chapter presents the interpretation of the findings, implications, and future research. As stated previously, the three research questions for this study are: Is there a statistically significant difference in college students' financial valuation of art between college students who received priming and college students who did not receive priming? Do the other independent variables have any significant effect on the financial valuation of art? Does the type of art have an effect on the financial valuation of art? This chapter interprets the main findings from the independent variables (priming, gender, number of college art courses completed, college class status, and college major) and the dependent variable (undergraduate college students' financial valuation of art) by linking them to previous related literature in Chapter II. Second, the implications of this study are discussed. Third, suggestions for potential future research are discussed.

Interpretation of the Findings

Priming

As stated previously, priming is a form of subtle, indirect messaging, because it is conducted through an environmental cue to influence a subject's decisions without his or her knowledge (Bargh, 2006). The concept of priming rests on the assumption that when subjects are making a decision, they will be influenced by psychological and

environmental factors, priming being an environmental factor that researchers can manipulate. Research on priming has revealed that subjects can be subtly, indirectly influenced by stimuli without their awareness (Bargh, 2006). Since priming has influenced subjects in other studies outside of art, one of the main goals of my study is to fill in a gap in the literature by studying the effect of priming on the financial valuation of art. Priming has been studied with a variety of different types of tasks that do not require conscious awareness. Even though the priming studies in the literature review were in areas outside of art, each supports the idea that priming influences subjects. A discussion of the three main findings in my study about priming compares these findings to other studies in the literature review.

First, even though prior priming research has been done in areas outside of art, the overall effect of priming in my study is consistent with other researchers' findings in that priming influenced and affected judgment. Other researchers examined how priming influences and affects judgments in the context of environmental cues. For example Sleeth-Kepler and Wheeler (2011) found that subjects who were primed with items listed for sale at a luxurious antique retail store scored the financial value of homes higher than subjects who had been primed with items that had been listed for sale in a thrift store. In another study, Bateson, Nettle, and Roberts (2006) used a small picture of a pair of human eyes to simulate being watched in order to prime subjects, and found that the priming effect increased the amount of money subjects put into a collection jar to pay for their coffee consumption. My study expands the applicability of priming to influence and affect judgment in the context of the financial valuation of art.

Second, my study suggests that priming may be more influential in increasing financial valuation of art if a subject is already aware that an artwork is of high financial value because it was painted by a well-known artist. In a previous study, Leder (2001) found that when subjects were told an artwork was a reproduction painted by the artist Van Gogh, they indicated that they liked an artwork more than when subjects were told an artwork was a reproduction not by Van Gogh. This finding by Leder (2001) indicates that subjects who gave the highest ratings were most likely already familiar with Van Gogh. An unexpected finding of my study was that priming significantly influenced valuation of an artwork that was most likely already known to both groups, Priming and No Priming to be of very high financial value (Landscape Artwork #2 by Van Gogh).

Third, although it was predicted that priming would significantly influence financial valuation of both types of art in my study (landscape and abstract), the findings suggest that priming was linked to increased financial valuation more frequently for the landscape artworks than for the abstract artworks. Furnham and Walker (2001a) suggested that familiarity leads to increased liking and preferences on evaluations of art. It is possible that subjects in my study were more familiar with artworks that depicted recognizable images (such as landscapes) than artworks that depicted abstract images, and therefore their familiarity became a preference for the type of art and this interfered with the priming effect if they did not like an abstract artwork. Additionally, the priming images used in my study to influence the subjects were recognizable images of a high-end designer storefront and a restored classic automobile and were not at all abstract images. It is possible overall that the recognizable imagery in the priming images also primed the subjects for other recognizable images.

Gender

The overall finding of gender in my study complements other study findings in that gender influenced judgment of art. In a previous study, Hekkert and Van Wieringen (1996) found that male and female subjects who did not have art training scored artworks higher if they were in color and were realistic in style. However, both male and female subjects who had training in art scored artworks higher if they were not in color and were not realistic in style. The two main findings about gender in my study suggest that gender influenced females more than males for landscape artworks #1 and #3. Landscape Artwork #1 was realistic and traditional in style and portrayed a great amount of visible detail. I am unsure as to why females scored Landscape Artwork #1 with a higher financial value than did males because both genders had essentially the same amount of art training.

In another study, Polzella (2000) found that males and females differed in how they scored a particular style of art known as Impressionism. The results of his study indicated that females scored Impressionist artworks as more pleasing and interesting than did males, and females also scored Impressionist artworks as more beautiful than did males. Further, Bernard (1972) found that females bought more reproductions of artworks that were classified as Impressionistic in style than did males. In my study, Landscape Artwork #3 was more Impressionistic-like in style, meaning it was not as realistic nor traditional and portrayed less detail, but still had a recognizable subject. It is therefore probable that females liked the Impressionistic-like-style of Landscape Artwork #3, and gave it a higher financial valuation than did males.

Number of Art Courses Completed

My study supports the same logic of other studies that have examined the variable of a subject's level of formal educational training in art, in that other studies have also found the level of formal educational training in art directly influenced subjects' evaluations of art. For example Augustin and Leder (2006) found that art-trained subjects used formal art categories to label the art more often than did the non-art-trained subjects. My study suggests that, as the number of art courses completed by the subjects increases, the financial valuation given by them also significantly increases for an artwork (Landscape Artwork #2) that is most likely already known to subjects to be in a formal art category of high financial value because it was painted by a well-known artist. In another study, Nodine, Locher, and Krupinski (1993) examined the influence that the amount of formal training in art would have when they found that non-art-trained subjects focused on and spent more time viewing representational content in the center of the artwork, whereas art-trained subjects spent more time viewing stylistic qualities in the background. Perhaps subjects in both my Priming and No Priming groups knew Landscape Artwork #2 was by Van Gogh because of the stylistic qualities in the background of the artwork, because the stepwise MLR model identified that, as the number of art courses completed by the subjects increased, the financial valuation given by them also significantly increased for Landscape Artwork #2.

College Class Status

My study distinguishes college class status differently than did another study on evaluation of art. Furnham and Walker (2001b) examined the relationship between college class status (e.g., seniors) and evaluation of art by using different styles of art and

found that seniors were more likely to prefer representational art than abstract art. Furnham and Walker (2001b) posited it was possible that seniors were more familiar with representational paintings than abstract ones. My study examined freshmen, sophomores, juniors, and seniors and did not find that college class status made any difference on the financial valuation of representational paintings (e.g., landscapes) or abstracts. Because priming and the number of art courses completed were significant effects on the financial valuation of the landscape artworks, I thought that the number of art courses completed would be correlated with class status, in that seniors most likely would have taken more art courses. Surprisingly, college class status was not a significant effect in my study.

College Major

My study distinguishes college majors differently than did two other studies on the evaluation of art. O'Hare (1976) conducted a study and found that art majors preferred landscapes that were abstract in style, whereas psychology majors preferred landscapes that were recognizable as a realistic landscape and not abstract. My study also included art and psychology majors and recognizable, realistic-style landscapes and abstract artworks, but college major did not have any effect on financial valuation. In another study, Neperud (1986) found that art majors scored abstract artworks higher than did elementary education majors. My study also included education majors. However, surprisingly, because the subjects' college majors were similarly distributed, college major did not have any significant effect on the financial valuation of the artwork.

Implications

In this section, I discuss what the interpretations of my findings mean in more practical terms through identifying the implications of my study. There are potentially

many to identify, but I draw attention to three implications. I examine each of the implications in terms of how they impact certain individuals—specifically, art dealers, art faculty, and art students.

Implications for Art Dealers

My study's implications inform art dealers about how they may target certain clientele. For instance, art dealers might be able to sell landscape artwork for a higher price after staging a priming effect before they attempt to sell the artworks to female clients. To elaborate, it is worth reminding the reader of selected findings of my study. As noted previously, this study suggests that female clients like landscape artwork more than they like abstract artwork, and females scored the landscape artwork higher than males did. For that reason, art dealers could use priming to target the sale of landscape artworks to females as a marketing approach. The success of such targeted sales will be linked to the effectiveness of the priming.

My research findings also suggest that art dealers' targeting sales through priming could affect females more so than males. For example, one way for dealers to increase targeted sales to females would be to eliminate other types of art and only display landscape artwork. By doing this, targeted sales will be enhanced because the type of art presented will be more aesthetically pleasing to females. This, in turn, will lead to art dealers' being able to develop a pricing model by having the right audience to view landscape artwork—females. For these customers, females, art dealers can develop a pricing model specifically for them, by including a selling price in the description of the landscape artworks. By targeting sales with a higher pricing model, art dealers can essentially manipulate pricing for females by providing them with the art they like. If

females connect the financial value of the artwork (e.g., the selling price) with the type of art they like (e.g., landscape artwork), perhaps they will decide to pay more than a male would pay for the same artwork. Thus, priming can assist art dealers when targeting sales and developing a specific pricing model that is geared toward selling landscape artwork to females at a higher price. At the same time, females need more consciousness of potential biases toward higher pricing.

My study could possibly be used for the art market to extend current sales of landscape artwork. However, if art dealers focused on selling traditional-style landscapes, since it appears this is the type of art that would sell, art dealers would be reinforcing what individuals already prefer, and would, it could be argued, therefore reinforce traditionalism.

Implications for Art Faculty

For art faculty, my study's implications have an impact on lessons about art. Through the use of priming, faculty could promote potentially biased judgments about artwork—biases that college students are not aware of. For instance, art faculty might find themselves in an ethical dilemma by accidentally priming students to make evaluative and financial judgments about certain types of artwork through their teaching practices. As noted previously, this study suggests that priming can influence the financial value that college students attribute to artwork. For that reason, art faculty may unintentionally prime students to feel that some artwork is better than other artwork, without even meaning to do so. If art faculty tended to focus in the classroom more on particular types of art—such as traditional, realistic landscape artwork—than, say, modern and contemporary abstract styles of art, students might be primed to think that modern and

contemporary abstract styles of art are not valued as highly as the others. Art faculty members control the amount and the type of art that is presented to students in their classrooms and curriculum and may inadvertently prime students to value a particular type of artwork over others.

The same implication of reinforcing traditional artistic values is there for education. If art faculty structure the curriculum to include a majority of historic-type artworks such as landscapes and do not include an equal amount of modern artworks such as abstracts, then they further reinforce a traditional way of valuing art. If art faculty set the art curriculum around their personal preference of artwork, this could hinder students' critical thinking about art. Art faculty need to include a culturally diverse assortment of art in the teaching process, so they are not reinforcing a certain viewpoint. After all, it is a fundamental tenet of higher education to respect differences. My study suggests a need to spend more time in the classroom on abstract art.

Implications for Art Students

The implications of this study for art students is that education about art may inadvertently increase what consumers consider spending for art. There may be a relationship between how high an artwork is scored for financial value and what an art student as a consumer might actually consider spending for art. Of course, just because an art student scores an artwork as high value does not mean he or she would spend more for an artwork. Among art students with more art knowledge, it is possible they would consider spending more for art as consumers if they were primed than would art students who had not been primed. As noted previously, art education makes students susceptible to being influenced by priming if the artwork in question is already known to be of a high

financial value. Despite the fact that students from both groups (Priming and No Priming) had essentially taken the same number of art courses, a Van Gogh painting earned a higher financial valuation after priming. For that reason, art students may already be inclined to attribute greater financial worth to artworks by established artists because they understand the characteristics that contribute to their value. Financial value always involves a consideration of the art. However, perhaps art is viewed differently with priming because the reputation of the artist makes the art appear even more valuable than it might otherwise be. The weight of priming intensifies the prestige of the artwork for students who are already familiar with well-known pieces. Advance knowledge about the value of artwork can influence a student to potentially enhance the financial value, and they may thus be willing to spend more for artwork as consumers. In this sense, an art student might ascribe a high level of value to the piece due to priming and not due to the artwork itself. Therefore, an art student as a consumer may be willing to spend a higher price if an experience of priming has suggested that this piece is a symbol of wealth. A high level of art education makes the priming more effective in regard to whether the art student as a consumer might be willing to spend more for an artwork. Where price in other contexts outside of priming would be a consideration, the art student's education about art would perhaps make him or her less likely to shop for a lower price. In particular, priming is more of a consideration for those educated in art than the education itself.

On another level, art students can also fall prey to reinforcing traditionalism. If they create artworks because they think certain types of art are what clients and art dealers are interested in, then an economic perspective becomes prominent. Art students

may decide to create artwork according to the type of artwork they could sell as opposed to the type of artwork they prefer.

Ethical Concerns of Priming

My research could potentially have an ethical component and be viewed as decision-making that is intentionally or unintentionally influenced by priming. I found that priming influenced responses of subjects in ascribing higher financial valuations of art, demonstrating that priming could possibly lead to unethical practices. For example, priming could be used as an intentional business practice for art dealers to create an environment in which clients are more likely to accept paying higher prices for art. Priming studies have focused on influencing decision-making as an intentional process. Priming could also occur unintentionally when art faculty select artworks to be used as examples in the classroom. This teaching practice could be an ethical concern because it may influence students' thinking about which types of art are highly valued by society. For example, if art faculty focus more on representational artworks, such as landscapes, and not abstracts, then the possibility arises that students are being primed to perceive one type of art as being perhaps more valuable than the other. Priming may be influential for individuals who tend to rely on knowledge about art in decision-making about art. Thus, priming has the potential to elicit ethical concerns.

Implications for the Type of Art

The type of art (i.e., landscape compared to abstract) has implications on the aesthetic cues to which subjects respond in art. In order to provoke a preferred aesthetic experience, landscapes perhaps signal cues that are aesthetically pleasing to a majority of subjects. Different associations may be evoked by an artwork. The preferences of

landscapes over abstracts results in the reduction of aesthetic choice. The use of the two types of artwork in my study perhaps naturally provoked aesthetic interest, which increased an emphasis on landscape as aesthetically pleasing and as a result, decreased the preference for abstract. Such diverse differences in aesthetic preference is an underlying characteristic of what is considered worthy of art in society. Responses to art can be applied to the content in art. The predisposition survives as a tendency to prefer landscapes. This may be learned in the culture. Art is often viewed as a source of aesthetic pleasure. The degree of preference for the type of art may include disagreement. Planning and teaching in the generations that follow need to emphasize abstract as being just as worthy of value as landscapes. Abstract art has been branded as less acceptable of aesthetic value generally in the American culture. A balanced view of diverse types of art, leading to broader cultural acceptance, is necessary for continued aesthetic interest in art.

Recommendations for Future Research

To build on this study, I suggest the following considerations for future studies: First, I suggest that future research include more famous and well-known artworks, because the artwork by a famous, well-known artist, Van Gogh, had the most financial valuation difference between the Priming and the No Priming Groups.

Second, my study included 13.75% art majors. I suggest that future research include a study of more art majors, because the highest financial valuations were given to artworks most familiar to subjects.

Third, instead of using two different artwork styles, landscape and abstract, I suggest using two different types of art that are similar in style. An example of this

would be to include landscapes and portraits that are realistic in style. Or perhaps, a study could be attempted using two different types of abstract art, such as gestural and minimalist. This would hopefully place all artworks on a more similar level with one another. Even though Artworks #1, #2, and #3 were similar in that they were landscapes and Artwork #4, #5, and #6 were similar in that they were abstracts, it is quite possible that the two types of artworks in my study were too different, and that difference interfered with the study's attempt to isolate the priming effect's significance.

Fourth, a new research question is suggested for further study: Is there a type of priming that would affect abstracts as much or more than it affects landscapes?

Fifth, to learn more about how the type of art affects the influence of priming on the financial valuation of art, I recommend incorporating a blend of quantitative and qualitative methods. Such a study might be helpful in developing a more thorough understanding of how the art is originally perceived by the subjects, prior to the priming influence. The study was not designed to determine subjects' preferences for different types of art, and for that reason a qualitative approach might have been better able to determine how successful the priming effect was in influencing the financial values assigned to the artworks by the subjects.

Chapter Conclusion

My contribution to the field is to show that considerations of priming extend to art. Subjects' decision-making suggest that priming may influence financial valuations about art when combined with types of art that are generally preferred, such as landscapes. Priming may have little effect on types of art that are not generally preferred, such as abstracts. In the business world of art dealers, the use of priming could have

ethical concerns, although priming may not influence all individuals' making financial decisions about art. Neutralizing unintentional priming may be relevant in educational contexts in which art faculty have control over the types of art that are presented to students. In an educational environment, art students have to demonstrate knowledge about art. Perhaps, priming operates as a reminder that can direct attention to one's existing values about art. My results show that even though subjects varied on their evaluation of art, priming significantly influenced financial valuation of art.

Priming studies have been prevalent in psychology. As a result, there has been recent research outside of the realm of art examining different ways priming has influenced subjects' behavior. I have done research that included priming and art. This study has provided an opportunity to add to the literature about how financial decision-making in art can be influenced by priming. This study suggests that priming can influence subjects to score artworks with higher financial value as opposed to the financial value ascribed by subjects who did not receive priming. While intriguing, my research suggests that priming influenced financial value ascribed to landscapes more than it did the financial value ascribed to abstracts. My research suggests that when subjects like or prefer a type of art, they are more likely to be influenced by priming. More research is needed to determine the effect of priming due to differences of the type of art.

Priming financial valuation of art could have potential ethical implications. For example, if art dealers use priming in a business context they might not have any ethical concerns about the outcomes of priming, since the research is not yet well defined in the area of financial valuation of art. Second, art faculty may categorize their selection of

artworks for teaching purposes as rational because attention to accidental priming is not readily apparent or available, and yet, they might be using priming unintentionally.

Third, if art students are entirely unaware of the potential influence of priming, they might be more likely to be influenced in their decision-making about art even though they have knowledge about art.

Research to date has not considered and included how priming influences financial valuation of art. In some contexts the type of art may not be influenced by priming. This study sought to explore not only the influence of priming but also the effect of other independent variables on the financial valuation of art. My research has suggested that gender and the number of art courses completed can also increase the financial valuation of art. For example, females generally score the landscape artworks higher than do males, and as the number of art courses increase, the financial valuation goes up. I unexpectedly found evidence that priming can strongly influence the financial value of an artwork that is most likely already known to be of high financial value.

Although other studies have examined priming outside of the realm of art, no other studies to my knowledge have attempted to examine the influence of priming on college students' financial valuation of art. The results indicate that priming significantly influenced financial valuation of all three of the landscapes in the study and one of the three abstracts.

Overall, this study found that priming is a significant variable, and it can influence a subject's financial valuation of artworks. The study indicated that when a subject has been primed, decision-making will be more likely influenced, thereby increasing the subject's financial valuation of art. This study was useful and instructive

in that it identified priming as a significant variable to consider and the findings herein can be used to further financial valuation studies of art and the effects of priming.

APPENDICES

Appendix A Priming Image

This image of a classic car and designer fashion signaling high financial value, served as the priming effect. It was projected on a screen for the Priming Group.



Permission to use these images was granted, courtesy of CarGurus.com

http://static.cargurus.com/images/site/2008/10/25/10/28/1960_chevrolet_corvette_convertible_roadster-pic-48272.jpeg and Shutterstock Inc., New York, NY.

Appendix B
Survey Questionnaire

Circle the financial value for each artwork: (Circle only one answer)

Artwork #1

Not Expensive 1 2 3 4 5 6 7 8 9 10 Very Expensive

Artwork #2

Not Expensive 1 2 3 4 5 6 7 8 9 10 Very Expensive

Artwork #3

Not Expensive 1 2 3 4 5 6 7 8 9 10 Very Expensive

Artwork #4

Not Expensive 1 2 3 4 5 6 7 8 9 10 Very Expensive

Artwork #5

Not Expensive 1 2 3 4 5 6 7 8 9 10 Very Expensive

Artwork #6

Not Expensive 1 2 3 4 5 6 7 8 9 10 Very Expensive

Please circle one answer for each question.

1. What is your Gender?

- Male
- Female

2. What is the number of college art-related courses you have completed?

- No art classes
- 1
- 2
- 3
- 4
- 5
- 6
- More than 6

3. Which category most closely resembles your college class status?

- Freshman
- Sophomore
- Junior
- Senior

4. Please print your college major?

Appendix C
Email Advertisement to Gain Access to Student
Research Subjects

Dear Faculty Member,

I am seeking assistance for my dissertation research by asking if you would allow time during class for students to participate in my study of college students' financial valuation of art. The survey will take students approximately 15 minutes to complete.

Students will be asked to write in the financial value of six art works on a Likert scale and fill out a demographic questionnaire consisting of four background information questions (gender, number of art-related courses taken in college, college class status, and college major), using a pen/pencil-and-paper survey. Students may skip any questions they prefer not to answer. There will be no personal identifiable information on the survey form. I will describe the study results in a summarized manner so that students cannot be identified.

Students will not be paid for being in this research study. The only form of reward will be a random drawing at the end of each session for a twenty-dollar gift card to the MSU bookstore. The odds are about 1:25 (or better) in winning the gift card for the 15 minutes of their time.

If you are interested and are willing to assist, I will ask faculty to leave the room so the students will not be pressured to participate. I will also inform students they do not have to participate, and it will be stated on the information sheet that will be handed out to students that participation is voluntary with no consequences for not participating. This study will only include student participants who choose to take part.

I am excited about this study, and I look forward to hearing from you,

Sincerely,

Lenetta Choate

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Appendix D

Information Sheet about this Study

Participation is Voluntary

Please read the information and make your decision as to whether you want to participate in this study. If you have questions, please ask. You are invited to be in a research study about college students' financial valuation of art. If you do not want to participate, there will be no consequences. If you agree to take this survey, your participation will take approximately 15 minutes.

What will you be asked to do?

There will be no personally identifiable information on the survey form. You will be asked to rate the financial value of six artworks ranging from not expensive to very expensive and fill out a demographic questionnaire consisting of four background information questions (gender, number of art-related courses taken in college, college class status, and college major) using a pen/pencil-and-paper survey. You may skip any questions that you prefer not to answer. If we write a report or article about this study, we will describe the study results in a summarized manner so that you cannot be identified.

You will not be paid for being in this research study. The only form of reward will be a random drawing at the end of each session for a twenty-dollar gift card to the MSU bookstore. If you would like a chance to win the gift card by participating in the study, please write your name on the index card and place it in the plastic container. At the end of this session, a name will be drawn and the winner will receive the gift card before you leave.

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Appendix E

Rationale of Artworks That Were Selected for Financial Valuation

Landscape Artwork #1 was painted by Thomas Cole in 1839. Landscape Artwork #2 was painted by Vincent Van Gogh in 1889. Landscape Artwork #3 was painted by Joseph Mallord William Turner in 1843. All three Landscape Artworks depict recognizable subject matter that could exist in the real world. Six artworks (paintings) were selected for financial valuation from two different styles of art, landscape and abstract. These two styles of art were selected because they are opposite in style and are easily distinguishable.

Abstract Artwork #4 was painted by Sonia Delaunay in 1916. Abstract Artwork #5 was painted by Lucas Samaras in 1960. Abstract Artwork #6 was painted by Georgia O'Keeffe in 1917. All three of the abstract artworks depict abstract shapes that are not realistic, recognizable or of a traditional subject matter. These three artworks depict abstract or nonrepresentational subject matter and are a different style of art compared to the landscape paintings. Unlike the landscapes, the abstract artworks are without direct reference to subject matter that exists in the real world.

The first three artworks shown to subjects depict the representational subject matter of landscapes (Artworks #1, #2, and #3 in Appendix F) and the second group of three artworks shown to subjects depict nonrepresentational or abstract subject matter (Artworks #4, #5, and #6 in Appendix F). These artworks were shown to subjects in the order that they appear in Appendix F.

The landscapes were also selected as a result of this researcher's personal experience in teaching art appreciation and art history courses. Generally, undergraduate

students would not be familiar with these particular artworks by Cole and Turner (Artworks #1 and #3). However, Landscape Artwork #2, by the well-known artist Van Gogh may be known to students even if they have not taken an art course.

The abstract artworks were also selected because of this researcher's personal experience, in teaching art appreciation and art history courses. Generally, undergraduate students would not be familiar with these particular artworks by Delaunay and Samaras (Artworks #4 and #5). However, Abstract Artwork #6, by the well-known artist O'Keeffe was chosen as an example of one of her artworks that would not be recognizable except to someone who had knowledge of her artworks, since it is not typical of her style.

Finally, these artworks were selected because their unfamiliarity and difference in style of art (landscape or abstract) might better show if priming and/or the type of art could have an effect on college students' financial valuation of art. Two distinct types of artworks were used in the study because studies have found that subjects evaluate different styles of art differently, depending on a subject's familiarity with formal characteristics of art (e.g., Winston & Cupchik, 1992). Thus, it was necessary to be able to differentiate between the influence of the priming effect and the effect of the type of art.

Appendix F
Artworks That Were Selected for Financial Valuation



Landscape Artwork #1: Italian Landscape, Thomas Cole, 1839
Permission Image Source: The Butler Institute of American Art, Youngstown, OH



Landscape Artwork #2: Wheat Fields with Cypresses, Vincent Van Gogh, 1889
Permission Image Source: The Metropolitan Museum of Art, Art Resource, Inc., New York, NY



Landscape Artwork #3: The Lake of Zug, Joseph Mallord William Turner, 1843
Permission Image Source: The Metropolitan Museum of Art, Art Resource, Inc., New York, NY



Abstract Artwork #4: Flamenco Singer, Sonia Delaunay, 1916, Russia
Permission Image Source: Artstor Digital Resource Library



Abstract Artwork #5: Untitled, Lucas Samaras, 1960, Greece
Permission Image Source: Artstor Digital Resource Library



Abstract Artwork #6: Blue II, Georgia O'Keeffe, 1917
Permission Image Source: Georgia O'Keeffe Museum, Santa Fe, NM

Appendix G The Pilot Study

The rationale for the pilot study was twofold. First, this study sought to examine the effect of priming on the financial valuation of art. To test the priming effect, this study examined whether an image signaling a high-society setting led to differences in terms of one's financial valuation of art compared with the valuation made by subjects who were not exposed to that subtle, indirect message serving as the priming effect.

Second, this study sought to compare the effect of education. This study examined whether priming might play an equal or more significant role in financial valuation of art than education might play. These two rationales suggested the overarching hypothesis that external influences that are brief or quick and temporally relevant may present a more significant financial influencer, as manifested in financial valuation of art, than slower and more formal influences, such as education.

A description of the pilot study's research design is followed by the methods used to administer the survey and collect and analyze the data. Finally, the methods used to treat the data and analyze the results are discussed.

Pilot Study Research Question and Sub-Questions

The overarching research question was: Does priming affect college students' financial valuation of art? The four research sub-questions below examined this question:

Question 1. Is there a significant relationship between priming and college students' perceived value of art?

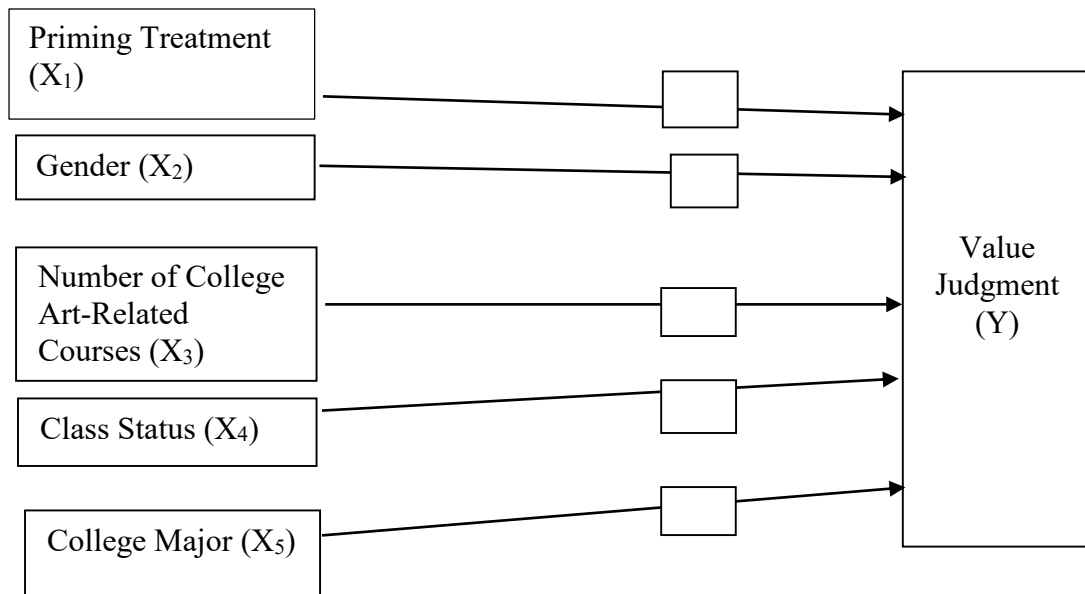
Question 2. Can we quantify the effect of priming on college students' perceived value of art?

Question 3. Is there a significant relationship between students' perceived value of art after having taken art-related college courses and priming?

Question 4. For those students who have had art-related college courses, can we quantify the effect of priming on college students' perceived value of art?

Pilot Study Conceptual Framework

The four research questions were answered using the following five independent variables: (Priming Treatment X_1), (Gender X_2), (Number of College Art-related Courses X_3), (Class Status X_4) and (College Major X_5). The dependent variable (Y) was the value judgment (sum of the three artworks). The conceptual framework model is listed below:



Pilot Study Research Design

To examine the first research question, this researcher randomly assigned undergraduate college students to either an Experimental or Control Group. In the beginning of the study, subjects in both groups were asked to rate the value of three artworks ranging from extremely inexpensive to extremely expensive on a five-point Likert scale, using a pen/pencil-and-paper survey. The Control Group did not receive the priming, while the Experimental Group received the priming independent variable.

Subjects in the Experimental Group waited in the hall and entered the research room as a group so that each subject in the Experimental Group was exposed to the same level of priming. After they were seated in the research room, subjects in the Experimental Group had the priming image projected on a screen in front of them for two minutes while they were listening to directions before they began the survey. By contrast, subjects in the Control Group were seated in the research room for two minutes with nothing projected on a screen in front of them while they were listening to directions before they began the survey.

There was a start signal to tell all the subjects at the same time when they could begin the study. There was also a stop signal after subjects had had two minutes to rate each artwork, for a total of six minutes to rate three artworks, and an additional two minutes to look at the screen in front of them after they were seated for a total of eight minutes.

In the second part of the survey, a demographic questionnaire was passed out to subjects, consisting of four background information questions on gender, number of art-related courses taken in college, class status in school, and college major. These items were administered to all subjects (i.e., students in the Experimental and Control Groups). After subjects completed the survey in the allotted time, the demographic and artwork ratings surveys were then paper-clipped together and collected for further processing and analysis.

For subjects in the Experimental Group, a final step was involved. A priming manipulation check was performed to test whether subjects in the Experimental Group were aware of the priming manipulation. The priming check consisted of asking the

subjects to recall the image of an antiques auction projected on the screen and then answer if it had anything to do with their response. All responses were compiled at the end of the survey sheet and were used for data analysis in the pilot study.

Pilot Study Sample

The pilot test consisted of a sample of undergraduate students from a Midwestern university enrolled in various majors. An undergraduate student sample was chosen because they are the largest group on campus, making them more conveniently available to participate in research.

Each student's participation was voluntary. College student subjects were not asked to disclose any personally identifiable information. The duration of subject participation was approximately ten to fifteen minutes.

The subjects in the pilot study received no compensation. The only form of reward was a random drawing at the end of each session for a twenty-dollar gift card to the university bookstore.

This researcher sought assistance in promoting participation for the pilot study through the faculty, who were not part of the study. Advertisements were used in the form of an invitation sent by email to various undergraduate faculty members asking if they would allow time during class for students to participate in the study. The invitation also gave the faculty information about the study for potential college student subjects.

Faculty were asked to leave the room so students were not pressured or coerced to participate by faculty. This researcher informed students that they did not have to participate, and it was stated on the information sheet handed out to students that

participation was voluntary, with no consequences for not participating. This study included only subjects who chose to take part.

This researcher sampled at least forty subjects for each group (i.e., Experimental and Control Group) for the pilot study. At the conclusion of the experiment, each subject's financial valuations of the artworks were tabulated according to the subjects' demographic role of gender, number of art-related courses taken in college, matriculation status, college major, and whether or not he or she was in the Experimental Group.

Pilot Study Measures

The request of the subjects to rate the value of each artwork ranging from extremely inexpensive to extremely expensive on a five-point Likert scale was adapted from previous studies (see, Table 1, Herr, 1989; Sleeth-Keppler & Wheeler, 2011). This method was developed by this researcher for the pilot study.

Pilot Study Priming Manipulation Check

A priming manipulation check was performed at the end of the pilot study to test whether subjects in the Experimental Group were aware of the priming manipulation. The priming check consisted of asking the subject to recall the image of an antiques auction projected on the screen and then answer if it had anything to do with his or her response. All responses that passed the manipulation check were used for data analysis in the pilot study.

Pilot Study: Summary of Research Adapted From Instruments

Question:	Scale:	Research Article:	Concept:
Subjects were instructed to make automobile price judgments.	Price Categories: Extremely Inexpensive Moderately Inexpensive Moderate Moderately Expensive Extremely Expensive	Herr, P. M. (1989). Priming Price: Prior Knowledge and Context Effects. <i>Journal of Consumer Research</i> , 16(1), 67–75.	Subjects judged moderately priced cars more expensive after being primed with expensive hypothetical cars.
Subjects were instructed to estimate the prices of items that could be for sale from either a luxurious retail antique store or a thrift- store chain.	Subjects were asked to estimate the value in U.S. dollars of real estate (houses).	Sleeth-Keppler, D., & Wheeler, S. (2011). A Multidimensional Association Approach to Sequential Consumer Judgments. <i>Journal of Consumer Psychology (Elsevier Science)</i> , 21(1), 14–23.	Subjects who estimated the prices of items in the antique-store context prime estimated the price of a house as a higher value than subjects in the thrift-store group.

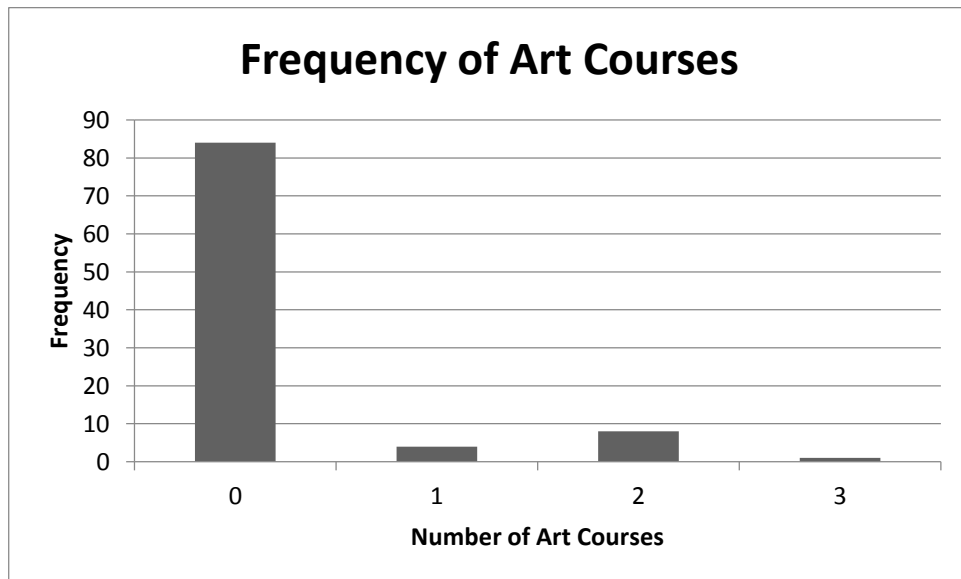
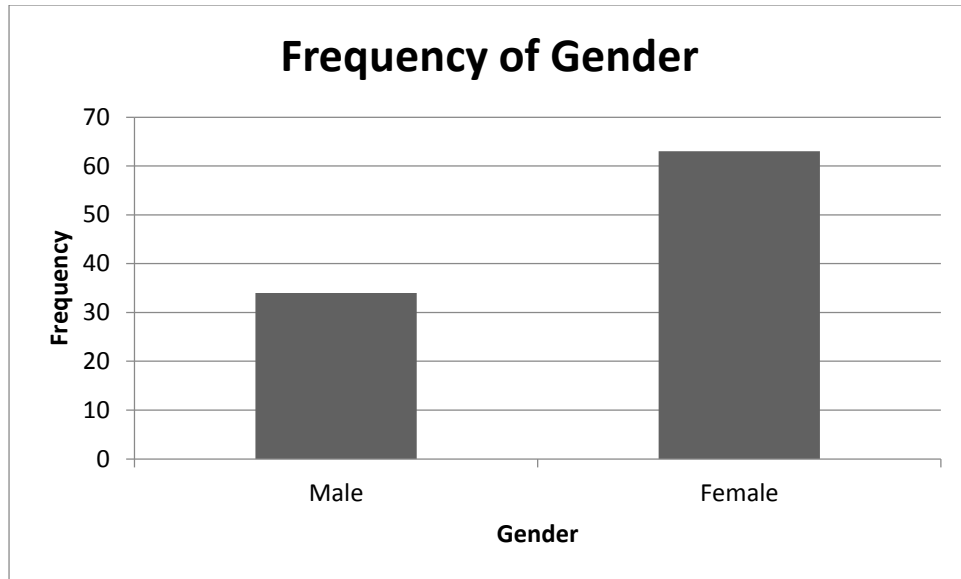
Pilot Study Results

In the pilot study, the results from the dependent variable were obtained by using a Likert scale. The financial value judgments of the artworks were examined through fitting the data to a Multiple Linear Regression Model. The difference between the Experimental and Control Groups was examined by the effect of independent variables’ parameter estimate.

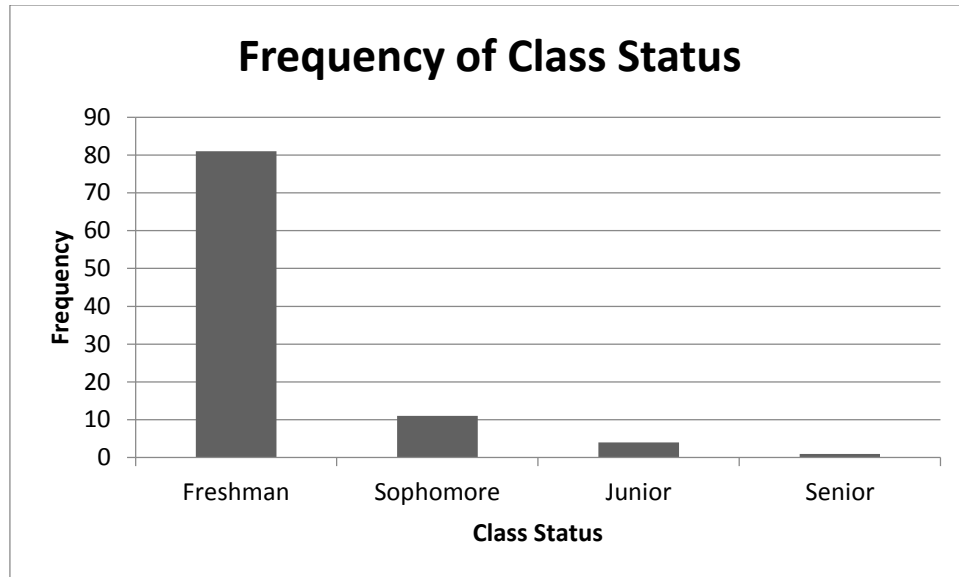
In the pilot study, a total of ninety-seven college subjects participated. Among the ninety-seven subjects in the pilot study, thirty-four were males and sixty-three were females. In the pilot study, the distribution of gender is shown in the graph, Frequency of Gender.

Next, subjects’ number of art-related courses completed were collected. The majority of the subjects had not completed any college art-related courses. Eighty-four

had not completed any art-related college courses, four subjects had completed one art course, eight subjects had completed two art courses, and one subject had completed three art courses in college. In the pilot study, the distribution of art classes is shown in the graph, Frequency of Art Courses.

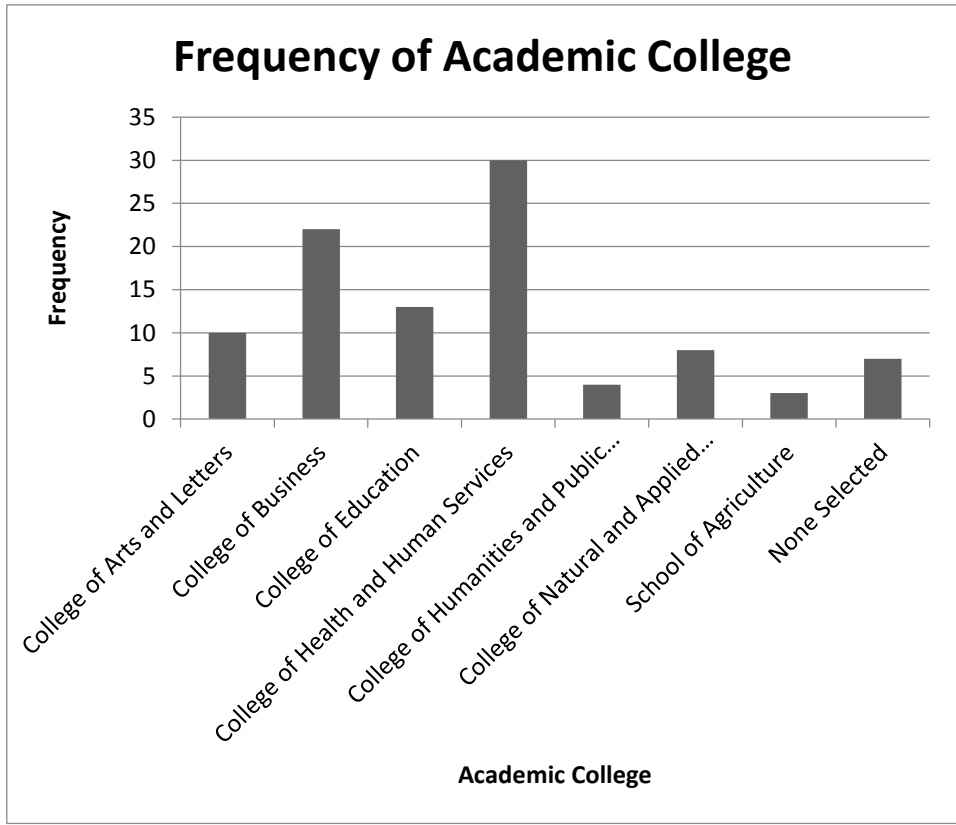
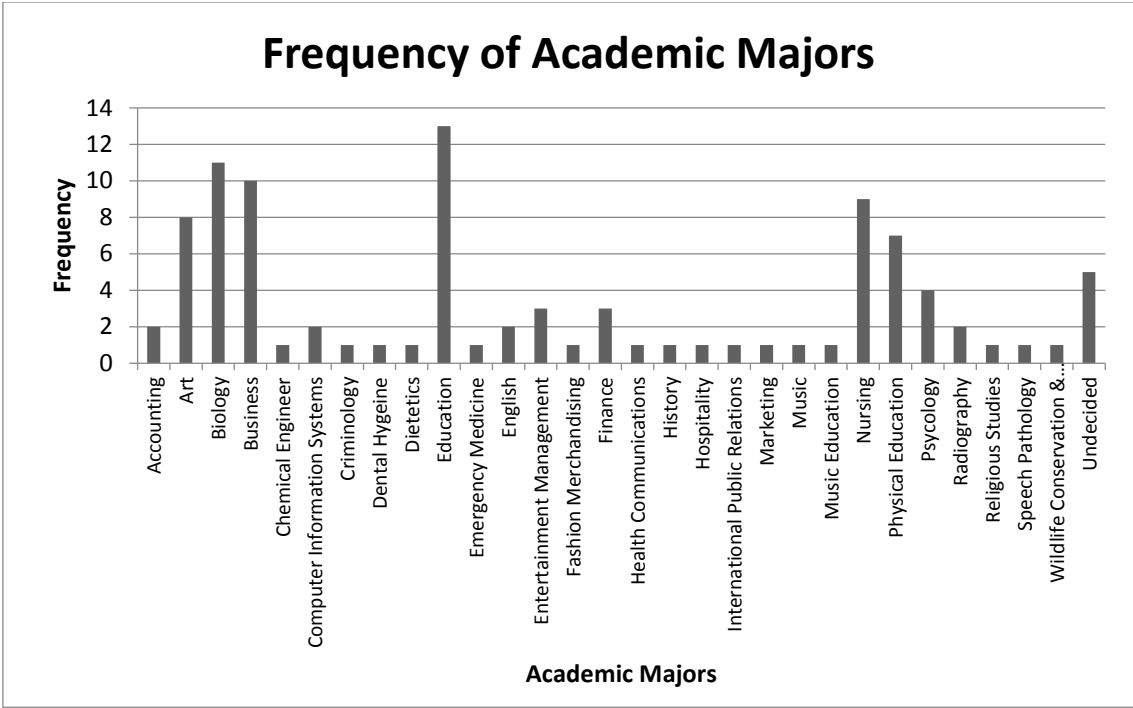


Another demographic factor in the pilot study established the class status of the subject. The class status of the subject was used as an independent variable in the financial valuation of art. In the pilot study, the class status showed that the majority of the subjects were freshmen, as shown in the graph below, Frequency of Class Status.

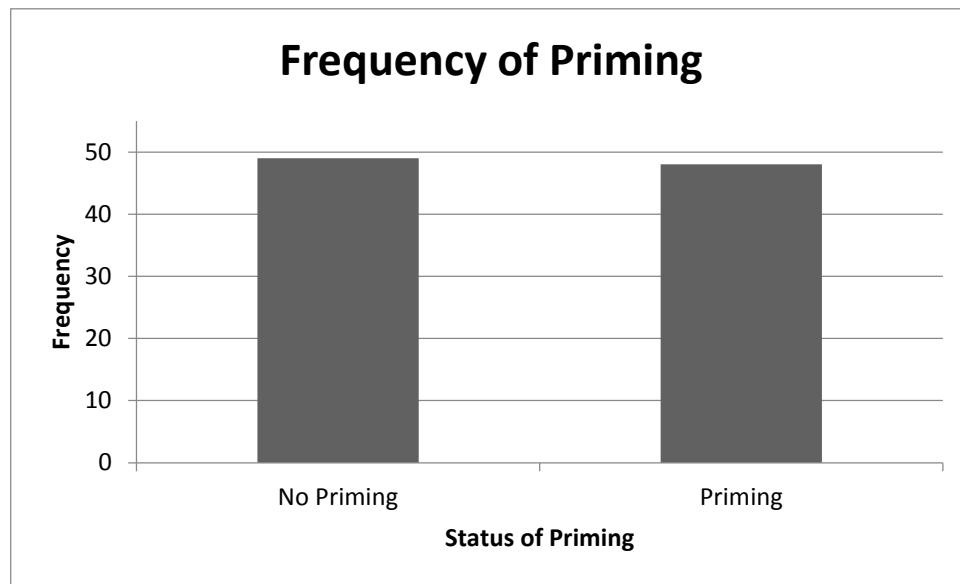


For the ninety-seven subjects in the pilot study, several different academic majors were reported. The distribution of the different academic majors is shown in the graph, Frequency of Academic Majors.

The subjects also designated their academic college as part of their demographic data. The associated colleges of the different majors reported are shown below in the graph, Frequency of Academic College.



The pilot study was divided into two separate groups. The Experimental Group received the priming treatment and the Control Group did not receive the priming treatment. In the pilot study, the Experimental Group consisted of forty-eight subjects (49.48%), and the Control Group consisted of forty-nine subjects (50.52%). The distribution of the priming is shown in the graph below, Frequency of Priming.



To fit the Linear Regression Model and evaluate the effect of priming on the financial valuation of the artwork, this researcher calculated the sum of the values of the three artworks and totaled each subject's financial valuation of the individual artworks to create the unique response variable in the Linear Regression Model. The twelve subjects who responded positively to the validity question regarding priming were omitted from the regression. Thus, the Linear Regression Model contained eighty-five observations for the pilot study.

For the pilot study, with such a small number of observations, the independent variables of gender, art courses, class status, and college major were not statistically

significant at an $\alpha = .05$ value. The p -values of the demographic independent variables were 0.1201, 0.5302, 0.3776, and 0.0910 respectively. After accounting for the independent demographic variables of gender, art courses, class status, and college major in the Model, then Multiple Linear Regression was used to study the result of priming as a direct effect on the financial valuation of artwork. There was not enough data to provide statistically significant differences (p -value = 0.8607) of the financial valuation of artwork between the subjects that were and were not primed. The Linear Regression Model did report a positive relationship of priming and the financial valuation of artwork. The subjects who were primed reported a higher financial valuation of the artwork equal to 0.082 (p -value = 0.8607). For the pilot study, there was not enough evidence to make the results of priming on the financial valuation of artwork statistically significant to answer research question one, is there a significant relationship between priming and college students' perceived value of art? However, the relationships and correlations were in the direction anticipated to answer the second research question, can we quantify the effect of priming on college students' perceived value of art? With a larger study, the effects of priming will hopefully be more statistically significant. In addition, it is hoped that priming's interaction with another independent variable, number of art courses, produces statistically significant data in order to answer the third and fourth research questions: Is there a significant relationship between students' perceived value of art after having taken art-related college courses along with priming?; and for those students who have had art-related college courses, Can we quantify the effect of priming on college students' perceived value of art?

Pilot Study Priming Image



When the Experimental Group entered the research room, this priming image was projected on the screen prior to the subjects' viewing the artworks. Permission to use this image was granted through the following:

http://news.bbc.co.uk/cbbcnews/hi/newsid_7140000/newsid_7143000/7143085.stm?ls

Pilot Study Artworks for Value Judgments



Landscape Artwork #1: Italian Landscape, Thomas Cole, 1839
Permission Image Source: The Butler Institute of American Art, Youngstown, OH



Landscape Artwork #2: Wheat Fields with Cypresses, Vincent Van Gogh, 1889
Permission Image Source: The Metropolitan Museum of Art, Art Resource, Inc., New York, NY



Landscape Artwork #3: The Lake of Zug, Joseph Mallord William Turner, 1843
Permission Image Source: The Metropolitan Museum of Art, Art Resource, Inc., New York, NY

Pilot Survey Questionnaire for the Experimental Group

Artwork #1: Rate the financial value of each artwork: (Circle only one answer.)

- ❖ **Extremely Inexpensive**
- ❖ **Moderately Inexpensive**
- ❖ **Neither Expensive nor Inexpensive**
- ❖ **Moderately Expensive**
- ❖ **Extremely Expensive**

Artwork #2: Rate the financial value of each artwork: (Circle only one answer.)

- ❖ **Extremely Inexpensive**
- ❖ **Moderately Inexpensive**
- ❖ **Neither Expensive nor Inexpensive**
- ❖ **Moderately Expensive**
- ❖ **Extremely Expensive**

Artwork #3: Rate the financial value of each artwork: (Circle only one answer.)

- ❖ **Extremely Inexpensive**
- ❖ **Moderately Inexpensive**
- ❖ **Neither Expensive nor Inexpensive**
- ❖ **Moderately Expensive**
- ❖ **Extremely Expensive**

1. Please circle the answer that best corresponds to your gender and/or sexual identity.

- ❖ Male
- ❖ Female
- ❖ Transgender

2. Please circle the answer that best corresponds to the number of art-related college courses you have completed.

- ❖ No art classes
- ❖ 1
- ❖ 2
- ❖ 3
- ❖ 4
- ❖ 5
- ❖ 6
- ❖ More than 6

3. What is your class status in school?

- ❖ Freshman
- ❖ Sophomore
- ❖ Junior
- ❖ Senior

**4. Which academic college is associated with your major?
(Circle only one answer.)**

- ❖ College of Arts and Letters
- ❖ College of Business
- ❖ College of Education
- ❖ College of Health and Human Services
- ❖ College of Humanities and Public Affairs
- ❖ College of Natural and Applied Sciences
- ❖ School of Agriculture

Please state your major: _____

A question will be asked verbally at the end:

❖ **Please circle: Yes or No**

Pilot Survey Questionnaire for the Control Group

Artwork #1: Rate the financial value of each artwork: (Circle only one answer.)

- ❖ **Extremely Inexpensive**
- ❖ **Moderately Inexpensive**
- ❖ **Neither Expensive nor Inexpensive**
- ❖ **Moderately Expensive**
- ❖ **Extremely Expensive**

Artwork #2: Rate the financial value of each artwork: (Circle only one answer.)

- ❖ **Extremely Inexpensive**
- ❖ **Moderately Inexpensive**
- ❖ **Neither Expensive nor Inexpensive**
- ❖ **Moderately Expensive**
- ❖ **Extremely Expensive**

Artwork #3: Rate the financial value of each artwork: (Circle only one answer.)

- ❖ **Extremely Inexpensive**
- ❖ **Moderately Inexpensive**
- ❖ **Neither Expensive nor Inexpensive**
- ❖ **Moderately Expensive**
- ❖ **Extremely Expensive**

1. Please circle the answer that best corresponds to your gender and/or sexual identity.

- ❖ Male
- ❖ Female
- ❖ Transgender

2. Please circle the answer that best corresponds to the number of art-related college courses you have completed.

- ❖ No art classes
- ❖ 1
- ❖ 2
- ❖ 3
- ❖ 4
- ❖ 5
- ❖ 6
- ❖ More than 6

3. What is your class status in school?

- ❖ Freshman
- ❖ Sophomore
- ❖ Junior
- ❖ Senior

4. Which academic college is associated with your major?
(Circle only one answer.)

- ❖ College of Arts and Letters
- ❖ College of Business
- ❖ College of Education
- ❖ College of Health and Human Services
- ❖ College of Humanities and Public Affairs
- ❖ College of Natural and Applied Sciences
- ❖ School of Agriculture

Please state your major: _____

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