FIGURATIVE VS. ABSTRACT:

ECONOMIC VALUATION OF ULTRA-CONTEMPORARY PAINTINGS AT AUCTION

Master Cultural Economics & Entrepreneurship
Erasmus School of History, Culture & Communication
Erasmus University Rotterdam
Academic Year 2023–2024
Student Name: Leah Imkamp
Student Number: 667126
Supervisor: Liesbeth de Strooper
Master's Thesis
June 13, 2024

Abstract

The Ultra-Contemporary art market, despite its market recent reemergence, has rapidly gained traction over the last two years. This thesis aims to investigate the economic impact of painting styles – specifically abstract and figurative – within this burgeoning market segment. Historically, abstract art has dominated the market, becoming a favorite among buyers since its rise in the early 20th century. However, recent reports suggest a shift towards figurative art, with a growing prevalence in both primary and secondary markets. This trend raises questions about the current popularity of painting styles and the preference of buyers in the Ultra-Contemporary market. The research addresses a significant gap in academic literature, which has largely overlooked the Ultra-Contemporary market, focusing instead on well-established market sections. By exploring the economic ramifications of painting styles, this research aims to bridge this knowledge gap and provide a comprehensive understanding of how these styles influence the valuation of artworks. This is particularly relevant as journalistic sources have highlighted the resurgence of figurative painting, suggesting a shift in market dynamics that needs academic exploration. To address this research question, this thesis employed a hedonic regression analysis to examine how abstract and figurative styles impact the economic value of Ultra-Contemporary art. The findings indicate that while the overall regressions were significant, the individual style variables – abstract and figurative – were not statistically significant in determining the price of artworks. However, the auction house and the nationality of the artists significantly influenced prices, with figurative art showing a comparatively lower p-value, suggesting a higher impact on prices than abstract art. These results imply that while there is a dominance of style, the style itself does not significantly impact auction prices within the Ultra-Contemporary market. This thesis also highlights the role of market dynamics and external factors, such as macroeconomic turbulences and inflation, which have turned the art market into a buyer's market. This shift is characterized by increased financialization and speculation, with buyers favoring prominent or trendy artists for future resale profit. In conclusion, this thesis contributes to the understanding of art valuation by examining the influence of painting styles within the Ultra-Contemporary market. It underscores the complexities of assessing the artwork's value and the relationship between economic and non-economic factors, providing valuable insights into contemporary market dynamics and trends.

Keywords: Art Market | Ultra-Contemporary | Auction market | Abstraction | Figuration

Contents

1. Introduction

Since the emergence of modern abstract painting in the early 9th century, abstraction has dominated the art world, becoming a perennial favorite among buyers. While abstraction and figuration have coexisted, recent trends indicate a shifting prevalence. Articles over the last few years suggest the 'return' of figurative painting, with popular artists reinforcing this trend (Delagrange, 2021; Halperin, 2019; Lesso, 2021; Schwabsky, 2019). This raises the question of what the more popular type of painting style is and what the preference of buyers are in this evolving market segment. Despite the relevance and evolving artistic trends of the Ultra-Contemporary market, the absence of academic research hinders a comprehensive understanding of how painting styles impact the economic value of artworks within this sector. This gap necessitates exploration to bridge the existing research gap. Therefore, this research aims to answer the following question: *To what extent do figurative and abstract painting styles influence the economic value of art in the Ultra-Contemporary auction market?*

While gendered price differences in this and other market segments have been researched, the economic impact of figurative and abstract painting styles has not been explored in this cultural economic context. Most existing research on painting styles has been in the fields of computer science and psychology, focusing on categorization algorithms and the psychological impact of different styles on viewers (Durkin et al., 2020; Viera et al., 2015). This lack of academic research is why the Ultra-Contemporary art market context was chosen for this thesis. The scientific relevance of this research lies in gaining deeper insights into the Ultra-Contemporary market dynamics that have not been thoroughly academically explored, unlike the more journalistic research by the Burns-Halperin Report, Artnet, Artsy or Artprice Reports. The Ultra-Contemporary art market remains significantly underexplored within academic research, creating a substantial knowledge gap in understanding the economic dynamics within the market section. There is almost no academic research on the Ultra-Contemporary market section, and the auction market is a logical starting point due to the public availability of the price data.

The societal relevance if this research is significant, as in-depth research into this field can provide valuable insights into the overall state of art market and current trends influencing its dynamics. To conduct this research, the theoretical framework will explore how art is generally valued, before examining the economic and non-economic values inherent to artworks. (Artistic) innovation will be discussed more intensely within the context of abstract

and figurative painting, the reemergence of figuration within the market section and Ultra-Contemporary itself. Pivoting to the methodological part, the research method will be explained, including sampling, data collection, and data preparation. The results will be present the descriptive statistics of the dataset and the main analysis of the hedonic regression analysis. The hedonic regression analysis is split into two analyses focusing on the regressions of estimate average price and hammer price as dependent variables. Lastly, the regression results will be interpreted, contextualized, and discussed in the discussion and conclusion.

With a recent dip in market and auction prices, questions emerge about how art is valued and what influences this value (Goldstein, 2023). This thesis addresses these questions by examining the dual aspects of non-economic and economic value, combing art theory of artistic styles and value with economic operationalization. While art historical theory seeks to explain and elaborate on the inherent cultural value of art, economic value is measured by the exchange value buyers attribute to an artwork, often reflected in its monetary price (Throsby, 2003). This thesis endeavors to reconcile these perspectives by examining how artistic style influences the economic value of artworks, thereby providing a more comprehensive understanding of the factors that drive art valuation.

2. Theoretical Framework

The theoretical framework as an anchoring of the methodology and contextualization of the research question, will try to define and explain terminologies and market dynamics that are essential to understanding their implications on the later performed analyses.

The theoretical framework starts with a short introduction into the structure of the modern art market to make sense of the environment this thesis is moving in. The division within the art market can be made into primary and secondary market. The primary market is dominated by galleries and involves selling artworks directly from artists to buyers, either through galleries or directly. In contrast, the secondary market focuses on the resale of artworks. The tertiary market, thus distinguishing the auction channel from other resale channels (Bocart et al., 2018; Adams et al., 2020; LeBlanc & Sheppard, 2022). The secondary market differs from the primary market in that fewer artists supply it due to the gatekeeping role of galleries, dealers, and institutions. However, with ongoing digitization and direct business-to-consumer marketing, these dynamics are (Throsby, 1994; Bocart et al., 2018). While market dynamics are potentially changing, the valuation of art has stayed a much discussed topic especially within cultural economics.

2.1. Valuation of art

Assessing art and its value is not easily done, as valuation judgements can vary based on different criteria and the weight assigned to them. The value of art can be influenced not only by objective physical characteristics but also by subjective, cultural, aesthetic, and artistic factors. Numerous market dynamics and influencing factors, which are often not easily measurable and subject to individual interpretation, further complicate the valuation process on both sides.

As Bonus and Ronte (1997) among others establish, the quality of artworks can hardly be objectively judged or proven by scientific methods (Fiedler, 1978). Montias (1990) even highlights the abandonment of general quality assessment standards for painters in the 17th century, on which basis other guilds judge masters of their craft, as "a large expenditure of diligent, competent labor and costly ingredients were neither a necessary nor a sufficient condition for producing good paintings" (p.55), but rather names the market as a decider of quality. Not only that but he names observable factors of labor and material, to not significantly contribute to a "good" work of art. Thereby Montias (1990) names market

valuation or price as a quality signal for artworks. This leaves the question of how quality and value of artworks is determined, not from the perspective of price as a starting point for quality valuation, but quality as a starting point for economic valuation. Generally for an artwork to gain value, it must be perceived as credible by the public, who in turn base their trust in the quality of the artwork's established credibility. This communal acknowledgement of value is a socially constructed process, relying heavily on interaction and display with and of the artwork (Bonus & Ronte, 1997; Engelhardt, 2015).

Understanding the complexities of the art market requires examining of how quality uncertainty as well as objective and subjective value judgments influence pricing mechanisms. A persistent subjectivity of value judgments within the market also leads to quality uncertainty. While it can be argued against ascribing monetary value to art, viewing it as invaluable in its intrinsic quality and aesthetic merit, the art market and valuation mechanisms of "Pricing the Priceless" have existed for centuries (Grampp, 1989). Due to the nature of the market for art as well as cultural goods and services generally, there is a "basic problem of fundamental uncertainty, since most art works are individual pieces whose quality (Candela et al., 2004) is entirely based on aesthetic judgments" (Beckert & Rössel, 2013, p.179). Unlike markets for search goods, where risks can be mitigated, measured, and anticipated, markets with high uncertainty, such as those in the cultural industries, face challenges in predicting or quantifying these uncertainties and therefore setting prices (Vergès, 2015). Because of the heterogeneous and subjective characteristics of the art market in particular, Rasterhoff & Vermeylen (2015) argue that quality uncertainty should be used in a broader sense, including these heterogeneous and subjective characteristics as factors within quality uncertainty. While efforts to reduce quality uncertainty in art are made through expert and institutional judgement, this reliance grants these entities substantial market power to influence art pricing quality (Arora & Vermeylen, 2012). Additionally, the higher demand uncertainty in the auction market has led to an increased use of guarantees and third-party guarantees for artworks (Vergès, 2015). Whereas economic theory in more homogenic markets sees prices as quality signals and the result of demand and supply within any particular market, the level of quality and demand uncertainty present in the art market makes price alone a comparatively less determinant factor of quality (Akerlof, 1970; Velthuis, 2003).

While there are persistent subjective value judgements that can hardly be observed, objective value characteristics observed or measured can be characteristics such as size, material used, year of creation, when concerning the artwork itself. Whereas socio-

demographic factors in the form of gender and age of the artists also tend to have an apparent significant impact on the price at auction. A subjective characteristic that has been operationalized as a more quantified variable for established artists and used in cultural economics is reputation (Velthuis, 2005). One of the more subjective factors shown to significantly influence an artwork's price is reputation, especially when sold at auction (Akerlof, 1970; Ginsburgh et al., 2006). Reputation, as a measure of value, is challenging to quantify, particularly for new, young artists whose reputations not yet had much time to develop and be shaped through institutions and experts in the field. This ongoing process highlights the interplay between market judgment and expert judgment often seen as existing in two different spheres. The difference in reputation and market freshness within the Ultra-Contemporary market section is also the reason why reputation - even though it can be a significant factor - is not included in this thesis.

Another proven impact on an artworks price, that will not be considered due to the market freshness of the Ultra-contemporary market section, is Grampp's (1989) observation that the older the artwork the more stable are their prices or "The greater the age of a work, the less is the probability of its losing all of its value." (p.156). Similar observations were confirmed by the recent Artnet intelligence report mid-year 2023 on recent market dynamics. While the general sale value went down and the sales value of ultra-contemporary art declined by 26% in one year, that of old masters, even though on a generally lower level of sales value, only declined by 6%, showing recent empirical evidence to Grampp's assumption (Goldstein, 2023). An explanation in art history for this dynamic is the changing taste, while economics adds the decline in marginal utility and accounts for value fluctuations in any style of art (Grampp, 1989). This more general exploration of the value of art leaves concrete value judgements to be surveyed. Subjective characteristics that can further influence the economic value of an artwork artistic, aesthetic, and cultural values and their specifics will be discussed in the following section.

2.1.1. Economic and non-economic value

As discussed earlier in the chapter, assessing the value of art is inherently complex due to the interplay of various value judgements. Artistic, aesthetic, and cultural values play crucial roles in value creation and will be examined alongside economic value in this analysis.

Grampp (1989) asserts that any object holds economic value if it provides utility, including both economic and non-economic utility-providing values. This approach underscores the complexity of valuing art, as the utility provided by an artwork can be derived from its artistic, cultural, or aesthetic qualities, which are inherently subjective. The economic value is therefore proportional to the utility it provides, explaining the challenges in art valuation. This also plays into the dynamics of seeing the art market as elite, since artworks can be considered luxury or superior goods, it leaves people without the necessary income or knowledge about art incomprehensible why significant sums are spent on art.

Economic value is often equated with the price of a good achieved through market exchange, or also exchange value (Klamer, 2004). While the concepts have been established by economists in the 19th century, Hutter and Throsby (2008) specifically level all three concepts, whereas price is tied to the monetary value, exchange value is not explicitly. Throsby (2003) offers a more comprehensive definition as the value that "comprises any direct use values of the cultural good or service in question, plus whatever non-market values it may give rise to" (p.2079). Two forms of economic value that occur in the auction market are pre-auction estimates and hammer prices. These two can potentially be categorized into supply-side and demand-side perspectives. Auction houses, representing the supply-side consignors as an intermediary, providing estimates from an institutional expert perspective based on non-economic factors such as artistic, cultural, and aesthetic value, as well as previous market results. Sproule and Valsan (2006) highlight reputation, medium, subject matter and/or theme, auction house, market and characteristics of the buyer as impacting factors. A truly supply-side value would be the reserve price set by the consignors as an acceptable minimum price, since reserve prices are private, they cannot be collected to use as a supply-side economic value (Sproule & Valsan, 2006). Whereas the demand-side economic value is represented by the hammer price, directly reflecting the buyers' willingness to pay, often seen as a more accurate measure due to the auction market's characteristic of first-degree price discrimination. However, this measure can still be influenced by external factors or biases (Ashenfelter & Graddy, 2006).

Cultural value encompasses various subjective characteristics. Throsby (2000) defines cultural value through characteristics such as aesthetic value, specified as beauty and harmony, spiritual value as understanding, enlightenment and insight and social value in the form of connection with others and a sense of identity. Last mentioned characteristics of this cultural

value definition are historical value elaborated as a connection with the past and symbolic value as a repository or conveyor of meaning.

While economic value, reflected in price, is often considered a precise indicator of an artwork's value in the art market, non-economic values significantly influence economic value. Artistic value is one such influence, falling under Throsby's (2000) umbrella term of cultural value and discussed alongside cultural value when considering subjective values (Klamer, 2004). Hutter and Shusterman (2006) make the value judgement of artistic value in and of itself more nuanced, as they defined some characteristics of artistic value. They also connect artistic value to economic value through supply and demand patterns that are inherent to these characteristics. According to Hutter and Shusterman (2006), the ten specific value characteristics that create artistic value are: art's moral or religious vision, expressiveness, art's communicative power, its social and political value, cognitive value, experimental value, aesthetics, art-technical value, art-historical value and artistic cult. A selection of these artistic values could increase the economic value of an almost by default, generating a formula of economic success created through artistic value: "The highest prices are attained for rare works or performances by most highly ranked masters that combine emotional impact with status and entertainment value." (Hutter & Shusterman, 2006, p.200). Alternatively, Smith (2008) offers another nuanced approach to artistic value, defining it through factors such as existent, representative, formative, insight/ idea, and transformative value. Unlike Hutter and Shusterman (2006), Smith's (2008) characteristics describe values that are exuded by the work itself, rather than those attached to it by the viewer. However, the subjectivity involved in judging these values presents challenges for economic valuation. Characteristics like emotional impact and entertainment value are difficult to quantify, as individual experiences vary greatly. Whereas some characteristics such as rarity and price of artworks can be measured more objectively by the amount of works produced by the artist and monetary value ascribed to them.

Various authors have attempted to quantify and measure the almost elusive aesthetic value of art. Bongard (1974) established a point system assigning artists numerical values based on number of artworks in major museum collections, less major museum collections, mentions in *Art Actual* and *Connaissance des Artes*. Frey & Pommerehne (1989) built upon Bongard's (1974) work, arguing that an artist's artistic capital stock influences the aesthetic valuation of their oeuvre. The authors found high correlations between their adaptation of Bongard's (1974) valuation system and actual standing of artists. The artistic capital stock

consists of four measures: the number of exhibitions and awards the artist has received, the years since the artists first exhibition, the variety of media used by the artist and the realized prices for their works. Frey and Pommerehne (1989) developed a price-per-point system to see if Bongard's (1974) used a regression analysis, which, although not statistically significant, showed clear correlations between Bongard's numerical value and the prices attained by the artists. Grampp's analysis demonstrated further potential for quantifying the aesthetic value of artworks, with an r-squared value of 0,25, indicating that 25% of the price variation could be numerical values. However, while these methods of quantifying aesthetic value are significant in the otherwise immeasurable art sphere, they do not fully capture the changing and intricate dynamics of the market (Bonus & Ronte, 1997).

Even though these characteristics definitions of artistic and cultural value seem reasonable at first glance, a few of these characteristics include other subjectively definable value judgements, that are in need of definition themselves. While economic value in the art market is often represented by monetary price, it is heavily influenced by non-economic factors such as artistic and cultural value, as established earlier. This thesis aims to bridge the gap between these perspectives by examining how artistic style impacts the economic value of ultra contemporary artworks at auction, providing a more comprehensive understanding of art valuation dynamics. Furthermore, the economic value will be operationalized through the monetary price achieved at auction, known as the hammer price, as well as pre-auction estimates. The pre-auction estimate reflects the expected exchange value from the supply side, while the hammer price indicates the actual willingness to pay from the demand side.

Based on the value judgements present economic value serves as the dependent variable in the following regression analysis and is providing a basis for understanding the broader dynamics of art valuation.

2.1.1.1.   Recent Market changes

Despite being the newest segment in the primary and secondary markets, the Ultra-Contemporary section has gained significant traction over the past years (Kakar & Thaddeus-Johns, 2023). Artnet's Mid-Year Intelligence Report for 2023 reveals that while Ultra-Contemporary artists experienced the most substantial year-to-year growth, sales values in this market segment were down 25% compared to the previous year, marking the highest decrease in sales across all market segments. The reduction in sales value reflects a broader

trend in the art market, exasperated by macroeconomic turbulences and inflation, which have turned the art market into a buyer's market. A buyer's market is characterized by market conditions that favor buyers over seller, making artworks harder to sell. Jean-Paul Engelen, president of the Americas at Phillips, fittingly summarized these dynamics at the Artnet Intelligence Report 2023: "Buyers are there, but money became more expensive" (Kazakina, 2023, p.18) describing the basis for these new market dynamics concisely (Kazakina, 2023).

This shift in market dynamics is also influenced by the ongoing financialization of art, where art is increasingly traded as a financial asset. Changes in buying patters towards acquiring works by prominent or trendy artists, with the intent of future resale profit, have significantly impacted the Ultra-Contemporary market section, indicating increased speculation (Taylor, 2011; Velthuis & Coslor, 2012).

2.2. (Artistic) innovation

"To analyze the legend of the avant-gardist innovation means to destroy it" - Schmidt-Burkhardt (2005, p.1)

To analyze the innovation of the avant-gardist movement destroys its image, as the following subchapters show that while the idea of the stylistic pluralism and different forms of abstraction in the avant-garde were novel and new, abstraction itself was not, as Schmidt-Burkardt (2005) exemplifies. While Vieira et al. (2015) see development patterns in music as master-apprentice relationships and in philosophy as oppositional, fine art shows a more mixed pattern of low opposition between members of the same movement and opposition in the change between movements. Development and innovation in fine art seems to be fostered by oppositional forces, breaking traditions and rules (Becker, 2008; Schmidt-Burkhardt, 2005). This can also be seen in newer dynamics of the Ultra-Contemporary market section trying to create novelty with the help of figuration and abstraction as the guideline.

Before diving into the valuation of (artistic) innovation throughout history, it is important to define innovation. Becker (2008) describes change in the art world as consisting of "constant incremental innovation and rare revolutionary innovation[s]" (p.304ff.). In a contemporary context, these incremental innovations have become more frequent as novelty has become central to artistic production and distribution. Artists increasingly blur the lines between styles and media, fostering incremental innovation (Becker, 2008; Engelhardt, 2015).

Ultra-Contemporary art, the primary focus of artistic innovation in this thesis, is notable in the auction market for its market freshness. However, due to its recent introduction, most Ultra-Contemporary art is still sold in the primary market rather than the secondary auction market.

Throughout history innovation within art has evolved and is presenting in different forms and milestones. In the following a few of these milestones concerning abstraction and figuration will be highlighted to understand the evolution as well as reception of abstraction and figuration, the insights to current market dynamics and valuation they provide. Tracing art history from Paleolithic art, human creations aimed to represent the real world, conveying experiences, events, and aspects of human life. Traditionally, Paleolithic art was considered mostly figurative. However, recent research has uncovered abstract and nonfigurative depictions in prehistoric art, establishing that abstract art is not a novelty of the late 19th and early 20th century. This rediscovery is linked to the contemporary appreciation of abstract art, suggesting that the rise of 20th century Western abstract art influenced the renewed interest in non-representational Paleolithic art (Moro Abadía & González Morales, 2013, p.284). While this is a relatively new focus in Paleolithic art research, sociological and anthropological studies have long examined non-representational artistic production (Moro Abadía & González Morales, 2013; Tripp et al., 2020).

During the Middle Ages, most religious paintings and frescos displayed limited understanding of human or animal anatomy and perspective. Giotto's frescos in the *Capella degli Scrovegni* in Padova are early examples of perspectivist paintings introduced into Western art history. Clement Greenberg (1944) described this evolution as an effort to reconcile the new perception of depth and volume. This innovation in art, often funded and valued by wealthy private individuals, demonstrates the progression within art history. The philosophies of Humanism and Enlightenment with ongoing medical research into anatomy helped to better understand the human body and portray it realistically in art. Different styles of figurative art influenced its presentation, while staying representative of the real world (Gombrich, 1950; Hessel, 2022). Later, the institutional rejection of Manet, his contemporaries and their novelty in painting contributed to the ongoing dynamics that later introduced the *Salon des Refusés*, as an alternative innovative exhibition space. Allowing for non-institutional artists to exhibit (Delacour & Leca, 2011). Some scholars argue that Impressionism and Pointillism can be seen as early forms of abstraction, making figurative art less recognizable as a representation of the real world (Greenberg, 1944). This stylistic innovation was initially unrecognized as part of the art historic cannon by experts and

academies. As Vieira et al. (2015) proved statistically in their study on the representation of art as a time-series where dialectic relations are quantitatively measured, that established institutions often favored continuity over innovation, resulting in a lack of recognition for novelty.

Going further into recent art history Modern abstract art in the western art canon, which began in the 19th century, played a significant role in stylistic pluralism and the avant-garde styles that followed. Stylistic pluralism refers to the representation of multiple styles of art being popular in the same area at the same time, a shift from previous eras (Gombrich, 1950; Hessel, 2022). With the notion of an avant-gardist movement some abstract innovations gained popularity throughout the 20th century, also institutionally rewarding artists throughout their lifetime (Dickermann, 2012; Schmidt-Burkhardt, 2005). Additionally, the invention of photography influenced the rise of abstract art, as it made the accurate painterly representation of the real world less necessary. Photography was more accurate, time- and cost-effective than painting (Benjamin, 1972; Scheunemann, 2000). With the art market evolving from an academic to a dealer-critic system the power dynamics of gatekeepers became more widespread, allowing for dealers and critics to foster a more style diverse and therefore innovative market (Saint-Raymond, 2019). Even these select highlighted parts of art history show that innovation has become inherent to art and persistent because of its valuation from different groups, with persistently high valuation of figuration alongside it (Wijnberg & Gemser, 2000). With a possibly different dynamic between and overlapping of abstract and figurative art, the Ultra-Contemporary is a novelty within the art segmentation of art history.

2.2.1. Figurative and Abstract Art

Starting with the definition of this thesis' main terminology of abstract and figurative poses the first difficulty. The generally available definitions of abstract and figurative are comparatively vague and open to interpretation (Durkin et al., 2020; Tate, n.d. a). This could reflect the spectrum on which abstraction and figuration exist, since most artworks are hard to categorize into one or the other. It also leads back to underlying art historical and/or theoretical question, what the terms of figuration and abstraction mean in concrete (Marković, 2011). Barr (1936) uses his infamous diagram of abstract art in a similar approach, grouping together figurative artists who are the precursors or important influences on different abstract styles of painting. The diagram was conceived for the cover of Barr's book "Cubism and

Abstract Art" named after the 1936 exhibition of the same title, curated by him. The network of artists and art styles he establishes, and the later accompanying diagram suggests how the idea of abstraction spread and which influences the pioneering artists had (Barr, 1936; Dickermann, 2012). It not only showcases the "invention" of abstraction, but the interplay and spectrum abstraction and figuration move on.

Figurative art can be defined as art that represents or retains strong references to the real world and the human figure (Durkin et al., 2020, p.19810; Tate, n.d. a). This type of art is also referred to as representational art as it represents the real world. In contrast, modern abstraction, or abstract art, which is also referred to as non-representational art, emerged in the late 19th early 20th century (Durkin et al., 2020; Knapp & Wulff, 1963). Abstract art involves a process of abstracting, not representing the real world. Although the term abstract has its origins in Greek philosophy, it has been associated with visual art since the 18th century (Dickermann, 2012; Pfisterer, 2011).

Recent research on representational and non-representational art is predominantly found in computer science and psychology. In computer science, researchers develop algorithms to categorize artworks by observable characteristics. Psychologists, on the other hand, study human responses to different art styles, examining correlations between personality traits and preferences for representational or non-representational art. These studies often record a general preference for representational art (Durkin et al., 2020; Robertaux et al., 1971; Spehr et al., 2009; Tobacyk et al., 1979; Wallraven et al., 2008). Although less common, the use of these terms in art-related research is not unusual (Altieri, 2021; Dickermann, 2012).

The emergence of modern abstraction created a counterpoint to figuration, working as two ends on the spectrum of abstraction and figuration. It can also be named non-representational art, concrete art, or non-objective art as a form of abstraction that does not use objects, figures or landscapes as its basis and furthermore utilizes shapes, colors, forms, and gestural marks in its expression (Durkin et al., 2020; Graham & Field, 2008; Greenberg, 1944; Sesemann, 2007; Tate, n.d. a). Barr (1936) agrees, noting that the "immediate, sensuous, physical surface" (p. 11) is a defining factor for the attraction to abstract art. Despite being nearly 90 years old, Barr's survey, presented as a book and exhibition, remains a significant narrative in modern art history. The infamous flowchart created for this survey also

underscores the impact of 19th century painting on modern Western abstraction and subsequent artistic generations, including the Ultra-Contemporary.

Taking a closer look at the different meanings of the word abstract, leads to the exploration of the verb *to abstract* as the process of drawing something out or away from, while the noun abstraction is the final 'product', already drawn out. While most art and paintings are on a spectrum of abstraction, abstract art can also include forms that are based on objects, figures or landscapes while being simplified or schematized. This spectrum can be seen in the Impressionist seeming figurative paintings of Turner, the Impressionist work of Monet, Pointillism of Signac, Sony Delaunay's Abstraction, Lee Krasner's Abstract Expressionism, Helen Frankenthaler's Color Field painting or the Contemporary Abstraction of Tiepolo's work by Flora Yukhnovich (Gombrich, 1950; Hessel, 2022; Tate, n.d.a).

A very definitive distinction between abstract and figurative art has been used and originally designed by Marković (2011) for a psychological experiment about the subjective judgment of abstract and figurative art. The purpose of the study is "to specify the differences between the judgements of representational and abstract paintings" (p.196) on the one hand as well as "to specify their possible overlapping in some aspects of subjective experience" (p.196), referring to the idea of spectrum in terms of painting styles, on the other. For the experiment three judgement dimensions with four categories each were established, that participants can judge selected abstract and figurative paintings on. The categories to judge are Perceptual, Semantic, and Affective dimensions. The Perceptual and Affective dimensions are based on previous studies, which created stylistic properties psychologically relevant to paintings, by Berlyne and Ogilvie (1974) as well as Cupchik (1974). Modeled after Osgood, Succi and Tannenbaum's (1957) and Osgood, May, and Miron's (1975) studies into how judgements of stylistic features of paintings are structured, the Semantic dimension was created by Marković (2011). The Perceptual dimension focuses on the physical features of an artwork, including form, color, space, and complexity. While form includes the scale from imprecise to precise, messy to neat, and undefined to defined, color includes color gradient to color contrast, graduated lightness to lightness contrast, and pastel colors to vivid colors. These categorizations based on color are ambiguous to either abstraction or figuration which could prompt their exclusion in the final scale model. The space scales offer flat surface to voluminosity, no spatial depth to spatial depth, and sharp contours to oval contours, whereas the complexity category includes multicolored to unicolored, ornate to plain, and detailed to reduced. The Sematic dimension tackles the understanding of the information paintings

convey, including judgements on illusion-construction of reality, expression, ideology, and decoration. Reflection of subjective impressions, including hedonic tone, arousal, relaxation, and regularity conclude the Affective dimension. For this thesis, the Semantic and Affective dimensions are too subjective as they consider the artists' intentions and the subjective aesthetic experiences of individuals. This conflicts with the objective categorization the author aims to achieve. The Perceptual dimension, particularly form, space, and complexity (with some exclusions), provides the most reasonable descriptors for categorizing paintings from abstract to figurative. While not being objective enough all dimensions are visualized in Appendix 1.

2.2.1.1. The figurative reemergence in ultra-contemporary painting

After defining abstract and figurative art as well as outlining possible descriptors for each in the previous chapter, this section explores potential shifts in trends within the Ultra-Contemporary market that inspired the topic of this thesis. The Artnet Spring 2019 Intelligence Report highlights this shift, introducing the term "Ultra-Contemporary" as used in this thesis. Halperin (2019) notes that "that current tastes have shifted away from bro-tastic abstract painting toward subtler, figurative work" (p.65), verbalizing an ongoing trend in the Ultra-Contemporary art market that had been emerging for a decade. Schwabsky (2019) describes this shift as artists jumping on the figurative bandwagon referencing the economic bandwagon effect, suggesting sufficient demand-side influence for artists to adapt their style for better marketability.

While many Ultra-Contemporary artists have not yet achieved widespread fame, the latest generation of figurative artists are represented in regional and international auction houses, demonstrating their market penetration (Goldstein, 2023; Lesso, 2021; Delagrange, 2021). According to the Artnet Intelligence Report Mid-Year Review 2023, out of the 10 highest-selling Ultra-Contemporary artworks by seven artists, six can be considered figurative painters. Despite a general market slow-down in 2023, which also significantly impacted the Ultra-Contemporary market with prices dropping more than 25% compared to the first half of 2022, this segment remains vulnerable to external factors such as inflation and rising interest rates. Collectors appear to prefer more commercial, established artists over those emerging in the Ultra-Contemporary market (Goldstein, 2023).

2.2.2. Ultra-contemporary

In terms of market section and art categorization Ultra-Contemporary is one of the most recent novelties within the art world. Coined by the Artnet News editors in the Spring 2019 Intelligence Report, Ultra-Contemporary found its way into the art journalist dictionary. Although the term Ultra-Contemporary was used before 2019 in academic literature it was rather loosely defined. For instance, Karmel (2011) mentions the term without defining it, while Borowski and Kosmala (2014) offer a vague definition as the "Young Art Market", open to individual interpretation. Halperin (2019), however, offers a more precise definition in the Artnet Spring 2019 Intelligence Report. She defines it as the market section for artists born in or after 1975. This definition marks a new period in art and serves as a clear cut-off point for categorizing artists.

It is important to be acknowledged that this definition of the term ultra-contemporary is based on and established by the journalistic sources from Halperin (2019) and Lesser (2023) and has not yet been used with this definition in academic literature. Despite its limited academic acknowledgement this definition represents the most contemporary understanding of the art market's newest segment. It can also give the best possible estimation for future development in the art market, as young galleries already see ultra-contemporary artists as the most important artists to their business's future (Kakar & Thaddeus-Johns, 2023). The same dynamic was validated in the recent Artsy Art Industry Trends 2024 report, with more than half of the respondents of the primary market, naming the Ultra-Contemporary section of artists as the most important to their business (Kakar, 2024). Building importance for galleries and in the auction market, this newer generation of artists started to build up their sales value and quantity, showing record breaking auction results season after season. With accompanying lower price points, it shows a trend of buyers to buy more art for lower price, instead of the (Kakar, 2024). This growing importance and partial disconnectedness with the traditional understanding of contemporary art[1] highlights the need for a new market section definition outside of the Post-War and Contemporary segment (Halperin, 2019; Lesser, 2023). Furthermore, the intelligence report elaborates this market section further as a "shift[ed] away from bro-tastic abstract painting toward subtler, figurative work" (Halperin, 2019, p.65). Thereby Halperin (2019) is potentially hinting towards a new demand for the figurative painting style furthered, by the sections novelty and market freshness. While this possible

---

[1] Refers to art that is of the recent past and of innovatory or avant-garde nature. Dating varies based on th institution from the 1940s onward (Tate, n.d.c).

15

market dynamic happening is hard to prove, the question, if figurative or abstract painting is supplied more will be discussed in 4.1. Results/Descriptive Statistics. The Artnet Intelligence Report spring 2019 editors also see a change in behavior as buyers buying up a large quantity of works by a single artist, in the promise to loan them to museum or being bought by the museums themselves, which drives up prices as it constricts supply (Halperin, 2019; Lesser, 2023).

In addition to its defining characteristics, the Ultra-Contemporary market section is notable for having the highest gender parity within the art market. Gender parity here refers to the equal representation of female and male artists, though it does not account for non-binary artists due to a lack of recorded data. In the Ultra-Contemporary market, 43,6% of artists offered at auction are female, and for those born in or after 1985, this figure rises to 63,6%. In stark contrast, female artists comprise only 4% of the overall auction market (Lesser, 2023). This high level of gender parity is significant, as female artists have historically faced substantial labor market and academic discrimination. For instance, Yale School of Art's Master of Fine Arts (MFA) program only achieved gender parity in 1983. Even today, only 30% of female MFA graduates in the U.S. gain representation by commercial galleries, 25% are exhibited at art fairs, and a mere 4% are represented in the international auction market (Cameron et al., 2019; Bocart et al., 2022; McAndrew, 2018; National Museum of Women in the Arts, 2017). The topic of gender parity proves its relevance to the research question in the understanding that diversity and representation within this market section could impact the valuation dynamics. As Ultra-Contemporary art is characterized by a higher representation of female artists, exploring how gender parity interacts with artistic styles could provide deeper insights into how these factors influence economic value. The historically marginalized position female artists and their recent prominence in the Ultra-Contemporary market might affect both the perception and valuation of figurative and abstract paintings differently, shaping the economic outcomes in this market section. This brief exploration of gender dynamics in the art market underscores the significance of the 43,6% female representation on the ultra-contemporary market. The considerable presence of female artists in this segment contrasts sharply with their representation in the broader art market, highlighting the ultra-contemporary market's progressiveness and its potential to shape future developments in the art world.

Even though tried to be somewhat separated in the theoretical discussion, economic and non-economic values are shown to be linked within cultural goods and artworks (Grampp,

1989). This also includes abstract and figurative art and how both styles may have influenced the prices of paintings. While Montias' (1990) survey of 17th century art styles does suggest that artistic styles influence the price, the hypotheses for this thesis, trying to answer a similar question, focuses on abstract and figurative art set in the 21st century. Furthermore, the forecasting of a figurative trend within the ultra-contemporary market section paired with the assumption that styles do influence economic value, create a space to form expectations for an analysis (Halperin, 2019). Based on these implicit expectations of a figurative impact, the hypotheses tested in this thesis are phrased as the following:

Hypothesis 1: The artwork characteristics of figuration show a higher significance than abstraction in their effect on the estimate average price in auction sales.

Hypothesis 2: The artwork characteristics of figuration show a higher significance than abstraction in the effect on the hammer price in auction sales.

The hypotheses were based on the expectation that there are persistent price differences in the auction market between figurative and abstract paintings, as indicated by trends in the literature. This thesis anticipates that these price differences were influenced by the distinct characteristics of the ultra-contemporary market segment.

The following chapter discusses the research method used, its limitations and advantages, detail the sampling and data collection and preparation, that are used to enable the hedonic regression analysis.

3. Methodology

To test the hypotheses stated before the following chapter will concern the methodology used to answer the research question: *To what extent do figurative and abstract painting styles influence the economic value of art in the ultra-contemporary auction market?* as well as the operationalization of the theoretical framework established in chapter 2. While preparing the practical analysis in the coming chapter, it also enables the replicability of the research by documenting the steps taken to achieve the results in chapter 4.

To form a reliable answer to the research question, a hedonic regression analysis was used. This method enabled the thesis to look at the influence the style of painting has on the economic value of artworks in the ultra-contemporary fine art auction market, similarly to Montias (1990) research into the same field within the 17th century Dutch painting.

The method of analysis was a quantitative secondary data analysis in the form of a hedonic regression analysis. This particular analysis was being used to determine the influence of the independent variables on the dependent. In a hedonic regression an economic value was always used, in this case the auction estimate and hammer price (Clark et al., 2021). The same method was used by Bocart et al. (2018) and Bocart et al. (2022) while focusing on gender as the main variable influencing price. A hedonic regression analysis is used as it is the best form of analysis to portray price dependency on independent variables. The quantitative method of secondary data analysis was used as it was the most reliable way to collect data in the art market since it is notoriously anonymous and opaque concerning prices, particularly in the primary market. Whereas auction prices are more easily to attain, the ultra-contemporary secondary market novelty might not show full accuracy of market pricing and preference, as primary market prices would. Due to the fact that auction prices are public and regularly collected by databases it was considered the best way of researching the influence on prices in the art market (Bonus & Ronte, 1997). Furthermore, the method of a hedonic regression analysis was chosen as it can display the measurable impact as well as relation of various independent variables on a dependent variable, here the economic value in the form of hammer price and estimate average price. In its methodology this thesis was referencing already existing research on different factors impacting price in the auction market, while adding to the sparse field of academic research concerning the ultra-contemporary market section and painting styles as the independent variable (Adams et al., 2021; Bocart et al., 2018; Bocart et al., 2022).

The hedonic regression analysis was chosen here because it reflects the impact an independent variable has on the price of a specific product. This predisposition of the method perfectly matches the goal of the research question, which was to figure out to what lengths the style of painting can influence the economic value of an artwork. This means that it explored how much the inherent characteristic of a figurative or abstract painting style can be representative of the artwork's economic value. Furthermore, the method of hedonic regression analysis is commonly used tool to determine price differences in art market studies (Bocart, Gertberg & Pownall, 2018, 2022; Euwe & Oosterlinck, 2017; Lucinska, 2015; LeBlanc & Sheppard, 2022; Oosterlinck & Radermecker, 2019)

The regression model used in this regression analysis is based on a standard multivariate regression formula, $\hat{Y}= b0+b1X1+b2X2+b3X3+…+bkXk$. The dependent variable in the form of $\hat{Y}$ was substituted by the hammer price and estimate average price in the respective regression analyses. Furthermore, the point of crossing on the y-axis, also named the constant, was symbolized by b0 followed by the unstandardized B as b1 and the following, which influenced the angle of the regression line. X1 and further iterations, showed the number of units of a specific independent variable. The number of units was unknown in the following analysis and replaced by the name of each variable used in the final regression model.

Advantages of having used a hedonic regression analysis for the methodology were measurable numeric results that are comparable to assess their relative impact on the dependent price variables. Furthermore, it allowed for the hard to numerate cultural industries to attain concrete numbers (Renneboog & Spaenjers, 2012). In the same vain, disadvantages of the method were found in the inability to numerate all tangible and intangible characteristics of cultural goods and artworks, it was used for to analyze while possibly reducing it to the economic impact, as others could not be fully assessed numerically (Grampp, 1989; Renneboog & Spaenjers, 2012).

Variables used in this analysis were divided into Artist, Artwork and Auction variables which were independent variables and price variables which were used as the dependent variable (table 1). Most variables were in need of dummy variables to account for the categorization of artist or artwork, these were dichotomously coded to help the formation of descriptive statistics. Furthermore, the upcoming variable of painting style, which was the focus of this research, was accompanied by a number of scales of characteristics to make the categorization of the paintings in figurative or abstract more feasible for the researcher and repeatable for other researchers. These scales consisted of nine 3-point-scales with

accompanying descriptors. Depending on the researcher's judgement the artworks included in the sample were placed on each scale, with the sum of all scale positions that categorized the artwork as either abstract or figurative, as modeled in a similar analysis by Heinrichs & Cupchik (1985). This will be explained further in 3.2. or 3.3. in connection with the data collection and preparation ahead of the statistical analysis.

Variable categories	Operationalized
Artist	Name of Artist
	Year of birth
	Gender
	Nationality
Artwork	Painting style
	Name of artwork
	Size (height & width in cm)
	medium
Auction	Auction house
	Auction date
Price	Low/high estimate
	Estimate average
	Estimate average log
	Hammer price
	Hammer price log

Table 1: Regression variable overview

The independent artist variables included name of the artist, year of birth, gender with dummy variables of female/male/non-binary/undisclosed and nationality of the artist in the form of countries. For confirmation of the artists' personal data, as this was not always given when collecting the data, websites including artnet.com, artsy.net or the websites of the artists or galleries were consulted. The recording of artists variables and its verification was modeled after previous research in the field (Adams et al., 2017; Bocart et al., 2018; Candela et al. 2016). Further, artwork variables included, most importantly for this research, the painting style in abstract and figurative, with scales in order to categorize the paintings collected from the database into the two styles. Continuing the artwork variables, they included name of the artwork, size in height (cm) and size in width (cm) as well as type of medium divided in dummy variables of the used media from the artworks in the dataset such as oil, acrylic,

screenprint, mixed media, etc. (Euwe & Oosterlinck, 2017; Oosterlinck & Radermecker, 2019; Renneboog & Spaenjers, 2012; Sagot-Duvauroux, 2003). Initially the variable year of the artwork was to be included in the model, as it is recognized to have a potentially significant impact on the economic value of artworks (Grampp, 1989). Due to this information lacking for a lot of artworks in the attained raw data and the extensive time effort required to be obtained, it was not included after all. Furthermore, the impact of the artwork age factor was expected to be comparatively small, within the sample or the general auction market, due to the market freshness of the artworks recorded in the sample. The final category of independent variables are the auction variables consisting of name of the auction house and date of auction (Euwe & Oosterlinck, 2017; Renneboog & Spaenjers, 2012; Sagot-Duvauroux, 2003). The dependent variable of prize was split into average estimate price and hammer price. The average estimate price was determined by taking the average of the estimate high and estimate low and used in the form of estimate average log. The hammer price required less effort since the final hammer price was recorded and subsequently converted into the hammer price log (Oosterlinck & Radermecker, 2019; Renneboog & Spaenjers, 2012; Sagot-Duvauroux, 2003). Within the price variables, the price of artworks was not adjusted as the recorded auctions were in the span of almost a month from 21.04.2024 back to the 20.03.2024 and solely recorded in USD. These variables were versions of a recurring set of variables used in hedonic regression analysis in previous art market research (Euwe & Oosterlinck, 2017; Oosterlinck & Radermecker, 2019; Renneboog & Spaenjers, 2012; Sagot-Duvauroux, 2003).

3.1. Sampling & Data collection

To test the hypothesis and perform the regression analysis, data was collected using the Artnet price database. This database is a comprehensive resource that compiles auction results for fine art, design, and decorative artworks since 1989, featuring over 16 million searchable auction results from 1985 onwards. The decision to use this specific database stemmed from prior familiarity with its search engine and its ability to filter by the year of birth of artist, which is crucial for this thesis' focus on ultra-contemporary art.

The data collection process employed probability sampling, concentrating on the latest auction results was to ensure the absence of sampling bias. The criteria to record artworks for the sample were the birthyear of the artist who created the work as well as the date of auction being before the date of collection. Additionally, only artworks categorized as paintings will be included, as this specificity aligns with the research question, which examined the impact of abstract and figurative painting styles. To ensure the relevance of the data, sold and

bought-in filter were applied as well as the year of birth set to 1975, to comply with the ultra-contemporary definition. This approach excluded lots from upcoming auctions, which lack hammer prices essential for analysis, and included both sold artworks and those that did not meet reserve prices. This inclusion helped mitigate data skew by considering artworks with zero exchange value, thus providing a fuller picture of market dynamics.

However, it is acknowledged that despite these measures, the data may have been skewed due to the exclusion of unsold artworks or those not properly recorded by the database. This potential skewness could have introduced selection bias, as different painting styles may have had varying probabilities of selling. Nonetheless, the selected filters were intended to provide a balanced dataset for analysis, though the limitations inherent in this approach are recognized.

The raw data itself was collected on April 24, 2024 with recorded auction data starting at the 21.04.2024 going back to the 20.03.2024, while all the results were recorded from several auction houses that are based internationally. The lots were listed individually by order of descending date from the start-date of the recording onward. The data was first collected in an excel spreadsheet, each lot given an ID number from 1 to 750. The spreadsheet was started with the artist variables, artist name, year of birth, ranging from 1975 to 2000, gender, categorized in female, male, non-binary and unidentified as well as nationality. Overall, 74 nationalities were identified for 750 recorded artworks, with artists occurring multiple times. Each nationality was further confirmed through an Artnet or Artsy search providing reassurance in nationality and year of birth of the artists. Following were the artwork variables, name of artwork, height in cm, width in cm and medium where the sample has recorded 35 different types of media. The auction variables are recorded next and consist of the auction house the artworks were sold at, adding up to 59 different auction houses or sale locations. The date of auction was mentioned, followed by the dependent price variables low estimate in USD, high estimate in USD, average estimate in US and finally hammer price in USD.

3.1.1. Data Preparation

After the simple recording of data, it had to be prepared to be used for the final regression analysis. Therefore, artists which could not be provided with socio-demographic or artwork information, a decision to exclude or not had to be made. The nationality of the artist DIEGO, appeared twice in the dataset, could not be confirmed, but it was decided to keep him in the dataset as the essential information for the following analyses was given. Seven other

artworks were decided to be excluded from the sample due to incoherent or missing information such as year of birth, multiple artists for one artwork or missing images. This left the dataset with 743 datapoints (n=743) to be included in the analyses. In preparation of the analyses, the nominal variables gender, nationality, medium and auction house were recorded in dichotomous coding for each dummy variable. This included female, male, non-binary and unidentified for gender. Here unidentified referred to the artists whose gender could not be determined through a search on specialized websites, specifically Artnet, Artsy and the artist or representing galleries own website. To make dichotomous coding for medium better manageable all nationalities that account for less than 1% of the sample or fewer than 8 artworks and corresponding artist nationalities were joined into one dummy variable, other nationalities. The new dummy variable of other nationalities merged 58 different nationalities into one (Appendix 2a). Additionally, the percentage division of all dummy variables was further explored in 4.1. Descriptive data.

In Addition, medium information that included more than one medium or technique was coded as mixed medium. This was done in accordance with the mixed media definition of using a combination of material or technique to create the artwork (Tate, n.d. b). Even with this collection of different media into one category, the artworks collected show 35 different media used. All media that accounted for less than 1% of the overall sample was also joined into other medium dummy variable as they each represent less than 3 artworks. The other technique dummy variable was the sum of 33 different media (Appendix 2b). This joining of variables into one left four different types of media, mixed media, acrylic, oil and other medium.

The auction houses selling artworks in this sample have also been dichotomously coded and add up to 59 different houses or locations. Auction houses with different sale-locations have been listed individually i.e. Phillips New York and Phillips Hong Kong. As was done with other dummy variables before, auction houses that account for less than 1% of the total sales or less than 10 artworks, will be grouped together in a new dummy variable, other auction house. The variable other auction house joined together 36 different auction houses or locations (Appendix 2c). Additionally, prices were recorded in the USD equivalent of the sale currency, that was provided by the Artnet price database and rounded to full dollar values.

The main part for the analysis of this thesis is based on the categorization of the sampled artworks into abstract and figurative. As the artworks were not categorized into these two options during recording, this responsibility falls back on the researcher. For this

categorization the introduced descriptors by Marković (2011) in 2.2. were used in three-point scales from abstract to figurative. Form included, respectively associated with abstract and figurative, imprecise – precise, messy – neat, undefined form – defined form. The color category was supplied with color gradient – color contrast, graduated lightness – lightness contrast, pastel colors – vivid colors. These descriptors were harder to attribute to one of the two styles, as the scales seemed very ambiguous to either painting style and could also not definitively be associated with either from an art historical point of view. The third category of space is rather straight forward compared to the former, with scales of flat surface – voluminosity, no spatial depth – spatial depth, sharp contours – oval contours, abstract and figurative respectively. Here the term oval contours was understandable but rather ill-named and was substituted with rounded contours moving forward. Lastly the fourth category of complexity included multicolored – unicolored, ornate – plain, detailed – reduced whereas the former descriptors of each scale has been considered figurative and the latter abstract. In this category again, one scale is not very fitting from an art historical perspective, as the descriptors multicolored – unicolored are not distinctly one painting style or the other and therefore be excluded. Furthermore, the descriptors dimensions semantic and affective used by Marković (2011) were not included in this categorization, as these could either not definitively have been categorized in to abstract or figurative or used the judging individuals own understanding of beauty and how they feel in relation to the artwork. These subjective judgements were not used as the goal is an objective as possible categorization of the artworks. In practice each artwork was ranked on nine three-point scales ranking from 1 to 3, abstract to figurative. With a minimum score of 9 and a maximum score of 27, all artworks that summed up less than 18 points were therefore considered to be abstract and every artwork scoring more than 18 were considered figurative. Even though the spectrum of abstract to figurative art was also noticeable in the pointing system with artworks scoring closer or further away from the middle point. For the purposes of this thesis every score was considered a definitive categorization into abstract or figurative art. After finishing this categorization, a comparatively small number of artworks – 48 - scored the middle point of 18 points. As the categorization in either painting style was an essential part of the following analysis, these artworks were again considered on the scales. This was modeled in a similar scale and pointing system to categorize artworks for analysis Heinrichs & Cupchik (1985) did, to try and predict artistic preferences. After doing a few test-regressions with this dataset, all of them automatically excluded one of the painting style variables. Considering that these two variables were the main informational variables for this thesis and analysis, their involvement

in the regression is essential. The reason for the automatic exclusion from SPSS seems to be the high correlation leading to collinearity with the Abstract/Figurative variables. To not encounter that problem the middle variable including the 48 artworks categorized as middle, were included in the dataset again and excluded for reference in the final regression.

To establish the validity of the hedonic regression analyses undertaken, they were modeled after previous research on the auction market and valuation of art such as studies by Adams et al. (2017) and Bocart et al. (2018) and similarly the choice of independent variables. Internal validity threats, such as selection bias, were minimized through probability sampling, ensuring a diverse sample that confirmed similar dynamics to those present within the market. Previously established scales for categorizing artworks into abstract and figurative art by Marković (2011) were used to enhance validity and ensure methodological consistency. Due to the more than sparse academic literature on Ultra-Contemporary market section, the reliance on journalistic art market reports was necessary to supplement the theoretical framework. Reliability was ensured through the use of the Artnet price database, an industry established database for auction results, that maintained data quality. The processes of data collection and cleaning were meticulously recorded to ensure accuracy and reproducibility.

4. Results

In the following chapter of the results, descriptive statistics are discussed first, giving an overview of the samples distributions as well as comparable numbers for the sell through-rate. The regression analyses with the separate dependent variables of estimate average log and hammer log follow including the individual interpretation of the two.

4.1. Descriptive statistics

After excluding artists with missing information, the final sample for the empirical analysis included 743 datapoints which concludes to n= 743 = 100% of the sample. These datapoints are based on the recorded artworks at auction sales, which is why the same artist can appear multiple times. Starting with the socio-demographic variables, the year of birth was already restricted due to the focus on the ultra-contemporary auction market in the research question, leaving the oldest artist to be born in 1975. The artists' ages range from 1975 to 2000. The average year of birth is 1983, showing that the artists age ranges more towards the older half of the sample. This is in accordance with the findings that artists take some years and a certain level of reputation to attain popularity in the secondary market (Throsby, 1994; Bocart et al., 2018). The gender division of the sample is consistent with reports about the ultra-contemporary auction market section, showing more parity than other market sections with 34,3% female artists in this sample leaving 61,5% of male, 0,4% non-binary and 3,8% artists with unidentified gender. Similar gender dynamics can also be seen when dividing the sample in abstract and figurative. The division has shown no particular preferences of figuration or abstraction for any gender, while staying consistent with the overall gender division in the market section (figurative: female 33,6%, male 61,03%, non-binary 0,40%, unidentified 4,97%; abstract: female 35,83%, male 62,50%, non-binary 0,42%, unidentified 1,25%). The nationalities of artists were very diverse while 22,8% of artists belong to the category other nationalities which was described in more detail in 3.2.3. This was followed by Japanese with 18,2% and American with 17,3%, Korean with 6,1%, and Chinese with 5,9% of the sample. The next nationalities represented were Australian with 4,5%, South African 3,2%, Danish 3,1%, as well as Indigenous Australian and French with 2,8% and 2,7% respectively, closely followed by Indonesian and British with 2,6% each. The last few percentages are spit between South Korean (2,2%), Irish and Ghanaian (each 1,4%) as well as Canadian, Polish and Zimbabwean with 1,1% each accounting for 8 artworks.

After having categorized all artworks on the aforementioned nine three-point scales, abstract, figurative or middle, were divided into 32,3%, 61,4% and 6,3% respectively. The

abstract categorization included 240 artworks, while the figurative categorization included 456 and middle included 47 artworks in total. This distribution showed that figurative painting was the dominant form of painting in this sample and could be potentially generalized onto the whole ultra-contemporary secondary art market. It also goes hand in hand with the statement that the trend of this newer market section leans toward figurative painting instead of the more abstract leaning style of the contemporary market section (Halperin, 2019). This could also be supported by the average score of 19,3 points in the categorization being above the middle point, scoring as figurative.

The size of the artworks recorded averaged 100,6cm in height and 95cm in width. Furthermore, the different media used distributed into 6,2% of other techniques, 30,2% the group of mixed media, including every artwork that listed more than one technique or medium, 30,9% of the artworks are made with acrylic paint while almost one third is accounted for by artworks made with oil paint as the medium of choice. Showing that the choice of medium tends to be more traditional, also in the youngest market section. While figurative artworks showed a distinct preference for oil as the medium of choice (35,60%) abstract artworks were mostly created in acrylic (36,10%).

Within this sample most artworks have been sold through Asian, American and European auction houses locations, which falls in line with the auction sales value and volume division of the auction market, except for the comparatively underrepresented chinses market, with the most artworks being sold through SBI Art Auction Japan selling 10,1%, Phillips New York 8,5% and the Australian Auction House Lawsons 6,2% of the sample. This could suggest that ultra-contemporary artists are most popular in those markets.

Starting with the auction variables the estimate low and estimate high are averaging 13.747 US$ and 22.981 US$ respectively with the estimate average averaging 18.364 US$. The average hammer price comes in at 18.724 US$, when not considering artworks that were bought-in, showing that those artworks sold are well within the estimates made by auction houses. Taking the bought-in artworks into consideration as well the average price drops to 13.645 US$, just below the low estimate average of the sample. This is in accordance with the sell-rate of 72,8%, lowering the average hammer price with 27,2% of unsold artworks. While Rea (2024) found an average sell-through rate of 71% for 2023 for the general auction market, Ashenfelter & Graddy (2011) record an average sell through rate of 76,8% for contemporary art between 1982-1994. Even though there is no precedent for ultra-contemporary sell-through rates, the result within this sample is slightly above average. Here,

it also has to be acknowledged that these results stem from a sample which only includes unsold artworks that were marked bought-in by the Artnet price database.

4.2. Regression analysis

In the following account of the hedonic regression analyses with estimate average price and hammer price as dependent variables respectively the variables other nationality, middle, other technique and other auction house are excluded for reference therefore including 49 different variables in the analyses. Furthermore, the alpha is set 0,05 in both analyses.

4.2.1. Estimate average price regression

Beginning with the estimate average price regression, it uses the variable estimate average log as the dependent variable, making the handling for the researcher and program easier, as it deals with single digits and decimals.

The first relevant number shown in the model summary of the regression is the R square with a value of ,666, showing that the prediction power of this particular regression analysis comes to 66,6%. Prediction power here means that all the included independent variables shown under the Model Summary table, account for 66,6% of the estimate average price. With supplying over two thirds of the estimate average price determining factors the R square of this regression is relatively good. This also means that less than one third of the estimate average price is determined by factors that are not included in this regression analysis. These could be value judgements such as artistic or cultural value that were discussed earlier in chapter 2.1.2. or other price predicting factors that concern other intangible characteristics of the artworks that are not measurable and can therefore not be included in a regression analysis like this. Furthermore, this could lead to the conclusion that the measurable physical attributes of an artwork have more influence on the final price than those intangible ones, making the market for the physical object a bigger influence than the market for the idea (Throsby, 2000).

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,816[a]	,666	,642	,38041075

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	199,784	50	3,996	27,611	<,001[b]
	Residual	99,996	691	,145		
	Total	299,780	741			

a. Dependent Variable: estimate average log

The ANOVA test shows the statistical significance of the executed regression analysis. In this regression analysis the significance with a score of <,001 is below the set alpha of .050, showing that the whole model has predictive power. It also shows that the independent variables, also named predictors under the ANOVA test table, have a statistically significant influence on the estimate average price of artworks in this sample.

The coefficients table (Appendix 4 a) first shows the constant of the model, or the crossing point of the y-axis, followed by the independent variables chosen for the regression analysis. Each independent variables' unstandardized coefficient portrays the change in direction of the linear regression line. The significance in the last column of the table shows the statistical significance each independent variable has for the direction of the regression. Here the alpha is also set to ,050, deeming every significance below this p-score statistically significant.

Overall, 24 of the 49 independent variables used in the regression have a negative relation on the estimate average price while 25 have a positive. This would suggest an overall

weak positive relation to the estimate average price with an upward sloping regression line starting from 12,562 on the y-axis. Global Auction has the biggest negative influence with -,702, which is also shown as statistically significant with a p-value of <,001. The biggest positive influence has Sotheby's Hong Kong with an Unstandardized B score of 1,458, also deemed statistically significant with a p-value of <,001.

Looking further at the significance scores (Appenidx 4a), the female variable is just statistically significance with a p-value of ,050, while male is statistically significant as well (,023). Furthermore, the nationalities Japanese (,025), Chinese (,032) and Korean (,031) are statistically significant in the regression. Next to the size variables that are both statistically significant (both <,001), with a very weak positive relation to the estimate average price (height in cm ,002; width in cm ,001), most other significant variables are auction houses. These are namely Lawsons (,022), Tiroche (,002), Mainichi Auction (,004), Seoul Auction (<,001), China Guardian (<,001), Poly Auction Hong Kong (<,001), Sotheby's Hong Kong (<,001), Global Auction (<,001), Tajan (,027), Phillips New York (<,001), Heritage Auction (<,001), Christie's Online (<,001), Phillips Hong Kong (<,001), Bonhams London (<,001), K Auction (<,001), Antik A.S. (,005) and Sotheby's London (<,001). The significance of the auction houses can of course be influenced by the number of artworks sold through the auction house in the sample and which artworks were recorded in the database at all.

Taking a look at the independent variables with the most meaning for this thesis, Abstract and Figurative, both have a weak negative relation to the estimate average with an unstandardized B of -,001 and -,015 respectively. This weak relation is also mirrored in the statistical significance which is far outside of the set alpha with a p-value of ,992 for the Abstract variable and ,802 for the Figurative.

Stating the hypothesis for this regression:

H0: The artwork characteristics of figuration do not show a higher significance than abstraction in their effect on the estimate average price in auction sales.

H1: The artwork characteristics of figuration show a higher significance than abstraction in their effect on the estimate average price in auction sales.

The higher significance of figurative art styles for auction prices can be accepted and the hypothesis based on this expectation can be accepted. Even though both variables are not statistically significant for the regression, these numbers show that the figurative painting style has a more significant relation to the estimate average price than the abstract. Therefore, the null-hypothesis of the analysis stating that figurative art does not show a higher significance can be rejected. Based on the standardized B in the coefficients table the equation

for this regression line with the dependent variable estimate average log the model equation was written (Appendix 4b).

4.2.2. Hammer price regression

In the second regression analysis the dependent variable has been changed from estimate average log to hammer log, standing in for the hammer price log. In the Model Summary for this regression the R square has a value of ,324 which shows that 32,4% of the dependent variable, here the hammer price, can be explained by the independent variables used in this model. The prediction power of 32,4% is relatively low, only accounting for a little over one third of the price. This could be due to the bought-in artworks, which are recorded with a hammer price as zero, reducing the overall prediction power. It shows that in this regression the valuation of artworks could be influenced more by the non-measurable factors of the artworks.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,570[a]	,324	,276	1,47720375

a. Predictors: (Constant), year of birth, Poly Auction HongKong, Polish, South Korean, Bonhams London, Indigenous Australian, Seoul Auction, non-binary, British, Canadian, Danish, Aspire Art, Indonesian, Ghanaian, French, China Guardian (HongKong) Auctions Co., Ltd., Tiroche, Australian, Phillips HongKong, Irish, Strauss & Co., Los Angeles Modern Auction , Sotheby's HongKong, Heritage Auctions, Mainichi Auction, Christie's Online, Antik A.S., Abstract, mixed media, width in cm, Phillips New York, female, Sotheby's London, Zimbabwean, SBI Art Auction Co., Ltd., acrylic, Global Auction, American, Chinese, K Auction, Tajan, South African, height in cm, Bruun Rasmussen Online, Korean, Japanese, Lawsons, Figurative, oil, male

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	725,348	50	14,507	6,648	<,001[b]
	Residual	1510,035	692	2,182		
	Total	2235,383	742			

a. Dependent Variable: hammer log

b. Predictors: (Constant), year of birth, Poly Auction HongKong, Polish, South Korean, Bonhams London, Indigenous Australian, Seoul Auction, non-binary, British, Canadian, Danish, Aspire Art, Indonesian, Ghanaian, French, China Guardian (HongKong) Auctions Co., Ltd., Tiroche, Australian, Phillips HongKong, Irish, Strauss & Co., Los Angeles Modern Auction , Sotheby's HongKong, Heritage Auctions, Mainichi Auction, Christie's Online, Antik A.S., Abstract, mixed media, width in cm, Phillips New York, female, Sotheby's London, Zimbabwean, SBI Art Auction Co., Ltd., acrylic, Global Auction, American, Chinese, K Auction, Tajan, South African, height in cm, Bruun Rasmussen Online, Korean, Japanese, Lawsons, Figurative, oil, male

Even though the prediction power of the hammer price regression is relatively low the ANOVA test shows that the independent variables included in the regression still have a significant impact on the hammer price as the p-value of <,001 is lower than the established alpha.

The coefficients table for the hammer price regression (Appendix 5a) shows the constant of this regression at -12,858 crossing the y-axis. Overall, the unstandardized B seems to have a moderate positive relation to the hammer price, with 16 coefficients in the negative, sloping the regression line downward, while 33 of the 49 predictors included in the regression stray to the positive with significant influence. Global Auction has the biggest negative influence on the hammer price with a coefficient score of -1,925 while Poly Auction Hong Kong has the biggest positive impact with a score of 1,799. The positive impact multiple variables have on the hammer price is over one, all of the variables with a score over one are also showing a statistically significant impact on the hammer price.

Significant variables in the regression are shown to be Chinese (,026) and Danish (,040) as nationalities while the other variables that are recorded as significant are auction houses. These are namely SBI Art Auction (<,001), Mainichi Auction (,028), Los Angeles Modern Auction (,020), China Guardian (,003), Poly Auction, Sotheby's Hong Kong, Global Auction, Phillips New York, Heritage Auction, Christie's Online and Phillips Hong Kong (all <,001) as well as Antik A.S. (,008) and Sotheby's London (,004). This shows that the specific sale or auction house has a comparatively big influence on the hammer price in comparison to the artwork or artist variables that have been collected for this thesis.

The main variables of this analysis, Abstract and Figurative both do not show statistical significance at p-values of ,841 (abstract) and ,782 (figurative). This corresponds with -,049 and ,065 respectively in their unstandardized B, that shows Figurative has a slightly higher influence on the hammer price. Based on the standardized B in the coefficients table the equation for this regression line with the dependent variable hammer log was modeled (Appendix 5b)

Sating the hypothesis for the hammer price regression:

H0: The artwork characteristics of figuration do not show a higher significance than abstraction in the effect on the hammer price in auction sales.

H1: The artwork characteristics of figuration show a higher significance than abstraction in the effect on the hammer price in auction sales.

The expectations phrased into Hypothesis 2 concerning the higher significance of the figurative art style on auction prices, as the variable shows a lower p-value than the compared to abstract art. Even though both variables do not show statistical significance figuration scores higher on the coefficients and lower on the p-value that abstract art, making it more significant. Therefore, the null-hypothesis for the hammer regression can be rejected, similar to the estimate average one.

5. Discussion & Conclusion

The regression analyses reveal that while the overall regressions, are significant, the style variables – abstract and figurative – are not statistically significant predictors of auction prices for Ultra-Contemporary artworks. However, multiple auction houses and nationality of the artists are shown to significantly impact the prices. Notably, the figurative style variable, with lower p-value, suggests a higher, albeit still insignificant, impact on the price compared to the abstract variable. These findings suggest that although there is predominance in style, the style itself does not significantly influence the auction prices for Ultra-Contemporary artworks. This aligns with Halperin's (2019) observation that figurative art is predominant, as more than 60% of the sample were categorized as figurative. Both regression models were significant, but they diverged in their predictive power – 66,6% for the estimate average price and 32,4% for the hammer price. The inclusion of bought- in artworks, which did not reach their reserve price and thus have a hammer price of zero, likely contributed to the lower predictive power of the hammer price regression. Furthermore, does the recorded sell through rate of artworks align with observed market norms, suggesting that the sample's dynamics could be representative of the broader Ultra-Contemporary auction market. This supports the generalizability of the findings to this market segment.

Additionally, are several limitations to this study. The limitations of the method are the possible skewness of recorded data due to a forced exclusion of all artworks that were not marked as sold on the Artnet price database. Therefore excluding artworks whose economic value was, at the time of the sale, at zero or below the set reserve price therefore being recorded as zero because of the missing exchange. Furthermore, the categorization of artworks, despite using Markovic's (2011) scales to minimize bias, remains a limitation. Additionally, the focus on Ultra-contemporary art excludes other segments that may exhibit different dynamics, as well as may impact the generalizability of the findings on the broader art market.

Concluding, this thesis aimed to explore whether painting styles significantly influence the economic value of art within the Ultra-Contemporary auction market and answering the question: *To what extent do figurative and abstract painting styles influence the economic value of art in the ultra-contemporary auction market?*

Through examining the valuation of art, including both economic and non-economic factors, the thesis highlights the complexities cultural economists and industry professionals

face in assessing an artwork's value. Although there might not be an objective measurable way of assessing an artwork's value, the inching towards a better understanding of what makes humans value art and influences not only pricing but also buying decisions has been elemental to understanding the market and art itself.

The thesis demonstrated that while artistic innovation and stylistic novelties have shaped art history, the characteristics of figurative and abstract art do not significantly impact auction prices in this sample. This insight highlights the multifaceted nature of art valuation, where factors beyond style play crucial roles. Understanding these dynamics is essential for both market participants and cultural economists, providing a nuanced view of how art is valued and traded in the Ultra-Contemporary market. This is of particular wight as research into the Ultra-Contemporary art market section is just growing alongside the market section itself. This shortage of academic research would also be an argument for possible future research into the Ultra-Contemporary market section, looking further into how the artists perceptions and self-categorization of abstract and figurative concepts can be defined, when blurring lines and the absence of self-allocation into styles seem to become more prevalent.

6. References

Adams, R. B., Kraeussl, R. and Navone, M. A. & Verwijmeren, P. (December 6, 2017). Is Gender in the Eye of the Beholder? Identifying Cultural Attitudes with Art Auction Prices (December 6, 2017). Available at SSRN: https://ssrn.com/abstract=3083500 or http://dx.doi.org/10.2139/ssrn.3083500

Akerlof, G. A. (1970), The Market for "Lemons": Quality Uncertainty and the Market Mechanism, *Quarterly Journal of Economics*, *84*(3), pp.488–500.

Altieri, C. (2021). Representation, representativeness, and "non-representational" art. In Prabha Shankar Dwivedi (Eds.) *Aesthetics and the Philosophy of Art*. Routledge India.

Angelini, F., Castellani, M. (2019) Cultural and economic value: a critical review. *Journal of Cultural Economics, 43*, 173–188. https://doi.org/10.1007/s10824-018-9334-4

Arora, P., & Vermeylen, F. (2012). THE END OF THE ART CONNOISSEUR? EXPERTS AND KNOWLEDGE PRODUCTION IN THE VISUAL ARTS IN THE DIGITAL AGE. *Information, Communication & Society*, *16*(2), 194–214. https://doi.org/10.1080/1369118X.2012.687392

Ashenfelter, O. & Graddy, K. (2006). Art Auctions. In V. A. Ginsburgh & D. Throsby (Eds.), *Handbook of the Economics of Art and Culture* (pp.910-945). Elsevier.

Ashenfelter, O. & Graddy, K. (2011). Sale Rates and price Movements in Art Auctions. *CEPS Working Paper*, Princeton University.

Barr, A. H. Jr. (1936). *Cubism and Abstract Art*. The Museum of Modern Art, New York.

Becker, Howard S. 2008. *Art Worlds*. Berkeley and London: University of California Press

Benjamin, W. (1972). A short history of photography. *Screen, 13*(1), 5-26.

Berlyne, D. E., & Ogilvie, J. C. (1974). Dimensions of perception of paintings. In D. E. Berlyne (Ed.), *Studies in the new experimental aesthetics* (pp. 181–226). Washington, D.C.: Hemisphere Publishing Corporation.

Bocart, F.Y.R.P., Gertsberg, M. & Pownall, R.A.J. (2022). An empirical analysis of price differences for male and female artists in the global art market. *Journal of Cultural Economic,s 46*, 543–565. https://doi.org/10.1007/s10824-020-09403-2

Bocart, F. Y. R. P., Gertsberg, M. & Pownall, R. A. J. (2018). Glass Ceilings in the Art Market. *SSRN Electronic Journal.* DOI: 10.2139/ssrn.3079017

Borowski, K. & Kosmala, W. (2014). The Contemporary Art Market in Poland – Paintings. *Journal of Management and Financial Sciences, 17*(15), 63-80, Available at SSRN: https://ssrn.com/abstract=2538201 or http://dx.doi.org/10.2139/ssrn.2538201

Cupchik, G. C. (1974). An experimental investigation of perceptual and stylistic dimensions of paintings suggested by art history. In D. E. Berlyne (Ed.), *Studies in the new experimental aesthetics* (pp. 235–257). Washington, D. C.: Hemisphere Publishing Corporation.

Delacour, H. & Leca, B. (2011). The Decline and Fall of the Paris Salon: a Study of the Deinstitutionalization Process of a Field Configuring Event in the Cultural Activities. *M@n@gement, 14*, 436-466. https://doi.org/10.3917/mana.141.0436

Delagrange, J. (June 26, 2021). Contemporary Figurative Painting. *Contemporaryartissue.com.* https://www.contemporaryartissue.com/contemporary-figurative-painting-a-complete-overview-and-list/

Dickermann, L. (2012). Inventing Abstraction 1910-1925: How a radical idea changed Modern Art. Museum of Modern Art, New York.

Durkin, C., Hartnett, E., Shohamy, D. & Kandel, E. R. (2020). An objective evaluation of the beholder's response to abstract and figurative art based in construal level theory. *Proceedings of the National Academy of Sciences, 117*(33), 19809-19815. https://doi.org/10.1073/pnas.2001772117

Euwe, J. & Oosterlinck, K. (2017), Art Price Economics in the Netherlands during World War II. *Journal for Art Market Studies*, *1*(1), pp. 47-67.

Fiedler, C. (1978). *On judging works of visual art*. University of California Press.

Frey, B. S. & Pommerehne, W. W. (1989). *Muses and Markets – Explorations in the Economics of the Art*. Basil Blackwell, Oxford.

Ginsburgh, V., Mei, J. & Moses, M. (2006), The Computation of Prices Indices. *Handbook of the Economics of Art and Culture*, Vol.1, Pages 947-979.

Goldstein, A. (Eds.)(2023). The Intelligence Report: Mid-Year review 2023. Artnet. https://media.artnet.com/image/upload/v1691415983/2023/08/introducing-the-artnet-intelligence-report-mid-year-review-2023_oqhquy.pdf

Gombrich, E.H. (1950). The Story of Art (16th Ed.). Phaidon Press Limited.

Graham, D. J., & Field, D. J. (2008). Variations in Intensity Statistics for Representational and Abstract Art, and for Art from the Eastern and Western Hemispheres. *Perception*, *37*(9), 1341-1352. https://doi.org/10.1068/p5971

Grampp, William D. (1989). *Pricing the Priceless: Art, Artists, and Economics.* Basic Books, Inc., Publishers

Greenberg, C. (1944). Abstract Art. In J. O'Brian (Eds.). *Clement Greenberg, The collected essays and criticism, Perceptions and Judgements*, *1939-1944* (Vol. 1, pp.199-204).

Halperin, J. (2019). Ahh…a Refreshing Data Dive. Artnet News Intelligence Report   2019.
https://media.artnet.com/image/upload/v1616185996/2019/02/intelligence_report_spri
ng_qspbad.pdf

Hessel, K. (2022). *The Story of Art without Men.* Penguin Random House UK.

Hutter, M. & Throsby, D. (2008). *Beyond Price: Value in Culture, Economics and the Arts*.
Cambridge University Press.

Kakar, A. & Thaddeus-Johns, J. (2023). Art Industry Trends 2023. Artsy.net.
https://partners.artsy.net/resource/the-industry-trends-report-
2023/?utm_medium=websit[%e2%80%a6]-art-industry-trends-report-
2023&utm_sfc=7013b000001nye0aai

Kakar, A. (2024). Art Industry Trends 2024. Artsy.net. https://www.artsy.net/article/artsy-
editorial-art-industry-trends-2024

Karmel, P. (2011) Just What Is It That Makes Contemporary Art So Different, So
Appealing?, *Visual Resources*, 27(4), 318-329, DOI: 10.1080/01973762.2011.622233

Klamer, A. (2004). Cultural goods are good for more than their economic value. In V. Rao &
M. Walton (Eds.), *Culture and public action* (pp. 138–162). Stanford, CA: Stanford
University Press.

Knapp, R. H. & Wulff, A. (1963). Preferences for Abstract and Representational Art, *The
Journal of Social Psychology, 60*(2), 255-262, DOI: 10.1080/00224545.1963.9922196

LeBlanc, A. & Sheppard, S. (2022). Women artists: gender, ethnicity, origin
and contemporary prices. *Journal of Cultural Economics, 46*,
439-481. https://doi.org/10.1007/s10824-021-09431-6

Lesser, C. (2023, March 8). The Women Artists Market Report 2023: The Ultra-
Contemporary Women Artists at the Forefront of the Art Market. *artsy.com.*
https://www.artsy.net/article/artsy-editorial-ultra-contemporary-womenartists-
forefront-art-market

Lesso, R. (May 14, 2021). The Rise of Figurative Painting: 6 Contemporary Artist to Know.
Thecollector.com. https://www.thecollector.com/rise-of-figurative-paintings-6-
contemporary-artists/

Libre Texts (2020, September 27). Representational, Abstract, and Nonrepresentational Art.
In Introduction to Art Concepts (Lumen).
https://human.libretexts.org/@go/page/71923

Lombardi, T. E. (2005). The classification of style in fine-art painting (Order No. 3189084).
Available from ProQuest Dissertations & Theses Global. (305390005).

https://www.proquest.com/dissertations-theses/classification-style-fine-art-painting/docview/305390005/se-2

Lucinska, A. (2015). The Art Market in the European Union. *International Advances in Economic Research*, *21*, 67-79. https://doi.org/10.1007/s11294-014-9503-y

Montias, J. M. (1990). The influence of economic factors on style. *De Zeventiende Eeuw, 6,* 49-57.

Moro Abadía, O., González Morales, M.R. (2013). Paleolithic Art: A Cultural History. *Journal of Archaeological Research, 21*, 269–306. https://doi.org/10.1007/s10814-012-9063-8

Oosterlinck, K. & Radermecker, A.-S. (2019), "The Master of…": creating names for art history and the art market*, Journal of Cultural Economics*, 43, 57- 95.

Osgood, C., Succi, G. J., & Tannenbaum, P. (1957). *The measurement of meaning*. Urbana, Illinois: University of Illinois Press.

Osgood, C., May, W., & Miron, M. (1975). *Cross-cultural universals of affective meaning*. Urbana, Illinois: University of Illinois Press.

Pfisterer, U. (Ed.) 2011. Metzler Lexikon Kunstwissenschaft: Ideen, Methoden, Begriffe. J.B. Metzler.

Rea, N. (Eds.)(2024). The Intelligence Report: The Year Ahead 2024. Artnet. https://news.artnet.com/market/by-the-numbers-year-ahead-report-2024-2446165

Renneboog, L. & Spaenjers, C. (2012), Buying Beauty: On Prices and Returns in the Art Market*, Management Science*, 1-33.

Sagot-Duvauroux, D. (2003), Art Prices, In: Towse, R. (Ed.), *A Handbook of Cultural Economics*, Edward Elgar, Cheltenham.

Saint-Raymond, L. (2019). Revisiting Harrison and Cynthia White's Academic vs. Dealer-Critic System. *Arts*, *8*(3):96. https://doi.org/10.3390/arts8030096

Scheunemann, D. (2000). On Photography and Painting. Prolegomena to a New Theory of the Avant-Garde. In Dietrich Scheunemann (Ed.), *European Avant-Garde: New Perspectives*. Leiden, Niederlande: Brill. https://doi.org/10.1163/9789004449411_004

Schwabsky, B. (2019, October 30). What's Wrong with the New Figurative Painting? *The Nation*. https://www.thenation.com/article/archive/whats-wrong-with-the-new-figurative-painting/

Sesemann, V. (2007). "Representational and Nonrepresentational Art". In *Aesthetics*. Leiden, Niederlande: Brill. https://doi.org/10.1163/9789004357990_049

Shaw, A. (2023, March 7). Is the figuration boom over? Gagosian to launch major show of abstract artists across London galleries this summer. *The Art Newspaper*. https://www.theartnewspaper.com/2023/03/07/is-the-figuration-boom-over-gagosian-to-launch-major-show-of-abstract-artists-across-london-galleries-this-summer

Smith, T. (2008). Creating value between cultures: Contemporary Australian aboriginal art. In M. Hutter & D. Throsby (Eds.), *Beyond price* (pp. 23–40). New York, NY: Cambridge University Press.

Spehr, M., Wallraven, C., & Fleming, R. (2009). Image statistics for clustering paintings according to their visual appearance. In O. Deussen, D. Fellner, & N. Dodgson (Eds.), *Computational Aesthetics* 2009: Eurographics Workshop on Computational Aesthetics in Graphics, Visualization and Imaging (CAe 2009) (pp. 57-64). Aire-La-Ville, Switzerland: Eurographics.

Sproule, R. & Valsan, C. (2006) Hedonic Models and Pre-Auction Estimates: Abstract Art Revisited. *Economics Bulletin, 26*(5), 1-10.

Tate (n.d. a). Art Terms. https://www.tate.org.uk/art/art-terms

Tate (n.d. b). Mixed Media. Art Terms. https://www.tate.org.uk/art/art-terms/m/mixed-media

Tate (n.d. c). Contemporary Art. Art Terms. https://www.tate.org.uk/art/art-terms/c/contemporary-art

Taylor, M. (2011). Financialization of Art. *Capitalism and Society, 6*(2). https://doi.org/10.2202/1932-0213.1091

Throsby, D. (1994). The Production and Consumption of the Arts: A View of Cultural Economics, *Journal of Economic Literature*, 32, 1-29.

Throsby, D. (2000). Economic and Cultural Value in the Work of Creative Artists. In E. Avrami, R. Mason & M. de la Torre (Eds.). *Values and Heritage Conservation* (pp.26-31). The Getty Conservation Institute. https://www.getty.edu/conservation/publications_resources/pdf_ publications/pdf/valuesrpt.pdf#page=30

Throsby, D. (2003). Determining the value of cultural goods: How much (or how little) does contingent valuation tell us?. *Journal of Cultural Economics, 27*(3–4), 275–285.

Tripp, A., von Petzinger, G., & Cooke, A. (2020). Art, Paleolithic. Encyclopedia.

Velthuis, O. (2003), Symbolic Meaning of Prices: Constructing the Value of Contemporary Art in Amsterdam and New York Galleries. *Theory and Society (32)*2, 181-215.

Velthuis, O. (2005). *Talking Prices: Symbolic Meanings of Prices on the Market for Contemporary Art*. Princeton University Press. http://www.jstor.org/stable/j.ctt4cgd14

Velthuis, O. & Coslor, E. (2012). The Financialization of Art. In Karin Knorr Cetina, and Alex Preda (Eds.), *The Oxford Handbook of the Sociology of Finance* (pp. 471–487). https://doi.org/10.1093/oxfordhb/9780199590162.013.0025

Vergès, J. (2015). Analyse the nature of uncertainty in the art market from the perspective of cultural producers. Discuss producers' strategies to manage such uncertainty. [Thesis, King's College London].

Vieira, V., Fabbri, R., Sbrissa, D., da Fontoura Costa, L. & Travieso, G. (2015). A quantitative approach to painting styles. *Physica A: Statistical Mechanics and its Applications, 417*, 110-129. https://doi.org/10.1016/j.physa.2014.09.038.

Wallraven, C., Fleming, R., Cunningham, D., Rigau, J., Feixas, M. & Sbert, M. (2009). Categorizing art: Comparing humans and computers. *Computers & Graphics, 33*(4), 484-495. https://doi.org/10.1016/j.cag.2009.04.003

Wijnberg, N. M. & Gemser, G. (2000). Adding Value to Innovation: Impressionism and the Transformation of the Selection System in Visual Arts. *Organization Science, 11*(3), 323-329.

7. Appendix

Appendix 1: Dimension visualization

Dimension	Category	Original Operationalization	Thesis Operationalization
Perceptual	**Form** Imprecise – precise Messy – neat Undefined form – defined form	Bipolar 7-step scale	Bipolar 3-step scale
	Color Color gradient – color contrast Graduated lightness – lightness contrast Pastel colors – vivid colors	Bipolar 7-step scale	Bipolar 3-step scale (excluding: Graduated lightness – lightness contrast, Pastel colors – vivid colors)
	Space Flat surface – voluminosity No spatial depth – spatial depth Sharp contours – oval contours	Bipolar 7-step scale	Bipolar 3-step scale (oval contours = rounded contours)
	Complexity Multicolored – unicolored Ornate – plain Detailed – reduced	Bipolar 7-step scale	Bipolar 3-step scale
Semantic	**Construction vs. Illusion of Reality** The artist wanted to experiment with color and shapes (the indicator of the Construction of Reality).	Two unipolar scales, sentences as description of artists intentions	Not used

	The artist wanted to depict the exact appearance of the scene (the indicator of the Illusion of Reality).		
	Expression	Two unipolar scales, sentences as description of artists intentions	Not used
	The artist wanted to express his/her emotions.		
	The artist wanted to express his/her fantasies.		
	Ideology	Two unipolar scales, sentences as description of artists intentions	Not used
	The artist wanted to represent historical events.		
	The artist wanted to transmit religious messages.		
	Decoration	Two unipolar scales, sentences as description of artists intentions	Not used
	The artist wanted to produce beautiful and nicely decorated objects.		
	The artist wanted to induce pure aesthetic pleasure.		
Affective	**Hedonic**	Bipolar 7-step scales	Not used
	ugly – beautiful		
	unpleasant – pleasant		
	sick – healthy		
	Arousal	Bipolar 7-step scales	Not used
	unimpressive – impressive		
	weak – strong		
	boring – interesting		
	Relaxation	Bipolar 7-step scales	Not used
	stressing – calming		
	cold – warm		

	gloomy – serene		
	Regularity	Bipolar 7-step scales	Not used
	chaotic – arranged		
	disharmonious – harmonious		
	irregular – regular		

Appendix 2: 'Other' variables inclusion list

a. Other nationalities variable

New Zealand, Indian, DRC, Ugandan, North Korean, Argentinian, Israeli, Georgian, Palestinian, Israeli-American, Israeli-Ukrainian, Scottish, Italian, English, Spanish, Mexican, Puerto Rican, Croatian, Pakistani, Polish-American, Ukrainian, Hungarian, Swedish, Thai, Taiwanese, Colombian, Filipino, Russian, Romanian, Bulgarian, Iranian, Balinese, Swiss, Czech, Javanese, Brazilian, Portuguese, Nigerian, Belgian, Mongolian, Ivorian, American/New Zealand, Cameroonian, Senegalese, Norwegian Kazakhstani, Dutch, Slovakian, German, Zuni, Turkish, Congolese, Malian, Zambian, Angolan, Singaporean, Austrian and Batswana.

b. Other media variable

Synthetic polymer, flashe, collage, recycled rubber, spray paint, aerosol, enamel, pencil, skateboard, ultrachrome ink, tempera, ink, posca, watercolour, soft pastel, assemblage, copper, Liquitex, gouache, painting, liquid prossed emulsion, egg tempera, carbon, Indian ink, ribbon, wool, chewing gum, encaustic paint, garment, unique acrylic, unique oil and oil stick.

c. Other auction house variable

iART Co., Ltd., Larsen Art Auction, New Orleans Galleries, Bonhams Los Angeles, Morgan O'Driscolls, McTear's Auctioneers, David Lay Auctions, Aguettes, Sotheby's New York, Webb's, Bonhams Hong Kong, Desa Unicum, Sworders Fine Art Auctioneers, Dorotheum Linz, Artcurial, Art In House, Swann Galleries, Bonhams Skinner, Ahler & Ogletree Auction Gallery, Yes Auction, Heffel Fine Art Auction House, artnet Auction, Art+Object, Rago Auctions, Menzies Art Brands, Matsart Auctioneers and Appraisers, John Moran Auctioneers & Appraisers, de Veres, Shapiro Auctioneers, Whyte's, Auktionshaus Dannenberg GmbH &

Co. KG, Clars Auction Gallery, Revere Auctions, Christie's New York, Tate Ward Auctions and Quittenbaum Kunstauktionen GmbH.

Appendix 3: joined Coefficients table with significance markers

Model	Estimate average log	Hammer log
	Unstandardized Coefficients	Unstandardized Coefficients
	B	B
(Constant)	12,562*	-12,858
female	,167*	,340
male	,191*	,353
non-binary	-,040	,474
Australian	-,012	-,070
Indigenous Australian	-,108	,187
Japanese	,152*	-,103
French	-,004	-,168
Chinese	,180*	,728*
American	,082	,136
South African	-,162	-,391
Irish	-,063	,161
Korean	-,233*	-,801
South Korean	-,260	-,564
Ghanaian	-,038	-,438
Indonesian	-,074	,202
British	-,072	,091
Canadian	-,124	,802
Polish	,114	-,094
Danish	-,077	1,091*
Zimbabwean	-,060	-1,045

Abstract	-,001	-,049
Figurative	-,015	,065
height in cm	,002***	,001
width in cm	,001***	,001
mixed media	,042	,292
acrylic	-,048	,169
oil	,027	,408
Lawsons	-,273*	-,724
Aspire Art	-,130	-,916
Strauss & Co.	,053	,133
Tiroche	,396**	,595
SBI Art Auction Co., Ltd.	-,025	1,108***
Mainichi Auction	-,289**	,849*
Seoul Auction	,410***	,680
Los Angeles Modern Auction	,106	1,019*
China Guardian (HongKong) Auctions Co., Ltd.	,721***	1,130**
Poly Auction HongKong	,899***	1,799***
Sotheby's HongKong	1,458***	1,569***
Global Auction	-,702***	-1,925***
Tajan	,289*	-,572
Phillips New York	,313***	1,198***
Heritage Auctions	,373***	1,146***
Christie's Online	,695***	1,634***
Bruun Rasmussen	-,070	-,551

Online		
Phillips HongKong	,839***	1,738***
Bonhams London	,693***	,663
K Auction	,389***	,059
Antik A.S.	-,246**	,900**
Sotheby's London	,813***	1,123**
year of birth	-,005	,007

Significance indicators: *** p<0.01, ** p<0.05, * p<0.1.

Appendix 4: estimate average price regression

a. **Coefficients table**

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	12,562	5,110		2,459	,014
	female	,167	,085	,124	1,964	,050
	male	,191	,084	,146	2,278	,023
	non-binary	-,040	,237	-,004	-,169	,866
	Australian	-,012	,103	-,004	-,118	,906
	Indigenous Australian	-,108	,148	-,028	-,728	,467
	Japanese	,152	,068	,092	2,240	,025
	French	-,004	,117	-,001	-,033	,974
	Chinese	,180	,084	,067	2,144	,032
	American	,082	,053	,049	1,555	,120
	South African	-,162	,118	-,045	-1,373	,170
	Irish	-,063	,132	-,011	-,474	,636
	Korean	-,233	,108	-,088	-2,168	,031
	South Korean	-,260	,136	-,059	-1,907	,057
	Ghanaian	-,038	,132	-,007	-,292	,771
	Indonesian	-,074	,113	-,018	-,650	,516

British	-,072	,097	-,018	-,748	,454
Canadian	-,124	,144	-,020	-,862	,389
Polish	,114	,143	,019	,799	,425
Danish	-,077	,136	-,021	-,566	,572
Zimbabwean	-,060	,166	-,010	-,364	,716
Abstract	-,001	,062	,000	-,009	,992
Figurative	-,015	,060	-,012	-,251	,802
height in cm	,002	,000	,183	4,986	<,001
width in cm	,001	,000	,123	3,373	<,001
mixed media	,042	,063	,030	,667	,505
acrylic	-,048	,064	-,035	-,739	,460
oil	,027	,064	,020	,429	,668
Lawsons	-,273	,119	-,104	-2,292	,022
Aspire Art	-,130	,140	-,028	-,929	,353
Strauss & Co.	,053	,140	,012	,376	,707
Tiroche	,396	,127	,075	3,124	,002
SBI Art Auction Co., Ltd.	-,025	,079	-,012	-,318	,751
Mainichi Auction	-,289	,100	-,090	-2,894	,004
Seoul Auction	,410	,123	,121	3,346	<,001
Los Angeles Modern Auction	,106	,113	,023	,944	,346
China Guardian (HongKong) Auctions Co., Ltd.	,721	,098	,208	7,371	<,001
Poly Auction HongKong	,899	,112	,229	8,061	<,001
Sotheby's HongKong	1,458	,092	,406	15,789	<,001
Global Auction	-,702	,139	-,145	-5,062	<,001
Tajan	,289	,130	,068	2,221	,027
Phillips New York	,313	,066	,137	4,719	<,001
Heritage Auctions	,373	,084	,116	4,463	<,001
Christie's Online	,695	,080	,235	8,694	<,001

Bruun Rasmussen Online	-,070	,121	-,023	-,578	,563
Phillips HongKong	,839	,078	,283	10,793	<,001
Bonhams London	,693	,113	,154	6,109	<,001
K Auction	,389	,115	,133	3,384	<,001
Antik A.S.	-,246	,087	-,077	-2,825	,005
Sotheby's London	,813	,101	,217	8,045	<,001
year of birth	-,005	,003	-,046	-1,901	,058

a. Dependent Variable: estimate average log

b. Estimate average price regression model

estimate average log = 12,562 + ,167*female + ,191*male - ,040*non-binary - ,012*Australian - ,108*Indigenous Australian + ,152*Japanese - ,004*French + ,180*Chinese + ,082*American - ,162*South African - ,063*Irish - ,233*Korean - ,260*South Korean - ,038*Ghanaian - ,074*Indonesian - ,072*British - ,124*Canadian + ,114*Polish - ,077*Danish - ,060*Zimbabwean - ,001*Abstract - ,015*Figurative + ,002*height + ,001*width + 042*mixed media - ,048*acrylic + ,027*oil - ,273*Lawsons - ,130*Aspire Art + ,053*Strauss&Co + ,396*Tiroche - ,025*SBI Art Auction - ,289*Mainichi Auction + ,410*Seoul Auction + ,106*Los Angeles Modern Auction + ,721*China Guardian + ,899*Poly Auction + 1,458*Sotheby's Hong Kong - ,702*Global Auction + ,289*Tajan + ,313*Phillips New York + ,373*Heritage Auction + ,695*Christie's Online - ,070*Bruun Rasmussen Online + ,839*Phillips Hong Kong + ,693*Bonhams London + ,389*K Auction - ,246*Antik A.S. + ,813*Sotheby*s London - ,005*year of birth

Appendix 5: hammer price regression

a. Coefficeinets table hammer price regression

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-12,858	19,839		-,648	,517

female	,340	,329	,093	1,034	,302
male	,353	,326	,099	1,083	,279
non-binary	,474	,921	,017	,515	,607
Australian	-,070	,400	-,008	-,176	,861
Indigenous Australian	,187	,576	,018	,324	,746
Japanese	-,103	,264	-,023	-,389	,697
French	-,168	,455	-,016	-,368	,713
Chinese	,728	,327	,099	2,227	,026
American	,136	,205	,030	,664	,507
South African	-,391	,458	-,040	-,854	,394
Irish	,161	,513	,011	,314	,753
Korean	-,801	,418	-,110	-1,918	,056
South Korean	-,564	,530	-,047	-1,065	,287
Ghanaian	-,438	,511	-,029	-,857	,392
Indonesian	,202	,441	,018	,460	,646
British	,091	,375	,008	,242	,809
Canadian	,802	,558	,048	1,438	,151
Polish	-,094	,556	-,006	-,170	,865
Danish	1,091	,529	,109	2,061	,040
Zimbabwean	-1,045	,643	-,062	-1,625	,105
Abstract	-,049	,243	-,013	-,201	,841
Figurative	,065	,233	,018	,277	,782
height in cm	,001	,002	,034	,649	,516
width in cm	,001	,002	,031	,600	,549
mixed media	,292	,243	,077	1,201	,230
acrylic	,169	,250	,045	,677	,498
oil	,408	,248	,110	1,645	,100
Lawsons	-,724	,463	-,101	-1,564	,118
Aspire Art	-,916	,543	-,072	-1,685	,093
Strauss & Co.	,133	,545	,011	,244	,807
Tiroche	,595	,492	,041	1,209	,227

SBI Art Auction Co., Ltd.	1,108	,308	,193	3,597	<,001
Mainichi Auction	,849	,385	,098	2,206	,028
Seoul Auction	,680	,476	,073	1,428	,154
Los Angeles Modern Auction	1,019	,438	,080	2,326	,020
China Guardian (HongKong) Auctions Co., Ltd.	1,130	,380	,120	2,978	,003
Poly Auction HongKong	1,799	,433	,168	4,154	<,001
Sotheby's HongKong	1,569	,358	,160	4,376	<,001
Global Auction	-1,925	,539	-,146	-3,575	<,001
Tajan	-,572	,504	-,049	-1,135	,257
Phillips New York	1,198	,257	,192	4,654	<,001
Heritage Auctions	1,146	,325	,130	3,528	<,001
Christie's Online	1,634	,310	,202	5,266	<,001
Bruun Rasmussen Online	-,551	,469	-,065	-1,176	,240
Phillips HongKong	1,738	,302	,215	5,759	<,001
Bonhams London	,663	,441	,054	1,505	,133
K Auction	,059	,446	,007	,132	,895
Antik A.S.	,900	,337	,104	2,666	,008
Sotheby's London	1,123	,392	,110	2,861	,004
year of birth	,007	,010	,024	,707	,480

a. Dependent Variable: hammer log

b. **Hammer price regression model**

hammer log = -12,858 + ,340*female + ,353*male + ,474*non-binary - ,070*Australian + ,108*Indigenous Australian - ,103*Japanese - ,168*French + ,728*Chinese + ,136*American - ,391*South African + ,161*Irish - ,801*Korean - ,564*South Korean - ,438*Ghanaian + ,202*Indonesian + ,091*British + ,802*Canadian - ,094*Polish + 1,091*Danish - 1,045*Zimbabwean - ,049*Abstract + ,065*Figurative + ,001*height

+ ,001*width + 292*mixed media + ,169*acrylic + ,408*oil - ,724*Lawsons - ,916*Aspire Art + ,133*Strauss&Co + ,595*Tiroche – 1,108*SBI Art Auction + ,849*Mainichi Auction + ,680*Seoul Auction + 1,019*Los Angeles Modern Auction + 1,130*China Guardian + 1,799*Poly Auction + 1,569*Sotheby's Hong Kong – 1,925*Global Auction - ,572*Tajan + 1,198*Phillips New York + 1,146*Heritage Auction + 1,634*Christie's Online - ,551*Bruun Rasmussen Online + 1,738*Phillips Hong Kong + ,663*Bonhams London + ,059*K Auction - ,900*Antik A.S. + 1,123*Sotheby*s London + ,007*year of birth