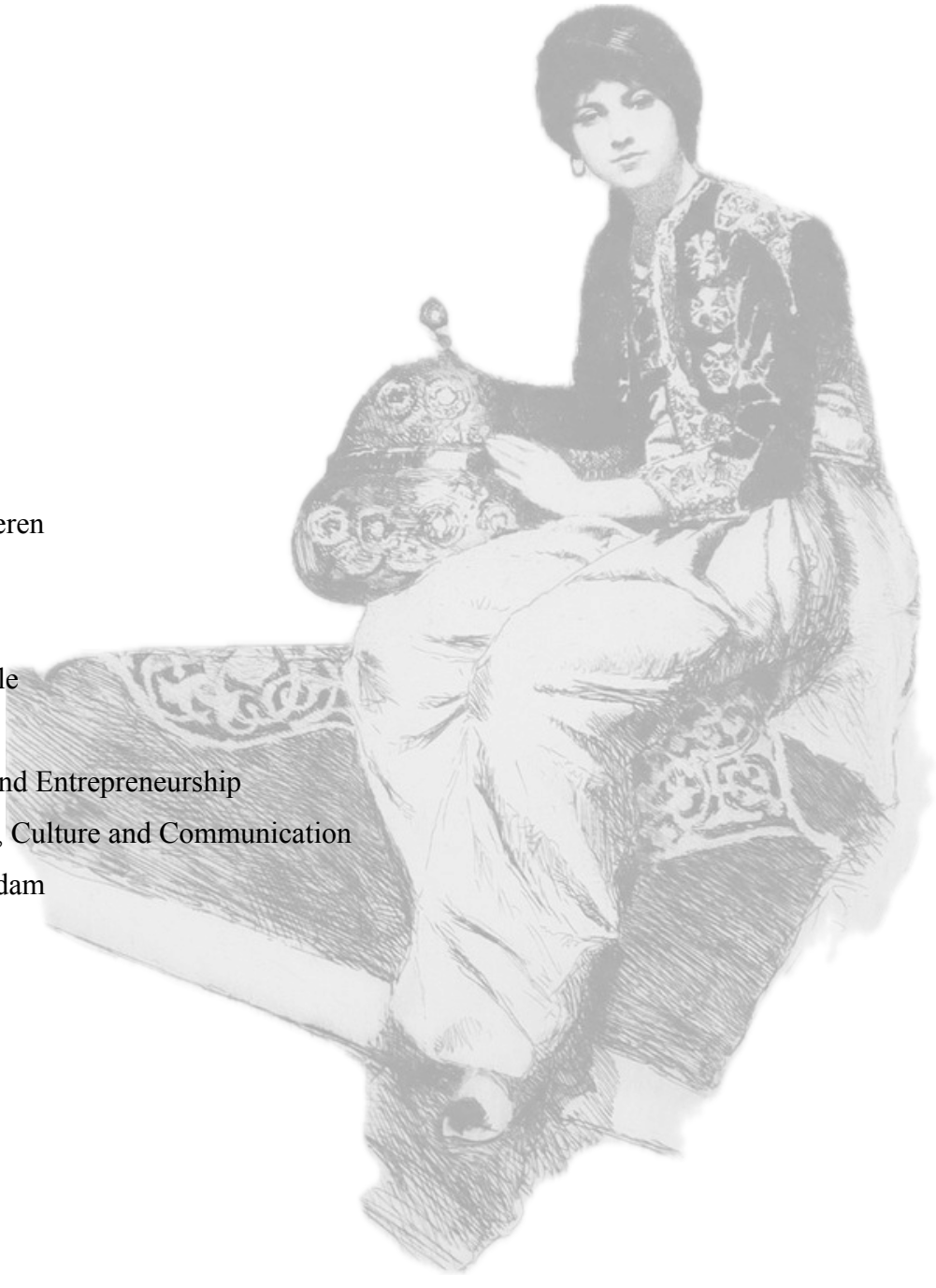
Fata Morgana

On the depiction of people in Gérôme's Orientalism and its effect on hammer prices



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ABSTRACT

This thesis examines the impact of the depiction of people on the hammer prices at auction for works by the famous Orientalist Jean-Léon Gérôme (1824-1904). The study situates Gérôme in the broader context of Orientalism, which as an art movement boomed during the 19th century. During which it depicted the Middle East through a Western lens. This thesis traces the origins and evolution of Orientalism and explores how Western artists, such as Gérôme, either travelled to the Middle East or relied on second-hand sources. While Gérôme travelled to the near East and Egypt, his works still fuelled the Occidental fantasy about the Orient. Mainly because he placed untruthful scenes in a setting that highly reflected reality. These scenes the Orientalists created range from all sorts of varieties. Scenes depict everyday life, natural landscapes, but most popularly the harem and its *odalisques*. This approach has been extensively criticised in previous literature, as it depicts the Middle East and its people, especially women, as passive. The untruthful depiction in Orientalism highly influenced the vision the Western audience had of the Middle East, and became a means to justify Western imperialism in the region. The depiction of people in Orientalism shapes the cultural perceptions of the Middle East, but also the market value of the works.

Employing a cultural economics approach, this thesis employs an hedonic regression to determine what variables about the depiction of people in the works of Gérôme has a significant effect on the hammer prices of the paintings. In order to execute this analysis, a dataset was created. In the dataset, auction results have been collected from ArtPrice, after which the paintings were coded. Coding was done based on art historical literature about Orientalism. The research reveals that authenticity of the painting, luxury of the clothes and accessories of the prime character, lavishness of the scene, skin colour of the main female character, a passive female character, hair in an updo, red hair, and an unveiled face have a significant positive effect on the hammer price of a painting by Gérôme that was auctioned during 2004-2024. Conversely, indirect eye contact or the city in which the painting was auctioned have a negative effect on the hammer prices of the work.

However, the thesis does have some limitations, as the dataset employed is relatively small and exclusively focuses on paintings by Gérôme. Despite these limitations, the thesis still contributes to the already vast field of literature on Orientalism by providing empirical evidence of how the depictions of people in Gérômes Orientalism influences the hammer prices of these paintings. The research underscores the need for critical assessment of

Orientalist art, its historical context, and its lasting impact on the art market and cultural perceptions today.
Structured in five chapters, the thesis provides an in-depth examination of existing literature, research on hammer prices and market values of visual arts, and new evidence on the depiction of people in these artworks.

KEYWORDS: Orientalism, Jean-Léon Gérôme, visual arts, hammer prices, hedonic regression

Word count: 15, 310

Table of contents

Chapter 1: Introduction

Whether you have seen Disney's Aladdin, read the tales of 1,001 nigh, or visited *La Grande Odalisque* in the Louvre, chances are you have consumed a work of Orientalism. Orientalism in today's sense of the word has a broad variety of meanings, it can be cultural, political, or social. The Orientalist art movement however, is a well-known genre that peaked during the 19th century (Tugwell, 2019). The genre was specifically popular in the Western world, where painters depicted overseas cultures in large oil paintings and impressive works on paper (Tugwell, 2019), "an area covering paintings of Turkey, North Africa, the Gulf and the Middle East" (Sothebys, n.d.). The genre is represented by painters as Eugène Delacroix (1798-1863), Jean-Léon Gérôme (1824-1904), Henri Matisse (1869-1954), Paul Klee (1879-1940) and Jean-Auguste-Dominique Ingres (1780-1867). Some of these painters travelled to the Middle East to depict their own observations (Sothebys, 2019). While others stayed in their home countries, merely depicting what they knew from photographs or paintings by other artists , 2019). Orientalism appealed to the prejudices, tastes, politics, and predominantly fantasies of the Occident (West) about the Orient (East) (Little, 2009). The movement depicted all sorts of scenes, from everyday life to grand pyramids, from religious scenes to harems (Tugwell, 2019). The latter being the most disputed: "Perhaps the most controversial aspect of Orientalist painting is the recurring image of the woman within the harem, which privileges the male gaze of the outsider" (Tugwell, 2019).

Furthermore, as mentioned above, not all Orientalist painters travelled to the Middle East themselves, which leads us to question if the Orientalist depictions are reality or merely a fantasy. Especially with regard to the depiction of the Oriental woman or the *odalisque*, that "privileges the male gaze of the outsider" (Tugwell, 2019). The 'oriental myth' (Kumar, 2012) became influential in politics and the impression the West has had of the Arab world. The paintings made by the 19th century Orientalists have been influential to art (e.g. Picasso's reimagination of Delacroix's *Les Femmes d'Algers*), but are still relevant to "contemporary cultural imagination" (Ali, 2015, p.38), such as modern film (Esner, 2017). Orientalism thus made the Arab world an area that fueled (male) fantasies.

Besides, reproductions of Orientalist works came to shape the perception of the past contemporary consumers had (Esner, 2017). One particularly influential artist in this regard was Gérôme, whose believable scenes highly penetrated the art market (Esner, 2017). While Gérôme travelled to the near East and Egypt, his works still fuel the fantasy image many Orientalist painters created. Still, he drew a scenery that was very similar to the way the

region actually looked, as he based his scenery on photographs he took there. In this way, his works provide a realistic setting in which a fantasy-like scene takes place. His work influenced the perception his contemporary audience had of the Middle East, but through his influential role at the Ecole des Beaux-Arts, he also came to influence other contemporary artists. Moreover, Gérôme's work can be characterised through his cinematic imagination, which even lead to his works influencing modern and current day cinema (Esner, 2017).

This image in today's cinema and other forms of media is different from the image 19th century Orientalists painted. But the Middle East is still depicted as "exotic" (Luyendijk, 2009, p.41). The 21st century may be characterised by the many tensions between the Western and Arab world. These tensions are highly influential to the way the Western world views the Arab world, and vice versa. However, the depiction of the Middle East in the media might be the most vital factor. A disadvantageous picture of the Middle East is frequently drawn in Western media, making the geographic area and its cultures seem 'backward' from that of Western countries (Luyendijk, 2009). In this sense, the depiction is rather similar to that of the Orientalists (Little, 2009). Luyendijk (2009) points out that the media often draw a picture of Arab women that classifies them as suppressed or passive. This image is one that might originate in 19th century Orientalism, as the theoretical framework will further explain. However, women are "anything but victims" (Luyendijk, 2009, p.43). Rather, the women in countries such as Egypt live a life much like that of Western women, which Luyendijk (2009) proceeds to illustrate with samples from his journal. We find other examples of this in contemporary media, such as the women in Iran that are demonstrating for their rights and freedom by burning their hijabs or cutting their hair, which lead to a global awareness and movement to empower women (Chafiq, 2022; Shawky, 2023). This empowerment of and by women is what initially drew me towards the subject of Orientalism. Because, if women are depicted as passive and submissive, what does this imply for the way we actually perceive them, and how do they break with this image, if they even do? In my opinion, women in modern society have shown that they are in fact anything but victims. And this is nothing new. Feminine Orientalists used their art to place themselves in a similar position as the women in the Middle East; demonstrating that the position of women in these two regions was not as different as the Orientalist art movement might have the audience think (Lewis, 1995; Zonana, 1993). In fact, the female Orientalists were convinced that both the Oriental and the Occidental woman was suppressed, resulting in feelings of sisterhood (Lewis, 1995; Zonana, 1993). If the image drawn of people, mainly of women, in Orientalism played such an important role then and now, it is interesting to wonder how we value that picture. In other

words, how does the depiction of people in 19th century Orientalism influence the hammer prices of the works at auction? Specifically, I focus on how this plays a role in the works by Gérôme, as he is an artist that can be relatively easily generalised because other Orientalists were highly influenced by his work and style.

As explained, untruthful depictions of the Arab world are still at play today (*lmb0526*, 2020). Orientalism has resulted in several harmful stereotypes about the Middle East and Arabic people emerging: evil, hypersexualised, bizarre, a region where men are effeminate and women submissive (*lmb0526*, 2020). These stereotypes might be found in 19th century Orientalist paintings, and maybe they are still being reinforced today. Similar to the approach that Gérôme employs, the temporality of scenes give the viewer a sense of reality (Esner, 2017). What happens is the creation of mutual misunderstanding. The West has come to believe the Orientalist stereotypes it has been consuming for centuries. While, simultaneously, the Middle East seems unjustly portrayed.

Through my research and this thesis I aim to enrich the already vast academic literature on Orientalism by employing an empirical approach of cultural economics to the subject: a monetary analysis of the paintings by Gérôme, specifically I research how the depiction of people in these paintings influences the hammer prices of those works at auction. In my analysis, I aim to disregard the "ethnic typology" that often goes hand in hand with racism and the Orientalist thesis (Said, 2003, p.97) by coding the paintings in this study through objective variables. Moreover, it is of importance to mention that my subject of study is Orientalist paintings by Gérôme, i.e. not the Middle Eastern region or its people. Through exclusively focussing on these images instead of the people, I aim and hope to position the problem in a way that does not make the "the Orient or Orientals an 'object' of study" (Said, 2003, p.97), keeping their role in the thesis open and active, preventing the sense of 'otherness' that has so often influenced the West's vision of the Arab world.

Orientalism and its implications on image creation, politics and imperialism have often been the subject of academic debate (Kuehn, 2011; Said, 2003). While the Orientalist thesis is highly influential in academics and contemporary society, the subject deserves more attention and critical research (MacKenzie, 1995, p.21). Orientalism has been subjected to extremes of hate and adoration, and the field of research of the genre has become characterised by aesthetics and positivist approaches with regard to representation (MacKenzie, 1995).

By employing hedonic regressions I test what variables have an effect on the hammer prices of works by Gérôme. I find several statistically significant effects: authenticity of the

painting, luxury of the clothes and accessories of the prime character, lavishness of the scene, skin colour of the main female character, a passive female character, hair in an updo, red hair, and an unveiled face have a significant positive effect on the hammer price of a painting by Gérôme that was auctioned during 2004-2024. Meanwhile, indirect eye contact or the city in which the painting was auctioned have a negative effect on the hammer prices of the work.

However, it is important to keep in mind that my thesis has its limitations. The dataset I created is a limited one; it only includes auction results of works by Gérôme, and is relatively small (167 observations of 107 different paintings).

This thesis is structured as follows. In Chapter 2, I will explore the theoretical framework that accompanies my research.. This framework has been broken up into three pieces: general art historical theory on Orientalism, cultural economical theory on the value of paintings, and a review of empirical articles on the art market and the market for Orientalism today. In Chapter 3, I will present the methodology that has been employed for this thesis and explore the sample. This chapter further explores the method of an hedonic regression and the ways in which it has been used in previous research. In this chapter, I will also present my hypotheses, which I choose to formulate separately to keep distance from the political heaviness one might assert to them. The chapter also includes some robustness checks for the regression model, which illustrate that the independent variables were closely linked and that the regression model had to be broken up in smaller pieces. In Chapter 4, I will present my findings, I will explain the significant values I find after running the regressions and connect them to the literature that was explored in the second chapter of this thesis. The fourth chapter also further identifies the limitations of my research, and I provide some suggestions for further research. Finally, this thesis wraps up through a conclusion in Chapter 5.

Chapter 2: Theoretical framework

2.1 Art history and imagery

In art history 'Orientalism' "generally refers to a segment of the emergent of the "other nineteenth century" (Bohrer et al., 1988, p.49). The French laid the foundation for the genre that was later adopted by the rest of Europe (Kuehn, 2011). A large portion of the art within this genre depicts "customs and costumes, typology and topography of the East" (Bohrer et al., 1988, p.49) in order to draw an image of the 'exotic' world. The accuracy of the landscape and architecture in the scenes make the paintings a believable image of reality. However, the paintings were often fueled by the idea or fantasy the painter had of the Orient (Little, 2009). Some of the key ideas of the movement are the harem scene, rich colours, and stereotypical images of Arabic people (TheArtStory, n.d.).

It is challenging to qualify the genre to one art movement, as the artists within the genre have highly diverse styles, e.g. Ingres with his Poussinist, academic linework (Figure 2.1) versus Delacroix's more Rubinist, loose approach (Figure 2.2). However, one could argue that the genre best fits in the Romantic art movement as Romanticists were driven by emotions and feelings, and "anything that elicits such feelings" (Benton & DiYanni, 2014, p.207). MacKenzie (1995) even relates Orientalism to the sublime for its sometimes "violent and turbulent imagery" (p.54) which resulted in feelings of fear for the spectator (Figure 2.3).

Figure 2.1: La Grande Odalisque (1814), Jean Auguste Dominique Ingrès, Louvre Paris

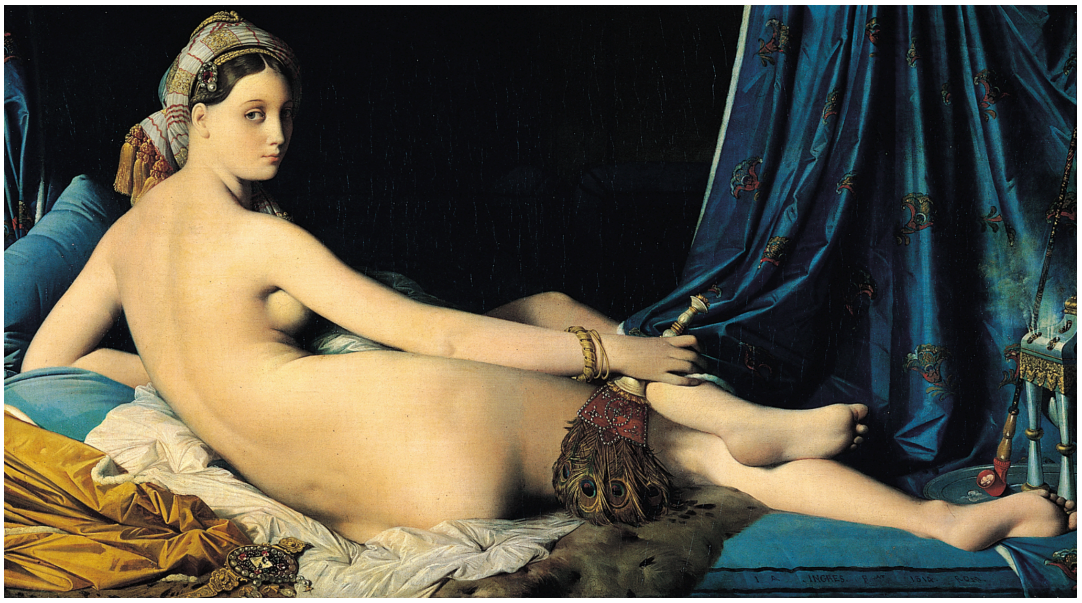


Figure 2.2: Odalisque, Eugène Delacroix (1845-50), The Fitzwilliam Museum

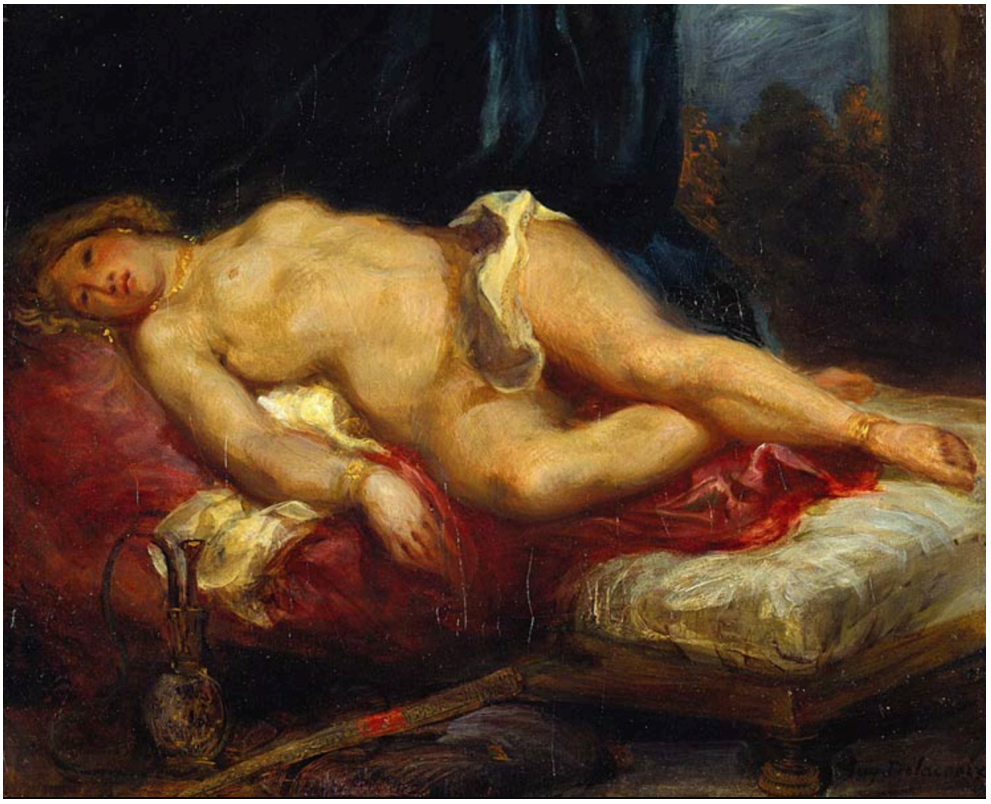


Figure 2.3: The Death of Sardanaplus, Eugène Delacroix (1827), Louvre Museum

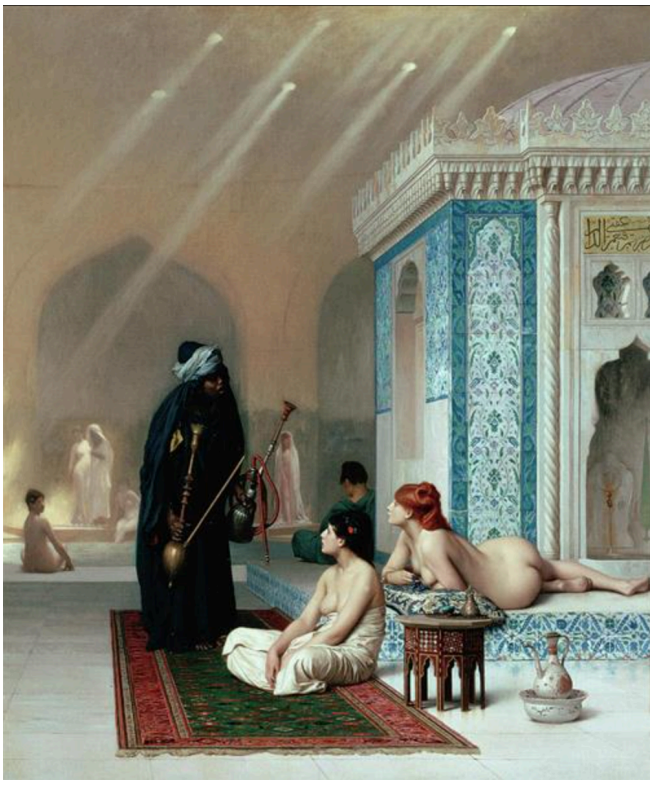
Moreover, influences vary. For example, Ingres and his school were inspired by artists such as Poussin and Rafael (Figure 2.1). However, Delacroix became inspired by his travels

to North Africa, where he studied “the glowing colours and romantic trappings of the Arab world” (Gombrich, 2023, p.387) (Figure 2.2, Figure 2.3). So, while Ingres’ *Grande Odalisque* (1814) may be more Neoclassical due to the linework and precision than Delacroix's ecstatically colourful *Odalisque* (1845-50), the two painters can still be classified as having a similar tone.

Furthermore, Oriental scenes are often opulent, from clothes to rugs and jewels to daggers. This opulence is “extended from the surroundings to the figures represented within” (Ali, 2015, p. 36). The Middle East became a place where pleasure and fear united, highly anticipating the fantasies and fears of the Western audience (Little, 2009).

This combination of feelings and the opulence of the scenes intersects the fascination with the harem (Figure 2.4), “creating scenes that become symbolic representations of the Muslim world in that period” (Ali, 2015, p.37). The harem is immediately also one of the recurring subjects found within the movement, especially the Oriental woman in the harem; alongside cultures, costumes, and societies (Syed, 2021). There were Orientalists who painted all sorts of scenes, however those who painted more provocative, sensual scenes were more successful (Ali, 2015).

Figure 2.4: Pool in a Harem (ca. 1876), Jean-Léon Gérôme, Hermitage Museum



Thus, the harem woman or *odalisque* became a popular scene for Orientalists, as it both elicited strong emotions and was more likely to make them successful as there was high

demand for goods that emphasised ‘exotic’ sexuality (Kabbani, 2008). The erotic harem scenes depicted (semi-) nude women “in a state of pleasing vulnerability” (Kabbani, 2008, p.135) (Figure 2.4). This depiction was a way for male painters to access a world they were otherwise not allowed to access (Kabbani, 2008). Drawing from their (sexual) fantasies, Orientalist painters started to create scenes that captivated the imagination of their Western audience. In *Women of Algiers in their Apartment* (1834, Figure 2.5), Delacroix draws inspiration from his travels to the Middle East, as can be seen in his depiction of clothing and interior. However, the way the women are seated and gazing at the spectator are a clear influence of the Occidental fantasy of the harem (TheArtStory, n.d.).

Figure 2.5: Women of Algiers in their Apartment (1834), Eugène Delacroix, The Metropolitan Museum of Art

As Delacroix, Gérôme travelled to the Near East and Egypt. There he painted, drew, and took photographs. Besides, his wealth allowed him to purchase artefacts in the Middle East. These materials were used in his studio to create works in which he aimed to authenticate the picture, for example through copying Arabic inscriptions (Benjamin et al., 1997; Esner, 2017). In his own time, Gérôme constructed an influential image of the Orient and eastern sexuality, even beyond the norm of the extensively present harem/bath scenes, e.g. *The Snake Charmer* (R. Benjamin et al., 1997)**.**

Generally, the women depicted in Orientalist scenes are fair-skinned (often having light hair too) (Figure 2.4 and Figure 2.6) (Kabbani, 2008).

Figure 2.6: Moorish Bath (1870), Jean-Léon Gérôme, Polly B. and Richard D. Hill Gallery

This depiction was explained by identifying the odalisques as Circassian; an ethnic group from Turkiye known for their light skin tone (Lewis, 1995). Yet, the Oriental woman appears to be highly similar to the Western woman, reinforcing the idea that many artists working within the genre never even travelled to the Arab world themselves but rather constructed their paintings of a Western, male fantasy (Syed, 2021). Moreover, this also implies the importance of scenery when it comes to determining whether a scene is Oriental or Occidental (Syed, 2021). Furthermore, nudity is a recurring element in Oriental scenes as well (Figure 2.1, Figure 2.2, Figure 2.3, Figure 2.4, Figure 2.6). However, nudity is naturally an image well-known in visual arts. In Orientalism, we find a strong relationship to the European tradition of nude imagery: voyeurism (Syed, 2021). “The nude woman looked either directly at the spectator suggesting awareness of being watched, or then, at herself in a mirror, implying surveying herself” (Syed, 2021, p.10). The light-skinned odalisques provocatively look at the viewer (Figure 2.1, Figure 2.2), appearing to be waiting for the spectator to join them. The men in the scenes, on the other hand, have dark skin and seem to be an obstacle that prevents the spectator from joining the seductive harem woman (Figure 2.6, Figure 2.7) (Kabbani, 2008). Creating a binary distinction between male and female is a recurring theme in Orientalist discourse, characterising the Orient as female and

reinterpreting men as voyeurs. Through this practice, the Middle East reflects a close relation and attraction to the desires of the Occidental male; who rediscovers his expression of emotion and intimacy through the image created of the Orient (MacKenzie, 1995).

Figure 2.7: The Harem in the Kiosk (1824 - 1904), Jean-Léon Gérôme, Sotheby's

Thus, the Orient became the terrain of the 'exotic' other, sexual fantasies, seduction and desires. Until now, men have been discussed as "sensualist lords of the harem" (Oueijan, 2006, p.1) and gatekeepers of the desirable *odalisques* within, but are these men not sexualised too in Orientalism? Oueijan (2006) discusses how the creation of an 'exotic other' results in a desire of the Western audience. (W. Benjamin, 1973) also discusses the importance of the interplay between closeness and distance when it comes to experiences of one with regard to an other. While in the setting of Orientalism, this desire and 'other' is often discussed by characterising lustful Occidental men and seductive Oriental women, the market for Orientalism was extremely broad (as discussed in section 2.2). This diversified market implies that Western women consumed the genre as well, hence there is a possibility that female desire of the Occidental audience influenced the depiction of Oriental men in the scenes; similar to the depiction of men one sees in pulp fiction such as *Oriental Stories*[1]. In this pulp, men are dangerous and possessive over sensual women who have to be rescued by other, strong men (e.g. The Dragoman's Jest by Price & Otis A. Kline, 1932). The way we

[1] "Oriental Stories, later retitled The Magic Carpet Magazine, was an American pulp magazine published by Popular Fiction Co., and edited by Farnsworth Wright. It was launched in 1930 under the title Oriental Stories as a companion to Popular Fiction's Weird Tales, and carried stories with far eastern settings, including some fantasy" ('*Oriental Stories*', 2024)

view men in these pictures can be read in three ‘masculine’ ways. First, the gaze of the (male) painter. Second, the gaze of the male protagonist in the painting. And finally, the gaze of the spectators of the painting (Gill, 2020). While I have not been able to find literature on the sexualisation of men in Orientalism or visual arts, I suspect that this is actually happening. Almost all the male characters in my dataset have been depicted in a suggestive manner; their blouses open until their belly button (Figure 2.8). Moreover, in Orientalist discourse male characters are depicted as violent and passionate (Oueijan, 2006). The violence can also be seen clearly in Gérôme’s work, as all the male characters I coded carried weapons (Figure 8), unless depicted in a religious scene. In this sense, Gill’s (2020) article on the sexualisation of men in advertisement still seems relevant, as they identify the link between sexualisation/objectification of men that reinforces the heterosexual norm and patriarchal power structures. Moreover, the article briefly mentions “bodies that are coded as 'Latin', with dark hair and olive skin, referencing long histories of sexual Othering and exoticism”(Gill, 2020, p.9), linking modern advertisement to 19th century Orientalism.

Figure 2.8: Arnaute buvant (1896), Jean-Léon Gérôme, Christie’s

While current day advertisement sometimes draws inspiration from Orientalism, many Orientalists drew inspiration from the themes in mediaeval representations (Said, 2003), the upcoming Western imperialism became a vital influential factor as well (Ali, 2015). Moreover, Western translations of the 1,001 stories play an important role too. Sasso (2018) identifies Burton's extremely erotic translation of the 1,001-night fairytales as the

most important influence on these sensual scenes, as he focussed primarily on the corporeal beauty of Sheherazade[2] and her sister Dunyazad. Other authors also added vastly sexualised scenes to the fairytales, creating a colourful, sensual, yet cruel image of the Arab world (Oueijan, 2006). An example of this is the story of the porter in the bazaar (Abdolah, 2023).

These untruthful scenes become especially precarious when we consider that the audience for Orientalist scenes judged the works as authentic depictions of reality. Nochlin (2018) states that this is the result of seeming objectivity that is the consequence of the absence of the painter/observer in Oriental paintings. This absence of historical dynamic gives the pictures a sense of timelessness (MacKenzie, 1995). This documentary/filmic realism was established, almost single-handedly, by Gérôme (Benjamin et al., 1997; Esner, 2017). His filmic approach became one other painters followed, mainly resulting from his influential role at the Ecole des Beaux-Arts, where he influenced many aspiring artists with different nationalities (among his students were Hamdy Bey, Bridgman, Deutsch, and Ernst) (R. Benjamin et al., 1997).

Thus, Oriental scenes appear to be frozen in time. This idea is in line with the Western perception of the Middle East, as the Occidental audience believed the region had not changed since the time of the Old Testament (Little, 2009). The perceived authenticity of the scenes influenced both the cultural and political stance of the audience (Bohrer et al., 1988). Especially, the works by Gérôme became vital in influencing the perception of the Orient in the Occident. Thanks to his relations to the Goupil[3] family, Gérôme was able to widely distribute his works and penetrate the market for visual arts from France to the United States, and even in the area of the Ottoman empire (Benjamin et al., 1997; Esner, 2017). This distribution and popularity of his works is one of the reasons he became so influential. Lewis (1995) proceeds to explain Gérôme's success through the ambiguity of his paintings, allowing the subjects in the paintings to titillate his audience. Yet, the dissemination of prints and photo-engravings of his work throughout the art market might have been the most crucial element in his penetration of the market (R. Benjamin et al., 1997). Prints and photo-engravings were cheaper than paintings, which allowed Gérôme to disseminate his work among the lower classes as well. Through this he substantially shaped the perception of the Middle East by the Occident (Esner, 2017). Today, Gérôme is still the subject of discussion. Nochlin (2018) famously related his paintings to the work of Said (2003), and argues that Gérôme's pictorial rhetoric served the imperialist agenda. Moreover, Gérôme's

[2] Narrator of the 1,001-night fairytales
[3] Art dealers, based in New York

filmic realism still influences the image the Western world has of the Middle East, as popular media, such as film, still draw upon the "imaginary Orient" he created (Esner, 2017).

This false representation, in the works of Gérôme, but also those of his contemporaries is often one that reinforces gender inequality, which made the nineteenth-century Western world believe "that the Islam is a uniquely sexist religion" (Ali, 2015, p.34): the "Orientalist myth" (Kumar, 2012, p.44). The Orientalist myth became a means to justify colonialism and is still very much at play today (Kumar, 2012). This is a view shared by (Nochlin, 2018) and (Said, 2003). In Orientalism, people are often depicted as primitive and barbaric, justifying the 'civilisation' of the Middle East and Western imperialism of the time (Little, 2009). Moreover, this myth is a means to create a binary distinction between the Western world and the Middle East, as the images cannot be seen as loose from the political context of colonialism (Ali, 2015). In the movement, the Orient is depicted in many ways, luxurious, cruel, passionate, but never rational like the Occident (Little, 2009). While the art movement is often linked to 'othering' the Middle East from Europe through reinforcing stereotypes of the people from the region, MacKenzie (1995) advocates for a theory of cross reference instead. This theory comes forth of European artists projecting aspirations, renewed values, and wished-for freedoms, as well as fears and fantasies onto the Middle East (MacKenzie, 1995).

2.2 Value of paintings, theoretically

There are several theories that characterise the properties of economic goods. One of the most vital aspects of cultural goods is that they can be characterised as "experience goods": we can only estimate the value after consuming them (Towse, 2019). For example, I can only tell if I like *La Grande Piscine de Bursa (1885)* after having seen it. Before seeing the painting, I might hear what art historians write about it or hear what my friends have to say, which might give me some indication as to whether I would like the painting or not. However, I can only really judge the value the work has to me, after seeing it myself. The fact that this judgement comes post-consumption makes it difficult for me to assess whether the price put on consuming the product is worth it for me. Thus, value and price are highly influential in decision-making processes (Jaffe et al., 2014). However, it is crucial to keep in mind that in cultural economics price/value does not only relate to monetary value. One can

also use the terms to speak of non-monetary costs and benefits, such as cultural value, social costs, or enhancement of self-esteem[4].

Strongly related to decision making processes is 'price-theory', which allows one to predict a person's behaviour in a market (Becker, 1993). As illustrated in the example, estimating value is extremely challenging. Once we know how we value certain goods, we are likely to continue consuming those goods instead of trying out new things. As, in this way, we minimise the time spent on searching goods and services that we like while also minimising the risk of not liking the new good/service and wasting our money on it. In this sense, our tastes are thus stable and influenced by price (Stigler & Becker, 1977). Our future choices will be influenced by prior choices, and so experience goods are also sometimes characterised as "a good of which enjoyment will increase with experience" (Towse, 2010, p.162). This notion is also labelled 'rational addiction': "... exposure to good music increases the subsequent demand for good music…" (Becker&Stigler, 1977, p. 78).

Stability of tastes might be an explanation as to why Orientalist scenes depict so often Western looking women and Occidental beauty ideals. Fair-skinned, hourglass shaped nudes have a long tradition in Western art (Syed, 2021), and the market for such works had long been established (Syed, 2021). One can thus state that the taste for paintings with such nudes depicted was stable. And so, Orientalist painters continued along that tradition to minimise uncertainty with regard to the value attributed to their paintings. While at the same time, consumers' taste did not change, making the Western-looking *odalisque* a success in the art market. The painters also responded to the market: dealers such as Goupil and Gambart played a vital part in the success of some painters as they asked artists to be responsive to the tastes of the market; ensuring the longevity of Orientalism (MacKenzie, 1995). At the time, this market for Orientalism was a varied one; royal and the bourgeoisie in Great-Britain and more commercialised and aimed at the *nouveau riches* in France and the USA (MacKenzie, 1995).

The goods sold in this market were predominantly paintings and prints (MacKenzie, 1995). These can be characterised as a 'credence good', which is a good of which quality cannot even fully be assessed after purchasing/consuming (Hermalin, 2014). A painting might be sold at auction for a certain hammer price, but one cannot establish if that is the real value of the work; another auction a couple years earlier might have had a completely different result. For example, Gérôme's *The Lute Player (1858)* was at auction in 2021, when

[4] Distinction through cultural consumption (Bourdieu, 2002)

it was not sold. A few years later, in 2023, it was sold for a hammer price of €91,752 (Artprice.Com, n.d.).

These credence good characteristics relate to why someone would buy art, as this can sometimes be a form of gambling (Belk, 1995). Art collection can result from many different motivations (Belk, 1995). Yet, buying art is often an investment. In recent years, investors have been searching for greater returns in alternative assets, such as art, which has resulted in the emergence of funds that are specialised in this (Campbell, 2009). "These [funds] also appear to offer a highly beneficial diversification strategy with extremely low correlation with traditional asset classes" (Campbell, 2009, p. 119). Investing in credence goods is thus risky, as value cannot be established. However, the art market has become increasingly transparent in the last couple of years, making art a less risky investment (Campbell, 2009).

The overarching theme of the above presented theories and challenges is information asymmetry: the buyer does not know all there is to know about the good because the market is not entirely transparent (Sell & Reese, 2014). Problems that may arise from this can be characterised as a 'lemon-problem', a 'lemon' being a product of low quality (Akerlof, 1970). Suppliers usually do their best to properly disseminate information (Akerlof, 1970). Auction houses, for example, write descriptions about the works up for auction and inform the possible buyers about the provenance of the works. Still, one can only estimate the value of the work after purchase, if they can even estimate it at all. Thus, to minimise the risk of buying a lemon, one might buy something they have learned the value of in the past: brand-name goods (Akerlof, 1970). Brand-name goods are products of which we know the quality because they have been produced by a certain brand, for example food by *McDonalds*, which is stable in value. However, in the context of the art market and art auctions, works by superstar artists, such as Pollock, Monet, or Gérôme might also be considered a brand-name good, as the name of the artist signals the value of their work.

Moreover, some art movements or artists have higher returns than others, for example, Modern art has had high returns in the last decade (Campbell, 2009). In this way, one could thus apply the 'superstar-theory' to the art market too: "In certain kinds of economic activity there is concentration of output among a few individuals, marked skewness in the associated distributions of income and very large rewards at the top" (Rosen, 1981, p. 845). The reward of the superstar and the size of their market are closely related. So, the rewards and market size are skewed towards the most talented people in the field (Rosen, 1981). Superstars are those artists well-liked by the audience, and one might use their name to ensure a higher demand, for example by putting the names of famous actors on your film poster (Rosen,

1981). A similar approach can be used by auction houses, as auctions usually have a couple of ‘superstar-works’ the auction is built up around. This phenomenon could also be related to the fact that tastes are stable: “I know that I like works by Monet, so I will attend the Impressionist auction”. While simultaneously: “Monet is a superstar known to be liked by a large audience and receive the most rewards, so this Impressionist auction will revolve around a work by Monet”.

2.3 Prices of paintings, empirically

What happens in the market for paintings, empirically? There is much research on this subject that allows one to assess what happens in the market. However, the returns of art auctions are difficult to research, as the methods used often do not allow for the construction of price indexes that adjust for variations on quality (Baumol, 1986; Frey & Pommerehne, 1990; Stein, 1977). Furthermore, as has previously been described, artworks are heterogenous goods that are not traded frequently (Mei & Moses, 2002). Mei & Moses (2002) have written one of the most influential articles on this matter (cited by 744 others), as they have overcome these problems by conducting a repeated-sales index on data from Watson Library and the Metropolitan Museum of Art. They find “a significant increase in the number of repeated sales compared to earlier studies by William J. Baumol (1986) and William N. Goetzmann (1993)” (Mei & Moses, 2002, p. 1656). Moreover, masterpieces tend to underperform in the market, which means that they do not yield the high prices they are expected to fetch (Mei & Moses, 2002). This finding somewhat contradicts the cultural economic theory that implies names and reputation to be valuable indicators of value as Akerlof (1970) describes. Furthermore, Mei & Moses (2002) find that for American paintings the location of the auction does not influence the hammer prices, while for Impressionist paintings and works by Old Masters the location does have an influence. Location and geographical segmentation do play a role however; markets are geographically segmented in the sense that there are legal barriers that make international trade more difficult, while the relative demand for different types of art is partially segmented through international variation as well (Renneboog & Spaenjers, 2014). Renneboog & Spaenjers (2014) find that local fundamentals have great importance, as there is a close connection between the country of sale and the type of artworks sold and substantial international variation in average returns to art investments over the period 1971-2007.

Other highly influential literature is the 1993 article by Goetzmann (cited 629 times). In the article, a repeat sales index is used to research the relationship between painting price movements and stock market fluctuations. Goetzmann (1993) finds evidence that when art collectors become more wealthy, the demand for art works increases. Goetzmann's findings are in line with those of other researchers, such as Baumol (1986) and Stein (1977). This finding also implies that art can function as a powerful investment vehicle, which creates a parallel between the above presented theory and empirics from the market.

Mei & Moses (2002) and Goetzmann (1993) have tackled the issues with heterogeneity and the velocity of art works in their research. However, another challenge is to measure the impact of things such as 'artist reputation' or the impact of attribution (Renneboog & Spaenjers, 2013). Renneboog and Speanjers (2013) have written on what aspects of paintings specifically influence the hammer prices of the works; and do include these variables that are difficult to quantify. In the paper, they apply a hedonic regression to their own data set; they find that "artist reputation, attribution, signs of authenticity, medium, size, topic, and the timing and location of the sale are significantly correlated with price levels" (Renneboog & Spaenjers, 2013, p. 2).

Moreover, for paintings, price does not necessarily signal quality. Radermecker et al. (2017) show that the value experts attribute to a painter and their works play a vital part as well. This given implies that the legitimation of an artist has a high impact on their status and sales within a market. Experts in this sense can be critics, but Ashenfelter & Graddy (2003) highly stress the importance of auction houses in this role too. On the other hand, Moulin (1987) identifies that an artist and their works become established once the work has fetched high prices in the market. In this study, I assume that the monetary and artistic value of art works go hand in hand. This line of thinking is similar to that of other authors (e.g. Crotta, 2019; Grampp, 1989).

While there appears to be much research done on monetary returns for art and art auctions, these papers seem to be predominantly on the markets for Impressionism, Contemporary art, and the Old Masters. It has been challenging to find literature that researches the market for Orientalist art, while the market is a highly interesting subject of research. Luckily, news websites focused on art do report on the market, as it has gained increasing importance. As has previously been mentioned, the market for Orientalist art boomed during the 19th century, tailoring many different tastes. However, during the 20th century, demand for the works declined (ArtPrice.Com, 2017), possibly due to Post-colonialism. However, today we see a new market segment for the works emerging: the

Middle East, which has resulted in a significant growth of demand (ArtPrice.Com, 2017), and the genre has become increasingly popular again (Christies, 2021). Middle Eastern collectors of the genre typically collect the works as quasi-historical artefacts that allow them to acquire a piece of their homeland (Christies, 2021). 75% of the Orientalist works that are sold are sold to collectors in the Middle East (Gronlund, 2019). While the genre was highly criticised after the publishing of Said's *Orientalism* (2003), the movement is now regarded as a celebration of Middle Eastern heritage, predominantly due to the colourful, glorified, detailed portrayal of that culture (Chow, 2022). Moreover, the genre is also seen as an illustration of respect between Western and Middle Eastern culture (Danatt, n.d.), opposing the view Said draws in his book. It is important to take into account the influence of emerging fine art museums in the Middle- ast as well, such as the Louvre Abu-Dahbi, Doha's Orientalist Museum, and Islamic Arts Museum Malaysia (Gronlund, 2019).

Traditionally, the market for Orientalist art was concentrated in Paris, where Gros & Delettrez was the most important player. However, now that the momentum for the market has been changing, the London art market has gained increasing importance, particularly Sotheby's who currently leads the Orientalist market (ArtPrice.Com, 2017).

Together with Sotheby's, Christie's and Bonham's are the only auction houses that offer Orientalism as a standalone category (Chow, 2022). Furthermore, the market has become increasingly competitive, and bidders range from the Arabic world to South-East Asia (Chow, 2022). While the genre is not specifically a very high-priced market, returns are steady: "Between April 2012 and April 2019, Sotheby's sales total for this genre ranged from a low of £3.4 million in 2017 to a high of £6.3 million in 2013" (Chow, 2022). One stand out auction was that of the Najd collection. The auction was held at Sotheby's in 2019 and fetched a total revenue of £33.5 million, which is a record total (Chow, 2022). This auction and other record sales in the Orientalist genre made 2019 a groundbreaking year for the market of Orientalism (Chow, 2022).

2019 was an important year for the revival of Gérôme as well, thanks to the auction of the Njad collection.

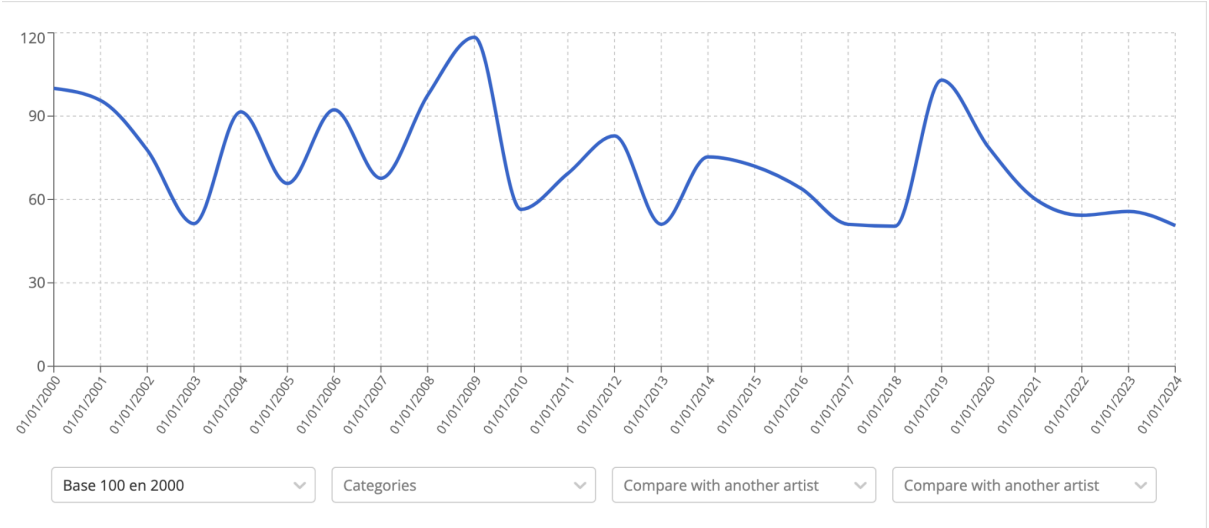


Figure 2.9: Price index for Jean-Léon Gérôme's works- (Ehrmann, n.d.)

Figure 2.9 illustrates the price index of artworks by Gérôme. While the graph shows a typical economic cycle, we see a high peak in the year 2019, after some more slow years. The most important works sold during the Njad auction were paintings. Yet, Gérôme did not just produce paintings. ArtPrice has registered the auction results of watercolour drawings (255 lots), furniture (1 lot), miniature (1 lot), photography, (1 lot), prints (10 lots), and sculptures (713 lots), alongside his paintings (542 lots) (Artprice.Com, n.d.). However, for this thesis, I choose to only gather data with regard to his paintings, as these yield the highest turnover (Figure 2.10).

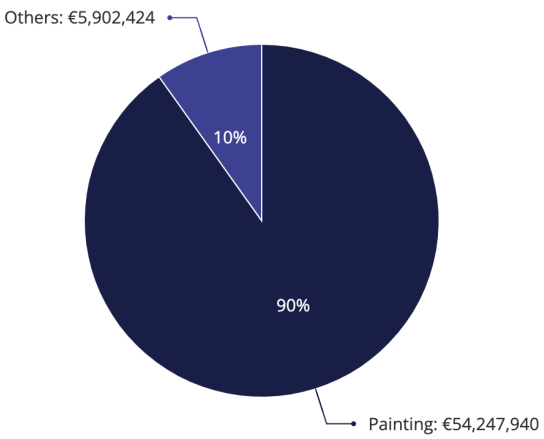


Figure 2.10: Turnover of works by Jean-Léon Gérôme divided by medium- (Ehrmann, n.d.)

Chapter 3: Methodology

3.1 Sample

The aim of this research is to estimate the influence of the depiction of people on the hammer price in 19th century Orientalist paintings by Gérôme. Gérôme and his work have been elaborated on in Chapter 2, but why is he the perfect case study for this thesis? The most vital factor for this decision is the influence Gérôme had on his contemporaries and on media today. In this sense, he influenced other painters then, and creators now. While, simultaneously, his work influenced the contemporary audience, and the audience today. Moreover, focussing on one artist makes it more simple to eliminate the effects one's name might have on the hammer prices. Artists with different reputations will yield different hammer prices, but its is challenging to estimate to what extent their reputation has an effect (Renneboog & Spaenjers, 2013). Thus, to eliminate that kind of 'noise' in my model, I choose to only focus on Gérôme, as he is an influential, established artist. Besides, Gérôme signed (almost) all of his works, so authenticity will play a less significant role as well.

Furthermore, my analysis focuses on works that have been at auction in non- Middle Eastern countries, as works by Gérôme have only been sold in the Western world during the past 20 years (aside from one work sold in Brazil). This concentration of auction location probably results from the fact that the Western world is an established location for art auctions, especially cities such as London, Paris, and New York.

Finally, the sample of artworks I selected only includes artworks that were at auction from 2004-2024. I am curious to see the influence of the depiction of people in Gérôme's paintings on hammer prices today, so I decided to do an analysis on the past 20 years. A sample with data of hammer prices from the last 20 years appears to be extensive enough to draw valuable conclusions after analysis, while also capturing our present day, as it only consists of data from the 21st century.

The data was manually collected via ArtPrice between February-May 2024. ArtPrice is world leader in art market information and auction results with over 30 million indices (Artprice.Com, n.d.). In the case for Gérôme, there are 1,619 auction results registered that date back to 1983 (Artprice.Com, n.d.).

The data collection resulted in a dataset with 167 observations. Some works in the dataset were recorded multiple times. There are two explanations for this. First, some works have several prime characters, in this case the work was recorded several times to analyse the

prime characters separately. This choice was made to prevent the code ‘other’ or ‘mixed’ occuring, as a high presence of these codes would make a valuable analysis challenging to make. To demonstrate, *The Helping Hand* (Gerome_22) was registered two times because the child and the old man were analysed separately (Figure 3.1).

Figure 3.1: The Helping Hand (1824 - 1904), Jean-Léon Gérôme, Sotheby’s

Second, some art works were at auction multiple times over the last 20 years. Some examples of this are *Baigneusses* (Gerome_2), *Egyptian Recruits crossing the Desert* (Gerome_12), and *Une Journée chaude au Caire (devant la mosquée)* (Gerome_64).

3.2 Method

As has already been mentioned, Orientalism is something that has not previously been researched from the perspective of cultural economics. The prices people are willing to pay for an art work, tell us something about the value of that work; whether monetary, social, or personal (section 2.2). Moreover, analysing hammer prices of artworks and the components that have influence on those prices is a relatively objective analysis, as opposed to more qualitative methods, such as content analysis.

In order to test what aspects have influence on the hammer price of an artwork, the most straightforward and efficient analysis is a hedonic regression (Stetco, 2017). While the model was first used to measure the impact of various characteristics on market value in the real estate market (Colwell & Dilmore, 1999), the method has also previously been used to establish what affects the hammer prices of artworks (Chanel et al., 1992; Crotta, 2019; Renneboog & Spaenjers, 2013). Alongside repeat sales index analysis, the hedonic regression

is the most widely used method when it comes to analysing the art market and its hammer prices (e.g. Crotta, 2019; Mei & Moses, 2002; Renneboog & Spaenjers, 2013; Stetco, 2017). Yet, why would the hedonic regression method be the most suitable for this research? Overall, the method is reliable and allows for large samples. Moreover, one can include a large set of variables into the model. Besides, in contrast to repeat sales analysis, the coefficient estimates that result from a hedonic regression have relatively small standard deviations (Agnello, 2010). Moreover, a repeat sales regression has a bigger risk of sample bias than a hedonic regression. Finally, hedonic regressions include all potentially relevant variables (Crotta, 2019).

3.3 Variables and hedonic regression model

As has already been mentioned a couple of times, research similar to this thesis has not previously been done. Thus, creating valuable variables has been rather challenging. In the end, I created 25 variables that are briefly presented in Figure 3.2, a more extensive codebook can be found in Appendix A.

Figure 3.2: variables in model

Variable	Code	Type	Measuring	Literature
Price	Price	Discrete	"€…"	(Renneboog & Spaenjers, 2012)
Size (rounded off)	Size	Discrete	"Value surface area"	(Renneboog & Spaenjers, 2012)
Authenticity	Authenticity	Ordinal	0: not signed 1: signed 2: dated 3: signed and dated 9: not mentioned	(Renneboog & Spaenjers, 2012)
Sale characteristics, month of sale	MonthSale	Discrete	"Month of sale"	(Renneboog & Spaenjers, 2012)
Sale characteristics, auction house	AuctionSale	Discrete	"Auctionhouse name, city of sale"	(Renneboog & Spaenjers, 2012)
Sale characteristics, year of sale	YearSale	Discrete	"Year of sale"	(Renneboog & Spaenjers, 2012)
Interior	Interior	Ordinal	1: natural landscape 2: sober 3: Some decorative elements	Ali, 2015

			4: Lavish, extremely luxurious	
Luxury	Luxury	Ordinal	1: none 2: sober 3: simple, but accessorised 4: lavishly accessorised/ luxurious fabrics	Ali, 2015
Skin female character fair	SkinFF	Dummy	0: no 1: yes 8: not visible 9: no female characters	Kabbani, 2008
Hair colour female character	HairCF	Nominal	0: hair not visible 1: light 2: dark 3: red 4: grey 9: no female characters	Kabbani, 2008
Body shape	Body	Nominal	0: not visible 1: straight/rectangular 2: Pear 3: Apple 4: inverted triangle/wedge 5: hourglass 9: no female characters	Kabbani, 2008 Codes derived from (Dress Silhouettes for Body Types, n.d.) Amarasinghe (2021)
Clothing female character	ClothingFemale	Ordinal	1:demure 2:suggestive 3:partially clad 4: nude 9: no female characters	Reichert, (2002); Wirtz et al., (2018); Gaenssle (2024)
Activity most important female character(s)	ActivityFemale	Nominal	1: physical labour 2: passive/leisure 3: religious 4: dance/music 5: intellectual 6: sensual 7: fighting 9: no female characters	Ali, 2015
Skin male character fair	SkinMale	Dummy	0:no 1:yes 8: not visible 9: no male characters	Kabbani, (2008)
Hair colour male character	HairCM	Nominal	0: hair not visible 1: light 2: dark 3: red 4: grey 9: no male characters	

Facial hair	FacialHair	Dummy	0: no 1: yes 8: cant see 9: no male characters	
Clothing male character	ClothingMale	Ordinal	1:demure 2:suggestive 3:partially clad 4: nude 9: no male characters	Reichert, (2002); Wirtz et al., (2018); Gaenssle (2024)
Activity most important male character(s)	ActivityMale	Nominal	1: physical labour 2: passive/leisure 3: religious 4: dance/music 5: intellectual 6: sensual 7: fighting 9: no male characters	Ali (2015)
Eye contact	EyeContactI	Ordinal	0: no eye contact 1: indirect 2: direct 1: direct 2: indirect 3: no eye contact 9: no female characters	Syed (2021)
Hairdo	Hairdo	Ordinal	0: hair covered 1: hair updo 2: hair semi-updo 3: hair loose 9: no female characters	Syed (2021)
Visibility face	Veil	Ordinal	1: face veiled completely 2: face semi-veiled 3: face unveiled 9: no female characters	Syed (2021)
Percentage faces unveiled	FaceVisible	Discrete	“Percentage of females in picture whose face is visible” 9: no female characters	Syed (2021)
Guard in picture	Guard	Ordinal	0: no guard 1: one guard 2: multiple guards	MacKenzie (1995) & Kabbani (2008)
Eye contact of most important character male	EyeContactH	Ordinal	0: no eye contact 1: indirect 2: direct 9: no male characters	MacKenzie (1995) & Kabbani (2008)
Weapons in	Weapons	Dummy	0: no	MacKenzie

picture			1: yes	(1995) & Kabbani (2008)

Renneboog & Spaenjers (2013) have already established that authenticity, size, time of sale, and auction house of sale have significant effects on hammer prices. Moreover, Crotta (2019) finds that nudity in Modigliani paintings has a significant effect on their hammer prices. I thus made sure to at least include variables on these characteristics in my analysis: variables *Size, Authenticity, MonthSale, YearSale,* and *AuctionSale* have been directly derived from Renneboog & Spaenjers (2013). The influence of nudity/amount of clothes worn is reflected in variable *ClothingFemale* and *ClothingMale*. However, to code these variables I followed the previous research by Gaenssle (2024); Reichert (2002); Wirtz et al. (2018), which resulted in the codes 1) demure, 2) suggestive, 3) partially clad, 4) nude.

The rest of the variables used in my analysis are based on literature presented in the theoretical framework. However, most of the codes for these variables were my own creation. Appendix A illustrates what literature I used to create the variables, linking fragments from Chapter 2 to the variables. For example, based on the literature by Ali (2015), I created the ordinal variables *Interior* and *Luxury*. The latter being about the luxury of accessories or materials worn by the characters in the painting, the first about the luxury of the interior/scene the character is set in.

Moreover, the variables about skin colour, hair colour, and body shape have been inspired by the art historical literature on Orientalism by (Kabbani, 2008). The codes for variable *Body* were found in Amarasinghe & Vindya De Silva (2021) who base themselves on *Dress Silhouettes for Body Types* (n.d.). In order to distance myself from political and social debate, I decided to make the variables for skin and hair colour straightforward: either fair skin or not (dummy) and little nuance in hair colours. With this approach, I follow the literature previously presented (Kabbani, 2008; Oueijan, 2006). One might argue that this is oversimplification of the matter, but due to the size of my dataset, multiplicity of variables, and time available for this thesis, and political hotness of the topic, I decided that this was the best solution. Moreover, based on the literature by Ali (2015), it seemed important to me to include what the characters in the picture are doing. Codes for their activity were loosely inspired by the genres identified by Renneboog & Spaenjers (2013) but predominantly my own creation.

Moreover, ff I were to code all the characters in the picture at the same time, I would need to code virtually every variable with ‘other’. When this happens, it becomes impossible

to do a valuable analysis, because the code 'other' does not tell you anything about the content of the painting. In order to solve this challenge, I decided to differentiate between male and female characters and only code the most important female character/group and most important male character/group. The most important characters were assigned intuitively, based on where my eyes went first when looking at the painting.

The above mentioned variables are applied to both female and male characters. However, bodyshape does not seem very relevant for male characters. Thus, instead of coding body shape, I coded facial hair for the male characters.

Furthermore, I created the overarching theme *Intimacy* (applied to female characters), in this theme there are the variables *EyeContactI, Hairdo,* and *Veil* (Appendix A)based on the literature by Syed (2021). When it comes to the visibility of the faces of the female characters, I also included *FaceVisible* (Appendix A) to register how many women in the painting are veiled, this allows for an impression of the overall image, instead of just the prime female character.

Lastly, there is the overarching theme *Hostility* (applied to male characters), this theme was derived from the literature by Kabbani (2008) and MacKenzie (1995), and consists of *EyeContactH, Guard,* and *Weapons* (Appendix A).

From the selection of variables, a hedonic regression model can be created:

$$HP = \beta0 + \beta1Si + \beta2Au + \beta3MSale + \beta4YSale + \beta5Auc + \beta6In + \beta\&Lux + \beta8DepFem + \beta9DepMal + \beta10Inti + \beta11Hos + \varepsilon$$

In this model, HP stands for the hammer price, which is the dependent variable. HP is influenced by β1-β11, where β1Si stands for *size*, β2Au for *authenticity,* β3MSale for *monthsale*, β4YSale for *yearsale*, β5Auc for *auctionsale*, β6In for *interior*, β7Lux for *luxury*, β8DepFemale for the variables about depiction of female characters, β9DepMal for variables about depiction of male characters, β10Inti for variables about intimacy, and β11 for variables about hostility. Every βi indicates and estimated change in HP for a one-unit-change in the respective independent variable, when all other variables remain constant. Moreover, β0 is the intercept term, i.e. the value of HP when β1-β11 would have a value of 0. Lastly, Ɛ is the error term, this term symbolises the difference between the observed values and HP and the values predicted and the variability of HP. The above presented model can also be summarised as:

$$HP = \beta0 + \sum_{i=1}^{11} \beta iVariable + \varepsilon$$

3.4 Robustness checks

I ran a VIF-test to see how the independent variables are correlated (Appendix B). This analysis was chosen because a VIF-test quantifies how much the variance of regression coefficients are inflated as a result of collinearity with other independent variables (Investopedia Team, 2023). When the values of a VIF-test are high, this indicates high multicollinearity, which can make the regression coefficients unstable (Investopedia Team, 2023). The results of the VIF-test show that my independent variables are all highly correlated. This high correlation is probably due to the relatively small size of my sample. A small dataset means that there is less data to estimate the coefficients of the regression, so information is less accurate. Second, variability is more pronounced when a sample is small, this will result in difficulties when trying to distinguish between the effects of different independent variables on *price*. Finally, a small dataset with many predictors can cause overfitting, the regression model will then report on noise, rather than actual relationships. This overfitting can result in multicollinearity because the model will still aim to fit in every datapoint as closely as possible. I aimed to resolve this challenge by testing what independent variables were not as highly correlated. To test this, Chi-square tests were run (Appendix C). A Chi square test is used to test if two categorical variables are significantly correlated (Hayes, 2024). To solve challenges due to collinearity, variables that are not significantly correlated are combined in smaller regression models. Combining non-correlated variables prevents correlations between the independent variables to mess with the hedonic regression that estimates the effect of the independent variables on the hammer price. I created five regression models, where I interchanged the second independent variable that was used in the regression. This solution resulted in the following models

1. $HP = \beta 0 + \beta 1\, Authenticity + \beta 2\, 'interchangeable' + \varepsilon$
    a. Interchangeable for independent variables: *luxury, haircf, clothingfemale, haircm,* and *hairdo*
2. $HP = \beta 0 + \beta 1\, MonthsaleNumeric + \beta 2\, 'interchangeable' + \varepsilon$
    a. Interchangeable for independent variables: *skinff, clothingfemale, guard, eyecontacth,* and *weapons*
3. $HP = \beta 0 + \beta 1\, Auctionhouse1Numeric + \beta 2\, 'interchangeable' + \varepsilon$
    a. Interchangeable for independent variables: *activityfemale, facialhair, eyecontacti,* and *veil*
4. $HP = \beta 0 + \beta 1\, Auctionhouse2Numeric + \beta 2\, 'interchangeable' + \varepsilon$

   a. Interchangeable for independent variables: *interior* and *activitymale*
5. $HP = \beta 0 + \beta 1\, FacevisiblePercentage + \beta 2\, skinfm + \varepsilon$

3.5 Hypotheses

With my analysis I test the following hypotheses:

1. Depiction female characters:
   a. Fair skin results in a higher hammer price, as opposed to skin that is not fair
      H0: β_skinff= 0 and H1: β_skinff >0
   b. Blonde hair colour results in a higher hammer price, as opposed to dark, red, grey or covered hair
      H0: β_haircf_blonde=0 and H1: β_haircf_blonde>0
   c. An hourglass body shape results in a higher hammer price as opposed to other body types
      H0: β_body_hourglass=0 and H1: β_body_hourglass>0
   d. Characters coded *nude* for *Clothing*, yield a higher hammer price
      H0: β_clothingfemale_nude=0 and H1: β_clothingfemale_nude>0
   e. Code *passive* for the variable *Activity*, yields higher hammer prices than other codes for the variable
      H0: β_activity_passive=0 and H1: β_activity_passive>0

The above described components of the hypothesis are in line with the tradition of nudity in Western art and the 19th century Western beauty ideal (Kabbani, 2008; Syed, 2021). As tastes are stable (Stigler & Becker, 1977), I thus expect fair skin, light hair, hourglass body, and nudity to yield a higher hammer price than their opposed characteristics as these are in line with the long tradition of nudity in Western art and thus speak to its long-established market. Moreover, passivity of a character makes them appear more vulnerable, which is a recurring depiction (Kabbani, 2008). Furthermore, lounging or bathing can be considered a more sensual scene than one in which the character is e.g. reading, working, or praying. Needless to say, sex sells, and goods/paintings that emphasise this are higher in demand (Kabbani, 2008).

2. Depiction of male characters:
   a. Skin that is not fair results in a higher hammer price, as opposed to fair skin
      H0: β_skinfm=0 and H1: β_skinfm<0

b. Dark hair results in a higher hammer price than light, red, or grey hair
   H0: β_haircm_dark=0 and H1: β_haircm_dark>0
c. A character with facial hair results in a higher hammer price than a character without facial hair
   H0: β_facialhair=0 and H1: β_facialhair>0
d. The code *suggestive* for variable *Clothing,* yields a higher hammer price than the other codes for the variable
   H0: β_clothingmale_suggestive=0 and H1: β_clothingmale_suggestive>0
e. Code *fighting* for variable *Activity* results in a higher hammer price than the other codes possible for the variable
   H0: β_activity_fighting=0 and H1: β_activity_fighting>0

As has been identified in the theoretical framework, Orientalism is highly correlated to othering (Bohrer et al., 1988; Said, 2003). Kabbani (2008) also identifies the men in Orientalist scenes as a barrier between us, the spectator, and the subject of the painting. In this sense, the men in the picture are 'the other', and thus depicted as such. Moreover, some Orientalist painters even played into the fears of the spectator with the scenes they depicted (MacKenzie, 1995). Along these lines of thinking, I expect a violent-looking 'other' to result in a higher hammer price than a man that looks friendly and similar to the Western audience he was created for. Specifically, I expect this because a depiction as described above elicits strong feelings, which makes the buyer intrigued by the painting and thus willing to pay more.

Furthermore, I expect that women would find an 'exotic' man more attractive when he looks dark and dangerous, hence, a man that does not have fair skin with dark hair, facial hair and suggestive clothes who is depicted as (possibly) violent, would yield a higher hammer price (Gill, 2020).

3. <u>Intimacy:</u>
   a. *Direct eye contact* for variable *EyeContact,* results in a lower hammer price
      H0: β_eyecontact_directeyecontact=0 and H1: β_eyecontact_directeyecontact>0
   b. The higher the value for *Hairdo, Veil,* and *FaceVisible*, the higher the hammer price
      H0: β_hairdo_hairloose=0 and H1: β_hairdo_hairloose>0
      H0: β_veil_faceunveiled=0 and H1: β_veil_faceunveiled>0
      H0: β_facevisible=1 and H1: β_facevisible>0

In the theoretical framework, it has been made clear that Orientalism is very much influenced by the idea of voyeurism (Syed, 2021). I expect that voyeurism and the idea that you see an intimate scene that you are not supposed to be seeing, without the character(s) in the scene being aware of you, makes you find the scene more interesting. So, when there is direct eye contact, and the spectator experiences that they are being seen, the hammer price will be lower. Moreover, loose hair and an unveiled face imply a more intimate scene, as the 19th century Middle Eastern women would veil their hair and faces when they went out. So, loose hair and an unveiled face would result in a higher hammer price.

4. Hostility: the higher the value for *Guard, EyeContactH,* and *Weapon,* the higher the hammer price

   H0: β_guard=0 and H1: β_guard>0

   H0: β_eyecontacth=0 and H1: β_eyecontacth>0

   H0: β_weapon=0 and H1: β_weapon>0

As has been previously mentioned, Orientalists wanted to elicit strong feelings. In several cases, their turbulent imagery relates to the sublime, making the spectator feel fear (MacKenzie, 1995). I expect that a painting that makes one feel strong emotions, such as fear, makes the person more intrigued by the work. This intrigue would in its turn make one pay a higher hammer price for the work at auction. Thus, feelings of fear and hostility would result in a higher hammer price.

Chapter 4: Results

4.1 Descriptive statistics

Collecting auction data of Orientalist works by Gérôme of the past 20 years has resulted in a dataset that consists of 167 observations of 107 different paintings. Among these 167 observations, the most popular depictions were those in which people are passive. Furthermore, it is interesting to see that women are only depicted in two different activities, while men are depicted in five different activities (Figure 4.1). One explanation for this could be that Gérôme was not allowed to be present in locations designated for women when he travelled to the Middle East. As has been identified in the theoretical framework, this absence has resulted in Orientalists painting scenes from their fantasies (TheArtStory, n.d.). The fantasy scenes will likely romanticise the image, thus we are unlikely to find women working, or praying. Moreover, there was a higher demand for sexualised scenes (Ali, 2015; Kabbani, 2008) and we know that Gérôme highly played into the market (R. Benjamin et al., 1997). Figure 4.2 illustrates how the prices of paintings are distributed per activity for the main character, 1 stands for *physical labour*, 2 stands for *passive/leisure*, 3 for *religious*, 4 for *dance/music*, 7 for *fighting*, and 9 for *no characters with this gender*. We thus clearly see that scenes with a female character in *passive/leisure* yield far higher hammer prices than scenes with a female character that is engaged in physical labour (Figure 4.2). For male characters, religious scenes fetch the highest prices at auction, but those in which they are depicted passive do well too (Figure 4.2). I explain the popularity of religious scenes through the 'exoticism' that so often characterises Orientalism, as the Western audience was (relatively) unfamiliar with mosques or Islam. Gérôme's religious scenes offer the audience a peak into what happened in the Mosques and the Orient; areas previously unexplored in the Occident.

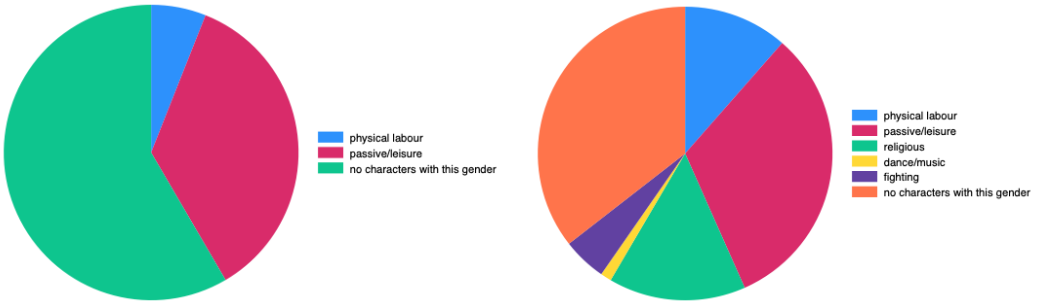


Figure 4.1: pie chart of depicted activities (left: female, right: male)

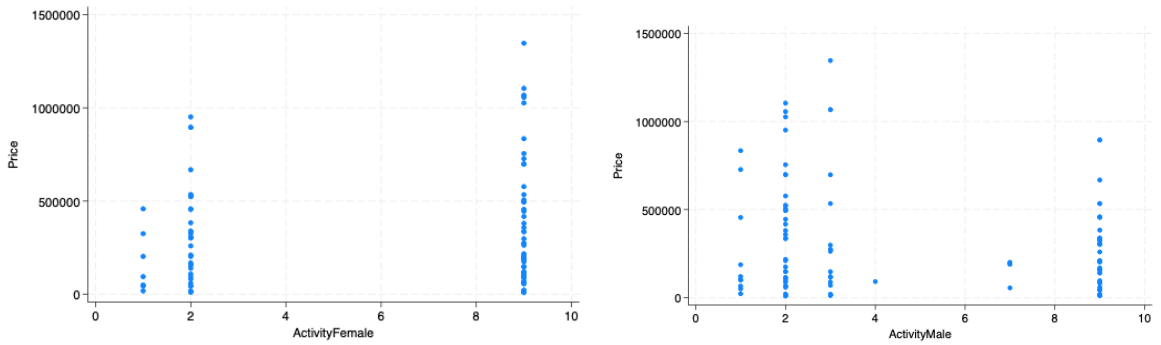


Figure 4.2: scatter plot of activityfemale (left) and price and activitymale (right) and price

When looking at the clothing the characters wear, we also see sensuality return. The majority of the women are depicted *nude* or *partially clad*, while men are more often depicted in *demure* clothes (Figure 4.3). Yet, a substantial part of the male characters is clothed *suggestively*. Many of the arnouts painted by Gérôme wear blouses that are wide open, allowing the spectator to see their chest. Figure 16 illustrates how the prices are distributed per category for clothing 1 stands for *demure*, 2 for *suggestive*, 3 for *partially clad*, 4 for *nude*, and 9 for *no characters with this gender*. It is interesting to see that a female character clothed *demure* fetched the highest hammer price, as this is not in line with the above presented literature or hypothesis. Yet, we see that the prices per category do not differ substantially (Figure 4.4). Moreover, we see that for male characters the category *demure* yields by far the highest hammer price (Figure 4.4). Still, suggestively clothed or the few partially clad men fetch relatively high prices as well (Figure 4.4).

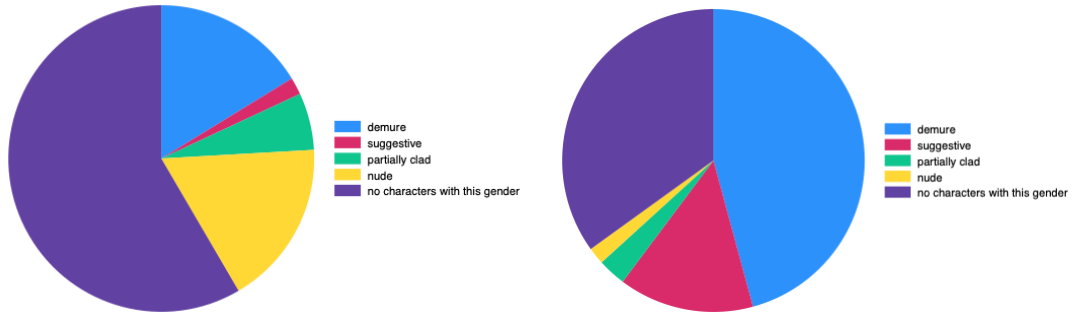


Figure 4.3: pie chart of clothing worn (left: female, right: male)

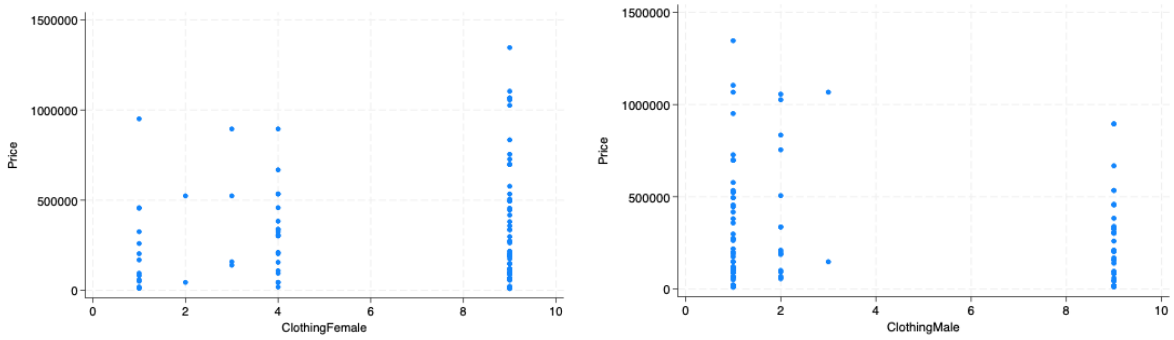


Figure 4.4: scatter plot of clothingfemale (left) and price and clothingmale (right) and price

The theoretical framework has also extensively discussed the skin colour of the female characters. Figure 4.5 illustrates the distribution of hammer prices based on whether the female character's skin is fair or not. 0 stands for skin that is not fair and 1 for skin that is fair, 8 stands for *cannot see*, and 9 for *no characters with this gender*. It is clear from the scatter plot that female characters with fair skin fetch higher prices at auction than female characters with skin that is not fair.

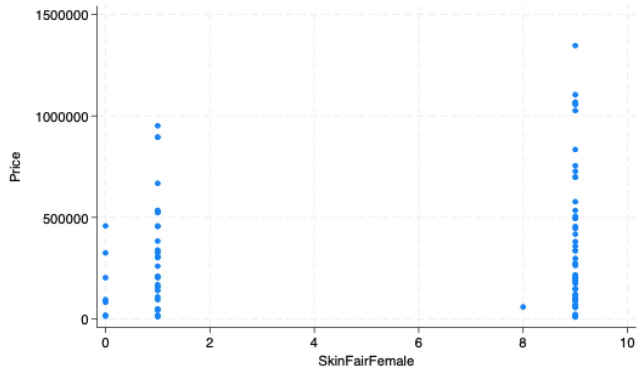


Figure 4.5: scatter plot of skinff and price

Moreover, section 2.1 also discussed feelings of fear and the sublime in relation to Orientalism. Figure 18 illustrates the distribution of hammer prices according to whether there are weapons in the picture or not. 0 means that there are no weapons and 1 means that there are weapons. We thus see that the categories yield similar hammer prices. Yet, paintings that depict weapons fetch prices higher than paintings without weapons (Figure 4.6). Throughout the rest of this chapter, I shall seek to understand if these independent variables actually have a statistically significant effect on the hammer price. Or if these descriptive statistics are more coincidental.

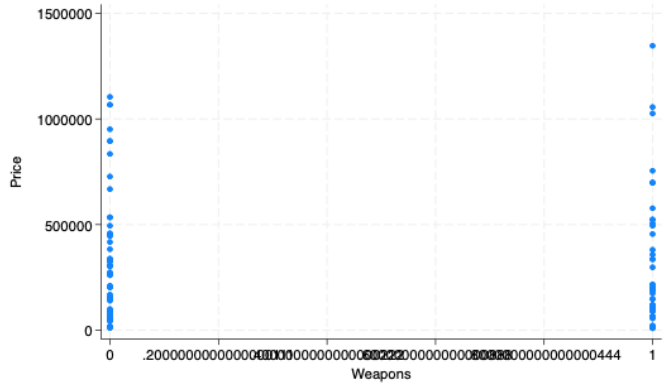


Figure 4.6: scatter plot of weapons and price

Of the 167 observations, 113 works were sold and 53 were not sold. The works that were not sold are included in the dataset, but have been coded as missing value for the

variable *Price*. On the 113 works that have been sold, a simple analysis was run to find the mean of the hammer prices, minimum price, and maximum price (Figure 4.7).

Figure 4.7: descriptive statistics for Price

Variable	Obs	Mean	Std. Dev.	Min
price	113	430971.08	592414.93	9020

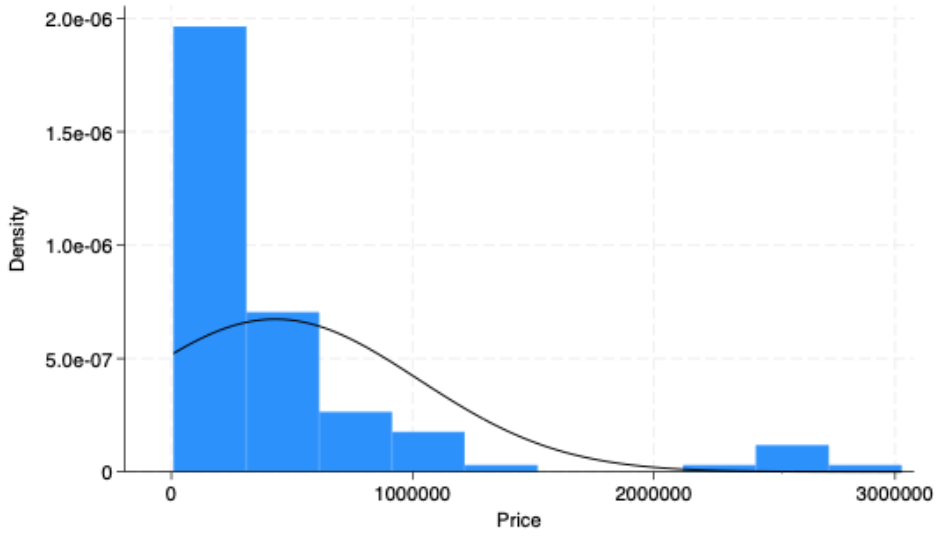


Figure 4.8: histogram with normal distribution for Price, derived from Stata

As can be seen in Figure 4.7, the mean price of Orientalist paintings by Gérôme in auctions within the last 20 years has yielded an average price of €430,971.10. Moreover, the minimum and maximum prices are far apart (€9020-€3,026,571). This wide range results in a high standard deviation of 592,414.9, which means that there is great variability in hammer prices for Orientalist works by Gérôme. Figure 4.8 further illustrates that the hammer prices of the works included in the data set are not normally distributed. Rather, the histogram is skewed to the right: positively skewed. We see that lower hammer prices occur with a higher frequency, while the right side of the histogram illustrates that there are some extremely high hammer prices too. These more extreme values on the right imply that the mean is not the most reliable in this analysis, as the few extremely high prices pull the mean up from the more frequently occurring lower prices. The outliers on the right of Figure 4.8 are not representative of the sample and significantly differ from the majority of the observations. For this reason, I choose to remove those outliers from the dataset. All observations with a hammer price higher than €2,000,000 were removed to prevent these outliers from messing with the results. This decision is based on Figure 4.8, which shows that the outliers are those

prices above €2,000,000, as we see a gap between the left side of the histogram and the right side of the figure.

Moreover, the prices of observed paintings vary gravely around the mean. This variation implies that there are significant differences in hammer prices for the works in the dataset. These differences are likely the result of various aspects, such as size, auction house, and authenticity (Renneboog & Spaenjers, 2013). In the proceeding part of this chapter, I will aim to identify what factors have influenced the hammer prices and to what extent.

4.2 Hedonic regression

4.2.1 Effect of the auction

As has previously been explained, the aim of my model is to establish what factors affect the hammer price of Orientalist works by Gérôme (Appendix D). The smaller models allow for a valuable estimation where the effect of collinearity among independent variables is minimised. Moreover, the removal of outliers from the data set prevents those outliers from skewing the results.

In line with the literature by Renneboog & Spaenjers (2013), I find that authenticity of a painting, i.e. if the work is signed, dated, or both, has a statistically significant positive effect on the hammer price of the works by Gérôme. The p-values for this given are below .05 which means that the result is statistically significant. Coefficients of this variable are strongly positive (Appendix D), which allows me to conclude a strong positive effect on the hammer price of a work by Gérôme when that work is signed and/or dated. In other words, a work that is signed and/or dated will fetch a higher hammer price than a work that is not signed and dated, in the case of paintings by Gérôme.

Renneboog & Spaenjers (2013) also test if the auction house has an effect on the hammer price of a work. They find that this has a statistically significant effect (as described in section 2.3). In the case of work by Gérôme, I find a statistically significant positive effect in the case of Bonhams, Christie's, Sotheby's, and Tajan. This finding means that a work by Gérôme will fetch a higher hammer price when sold at one of the above-mentioned auction houses as compared to other auction houses. For Donny Malone I find a statistically significant effect as well. However, the coefficient for this auction house is negative, which implies that a work sold at Donny Malone would yield a higher hammer price if it was sold at another auction house. In my analysis, Boureau, Claude Aguttes, Ketterer Kunst, and Skinner

were included as well. However, for these auction houses I do not find statistically significant effects on hammer prices.

Furthermore, the city in which the auction was held was included in my analysis as well, based on the literature presented in section 2.3. I find that for paintings by Gérôme sold between 2004-2024, Coutances, Muncih, Paris, São Paulo, and Glasco have a statistically significant effect. For Neuilly-sur-Seine, I found a statistically significant effect with a 10% level of significance. However, the coefficients for these cities are negative, which means that a painting sold in one of these locations will fetch a lower hammer price as compared to the same painting being sold in another location. The fact that Paris is in this list is interesting, as Paris has a long tradition of art auctions. One would thus assume that a painting sold in Paris would have a positive effect on the hammer price of the work. This finding contributes to the already exisiting luitrerature about the effect of the location of an auction (e.g. Mei & Moses, 2002; Renneboog & Spaenjers, 2014).

Lastly, previous literature (e.g. Baumol, 1986; Renneboog & Spaenjers, 2013, 2014) has discussed the influence of the month in which a work is sold on the hammer price. In the case for paintings by Gérôme, I do not find any statistically significant coefficients in this regard, i.e. the month in which a painting by Gérôme is sold does not have a statistically significant effect on the hammer price of the work.

4.2.2 Effect of the scene

Before discussing the main focus of my research question, I shall also briefly discuss the effect of the scene of the painting on the hammer price. In other words, how does the luxury and interior of the painting influence the hammer price? The literature presented in the theoretical framework has extensively covered the opulence of and lavish decoration in Orientalist paintings. This trend is also seen in the paintings by Gérôme.

Luxury was regressed along with *price* and *authenticity*. The results of this regression clearly show that the amount of accessories or value of clothing a character wears has a strong positive effect on the hammer price, as compared to a character that is wearing no luxurious clothes or accessories. For *sober, simple but accessorised,* and *lavishly accessorised* the p-values indicate a statistically significant effect on the hammer price. However, it is interesting to look at the coefficients of the categories. Contrary to my expectation (the more luxurious the accessories and clothes, the higher the price) and the literature by e.g. Ali, (2015), Little (2009), and Syed (2021), the regression shows a decline in coefficients as the ‘amount’ of luxury goes up. In other words, more luxury has a statistically significant

positive effect on the hammer price as compared to no luxury at all, but the strength of this effect goes down as the character gets accessorised more lavishly (Appendix D).

While the literature by Ali (2015), Little (2009), or Syed (2021) does not discuss the influence of luxury/opulence on the hammer price, it does identify its trend in Orientalism. Other literature, e.g. Benjamin et al. (1997) and Esner (2017) has explained how Gérôme anticipated the market. It is thus a logical step to assume that following the trend in Orientalism results in higher hammer prices. For *interior*, I find a statistically significant (p: .001) effect of *lavish, extremely luxurious* on the hammer price of an artwork. The coefficient that accompanies this p-value is 512143.9, implying a strong positive effect on the hammer price, i.e. the hammer price goes up strongly when the interior depicted in the painting is classified as *lavish, extremely luxurious*. This finding is thus in line with the literature mentioned above, as it shows that opulence has a positive effect on the price of the painting.

4.2.3 Effect of depiction of people

The prime focus of my research question is the extent to which the depiction of people has an influence on the hammer prices of the works by Gérôme. I will discuss the findings with a p-value lower than .05, i.e. the findings that are statistically significant. I will start with discussing the results for the female characters and intimacy. I do not test the effect of the body shape of the female character on the hammer price, as I only found *hourglass* or *pear shaped* women in Gérômes paintings. Besides, for the majority of his paintings, I was not able to code the body shape of the female character, because this was not visible enough to categorise it. Still, all the women he painted seem to be slim, but still curvy, i.e. broad hips, breasts, and a round bottom.

After discussing the results for the female characters, I will discuss the results for male characters and hostility.

Above, the skin colour of the female character has been discussed in depth. Section 4.1 has already shown that the most expensive painting with a female character depicts a woman with fair skin, as opposed to a woman that has skin which is not fair. However, this does not yet tell us if the fairness of the skin actually has a significant effect on the hammer price of the painting. After running the regression, I found a statistically significant (p: .017), positive coefficient of 188141.41. This result means that the null hypothesis (H0: β_skinff= 0) is rejected and the alternative hypothesis (H1: β_skinff >0) is accepted. In other words, a prime female character with fair skin fetches a higher hammer price, as compared to a prime female character with skin that is not fair.

For the hair colour of the female character I test H0: β_haircf_blonde=0 and H1: β_haircf_blonde>0, because I expect a female character that resembles an Occidental woman to yield a higher hammer price, due to stability of taste. The p-value for *haircf*: *blonde* is .072, which means that it has a 10% significance level. The coefficient that accompanies this p-value is 132679.17. This finding means that the alternative hypothesis is accepted. However, for the hair colours dark and red I also find a statistically significant effect, as both p-values are .00. For these hair colours, the effect is stronger than that for blonde hair. In sum, a prime female character with blonde, dark or red hair results in a higher hammer price than a painting in which the main female character has her hair covered. Moreover, red hair has a stronger positive effect (274682.83) than dark hair (256930.71) or blonde hair (132679.17). I assume that the scarcity of red hair is what makes its effect on the hammer price stronger. A more art historical explanation for this is that red hair in the context of pre-Raphaelites can be associated with sexual empowerment, desire, and exoticism (Howard, 2015). Considering that the pre-Raphaelites boomed during the same time period as the Orientalists, and their similar use of vibrant colours (HENI Talks, 2019), one can assume that Gérôme was inspired by the pre-Raphaelitic imagery and symbolism of red hair. Sasso (2018) also discusses the Orientalists and pre-Raphaelites in the same context, implying their close relation and possible mutual influence.

Furthermore, for the independent variable *activityfemale* (H0: β_activity_passive=0 and H1: β_activity_passive>0) I find a statistically significant effect at a 10% significance level for *passive/leisure*. This category has a coefficient of 150637.05. This finding means that I reject the null hypothesis and accept the alternative hypothesis. In other words, a female character depicted as passive results in a higher hammer price than a female character that is engaged in physical labour. These results are in line with the literature presented in section 2.1. For example the literature by Kabbani (2008) Kuehn (2011), and Syed (2021), who discuss the harem woman and her state of ‘pleasing vulnerability’. Lastly for the depiction of female characters, there is *clothingfemale.* For this independent variable I do not find results that are statistically significant.

Furthermore, in this research, the female characters are related to the intimacy of the scene (see also section 2.1). I expect that direct eye contact results in a lower hammer price (H0: β_eyecontact_directeyecontact=0 and H1: β_eyecontact_directeyecontact>0) because it makes the scene less intimate. For direct eye contact, I do not find a statistically significant effect. However *eyecontacti: indirect eyecontact* has a p-value lower than .05, which means that it is statistically significant. The coefficient that accompanies this p-value is negative

(-269919.4). So, when the female character in a painting by Gérôme makes indirect eye contact with the spectator, this results in a lower hammer price than a painting in which she would make no eye contact. As no eye contact implies that the subject of the painting is unaware of us watching her, this would make the scene more intimate. When there is indirect eye contact, we can assume that we are being seen. In line with the literature on voyeurism in Orientalism, a negative coefficient for *indirect eye contact* can thus be easily explained. Moreover, a face that is unveiled completely can also be associated with a more intimate scene (see section 3.5). So, I hypothesise that H0: β_veil_faceunveiled=0 and H1: β_veil_faceunveiled>0. For the independent variable *veil*, I find a statistically significant effect on hammer price for female faces that are completely unveiled. This category has a coefficient of 169976.66. This finding allows me to accept the alternative hypothesis, which means that a face that is completely unveiled results in a higher hammer price than a face that is fully veiled.

Moreover, for the independent variable *hairdo*, associated with intimacy as well, I find a p-value of 0.088, thus at a significance level of 10%. I hypothesised that H0: β_hairdo_hairloose=0 and H1: β_hairdo_hairloose>0, but do not find a statistically significant effect for loose hair. However, hair in an updo has a coefficient of 166122.5, which means that it has a positive effect on the hammer price. So, the hammer price increases when the main female character has her hair in an updo, as compared to a female character that has her hair covered. I had expected that an updo would result in a lower price because this is associated with getting dressed to go out into the public. Hair in an updo is thus less intimate. However, it does make sense that a woman would put her hair up when she goes to a harem to bathe, which could also make an updo be associated with intimacy. I was not able to find literature that supports this statement, but it is a logical explanation based on the literature presented in section 2.1.

Secondly, I look at the results for the male characters depicted in Gérôme's paintings. I aimed to test if a male character with dark hair fetches a higher hammer price, as compared to other hair colours (H0: β_haircm_dark=0 and H1: β_haircm_dark>0). However, the p-value for dark hair is greater than .05, so these results are not relevant. Yet, I do find statistically significant effects on hammer price for a male character that has red hair (p: .001). Similar to women with red hair, a male character with red hair results in a higher hammer price, as compared to a male character with blonde hair. I am not able to find literature that explains why this happens in the context for male characters. But, similarly to my explanation presented above, scarcity of red hair might explain the positive effect it has

on the hammer price for paintings by Gérôme. I do not expect that the sexual desire-aspect that explains the increase in hammer price for female characters with red hair to play a role in the case for men, because their sexuality does not seem to have a lot to do with 'exoticism', rather with power (Gill, 2020). Moreover, for the rest of the variables associated with the depiction of male characters: *skinfm, facialhair, clothingmale,* and *activitymale* I do not find statistically significant effects.

Furthermore, male characters are associated with hostility in Orientalism (see section 2.1). As explained in section 3.5, I expect that the hammer price goes up, when the value for *eyecontacth* increases, i.e. *direct eye contact* results in a higher price than *indirect eye contact* or *no eye contact*, the latter yielding in the lowest hammer prices (H0: β_eyecontacth=0 and H1: β_eyecontacth>0). For *indirect eye contact* I find statistically significant effects (p: .006). For this classification the coefficient is -286717.93, which means that the price of the work with a male character that makes indirect eye contact is lower than that of a work that depicts a man that makes no eye contact. This is contrary to my hypothesis and the literature presented in section 2.1, e.g. MacKenzie (1995). The other independent variables (*guard* and *weapons*) that I associate with hostility did not have statistically significant results.

4.3 Limitations

While running the robustness checks, it became clear that the dataset I employed is too small. Unfortunately, due to the time available for this thesis, I have not been able to make a larger dataset. For this reason, I now performed chi square tests of independence to test what independent variables have a statistically significant effect on one another. This approach resulted in smaller hedonic regressions that estimate the effect of the variables on the hammer price of the paintings, without having the collinearity among independent variables skew the results. Still, I was not able to find a statistically significant effect for all the variables used in the model. I am not able to estimate if this is the case because they do not have an effect, or because of the dataset that was employed.

Another limitation is that the coding of the paintings was done by just one person. Although the variables were created in the most objective way, it would be possible that some paintings were coded differently if someone else analysed them. For example, there is a painting depicting a dervish who is dancing in the dataset (Gerome_61). For dervishes, this whirling is a way to reach religious ecstasy (Wikipedia, 2024). Coding this picture was thus challenging, because *activitymale* had a code for *dance/music* but also for *religious*. For the

painting I eventually decided to code it *religious*. However, someone else might judge the dancing element more important, making them code it as *dance/music*.

For future research, I would thus suggest expanding the dataset and have multiple people code the paintings. This expansion could be through collecting more auction results for works by Gérôme. However, while Gérôme can function as a generelisable example for Orientalism, it could also be interesting to expand the dataset with works by other Orientalist artists. An expansion in this sense would allow one to draw more generalisable conclusions than I can draw based on this dataset. Moreover, having multiple people code the works would also make the results more reliable and the research more easily reproducible, as the coding would be less reliant on the judgement of just one person. Besides, having multiple people interpret the findings would also increase the reliability of this thesis, as right now I was the only one making interpretations of the regression output. Although the regression output is an objective result, relating it to the hypotheses or literature will always come with some bias. Even though I aimed to objectively report on the findings, it would be possible that my research on art historical theories or personal prejudices clouded my vision on the results. When working together with multiple people, it is easier to notice this bias in each other's interpretation and resolve it, enhancing reliability.

Chapter 5: Conclusion

This thesis has aimed to answer the research question: how does the depiction of people in Gérôme's Orientalism influence the hammer prices of those paintings at auction today? The research question is related to a broad scope of (predominantly) art historical literature that aims to understand the political and social implications of the art movement that boomed during the 19th century. Orientalism is a movement that has influences on thinking about and imagery of the Middle East then and today (Esner, 2017; Nochlin, 2018; Said, 2003). The theoretical framework has discussed what scenery in the movement looks like and how people are depicted (Bohrer et al., 1988; Kabbani, 2008; Kuehn, 2011; Syed, 2021). As has become clear, the latter has often problematic implications, as the image that is drawn is that of inequality, submissiveness, and savagery (Ali, 2015; Kumar, 2012; Little, 2009; Nochlin, 2018). In the past, this has functioned as a justification of Western imperialism in the Middle East (Kumar, 2012; Little, 2009). But even today this image creation has an effect on modern media and the stereotypical image they reproduce of the Middle East and its people (Esner, 2017.; Luyendijk, 2009). Literature on this matter is, as presented, extensive. But why has no one looked at the economical side of the matter?

Cultural economics is a tool that allows us to understand the way people behave in the realm of arts and culture (Becker, 1993). It helps us to estimate what people value, and how they value it, how they deal with information asymmetry, what they want to see and do, et cetera. In other words, it is a valuable tool to help one understand complex multifaceted matters, such as Orientalism or the market for paintings. The hammer price of a painting is one straightforward way to measure how one values that painting. It might also tell us something about the way the buyer values the scene depicted on the painting. And through that, we might be able to also identify trends in the market.

One trend in the art market that has been reported on recently is that of new buyers for Orientalist works (ArtPrice.Com, 2017). Where buyers used to originate from the Western world, the Arabic world is now an important upcoming market for the works. The auction of the Njad collection is a clear example of the revitalisation of Orientalism as an art genre in today's market (Chow, 2022). Taking all these aspects into mind, I thought it would be interesting to see to what extent the image creation, and so the depiction of people, has an effect on the hammer prices of Orientalist works at auction today. In order to answer the research question, I created a dataset reporting on the auction results of 107 different paintings by Gérôme. Gérôme was chosen as a case study because his work was highly

influential in his own time and today (Benjamin et al., 1997; Esner, 2017); he did not just influence the audience and the way they perceived the Orient, but also the work of his contemporaries and even film in the modern time. After collecting the auction results and coding the works, hedonic regression models were created. Contrary to my initial model, I employed several smaller regression models to prevent negative effects of collinearity on my results.

The results of the regressions were reported extensively in section 4.2. I found that authenticity of the painting, luxury of the clothes and accessories of the prime character, lavishness of the scene, skin colour of the main female character, a passive female character, hair in an updo, red hair, and an unveiled face have a significant positive effect on the hammer price of a painting by Gérôme that was auctioned during 2004-2024. These findings are mostly in line with the literature that was examined in section 2.1. Luxurious, lavish scenes, with a fair-skinned woman in a state of pleasing vulnerability is the trend in Orientalism. Besides, Gérôme and his contemporaries were known to play into the market, thus it makes sense that an image in line with the trend, fetches a high hammer price. Moreover, the stability of taste might also play a role here. An interesting positive effect however, is that of red hair. The literature in the theoretical framework does not shed light on red hair in Orientalism, but after performing the regression I found the article by Howard (2015), which identifies the associations with red hair in the context of pre-Raphaelitism. Yet, this only explains the increase in hammer price for female characters with red hair. For male characters however, I expect the scarcity of natural red hair to play a more vital part. From economic theory, we know that scarcity often results in higher prices, as an effect of the law of supply and demand.

In addition, with the regressions I also found negative significant effects. These effects were found for the cities in which the auction was held and for indirect eye contact, for both the female and the male character. Striking here is that I found significant negative effects for Paris as an auction location. As has already been mentioned, Paris is a city with a long tradition in art auctioning. When we look at the literature by Akerlof (1970), we see that reputation plays an important role in signalling quality. Finding a negative effect on hammer price for sales in Paris is thus contrary to the literature presented in section 2.2. Moreover, the negative effect on hammer price for indirect eye contact was expected. The reason for this decline can be explained through the loss of intimacy of the scene. In other words, the voyeurism (Syed, 2021) that was identified as important in Orientalism is broken down, resulting in a lower hammer price.

Furthermore, this thesis has also identified the limitations of my research. The main limitation being the relatively small size of my data set. Besides, the fact that I was the only person coding the paintings can also be seen as a limitation, because some choices that I made, might be decided on differently by someone else. However, this challenge was minimised by employing variables that were as objective as possible. Moreover, this thesis has only looked at paintings by Gérôme, making the results more challenging to generalise. Yet, Gérôme is, as explained, a schoolbook example of Orientalism and we might thus still somewhat generalise my findings. Predominantly because many of his contemporaries were influenced by his style of documentation and imagery. Still, for future research I think it would be highly interesting to make the research bigger than what I employed for my thesis. In other words, I suggest a bigger dataset that includes auction results from different Orientalist artists and several people coding the works. This approach would enhance the generalisability, reliability, and reproducibility of the research, while minimising the bias of a single researcher. Thus, creating a moree valuable research that adds even more to the already existing body of literature on Orientalism.

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Appendix A

Codebook

Control variables

Variable	Code	Measurement
Artist	Artist	Gérôme
Attribution	Attribution	Attributed
Medium	Medium	Oil painting
Topic	Topic	Oriental
Depicting people	People	Yes

Variable	Code	Type	Measuring	Literature	Illustration, literary framework
Price	Price	Discrete	"€…"	(Renneboog & Spaenjers, 2012)	
Size (rounded off)	Size	Discrete	"Value surface area"	(Renneboog & Spaenjers, 2012)	
Authenticity	Authenticity	Ordinal	0: not signed 1: signed 2: dated 3: signed and dated 9: not mentioned	(Renneboog & Spaenjers, 2012)	
Sale characteristics, month of sale	MonthSale	Discrete	"Month of sale"	(Renneboog & Spaenjers, 2012)	
Sale characteristics, auction house	AuctionSale	Discrete	"Auctionhouse name"	(Renneboog & Spaenjers, 2012)	
Sale characteristics, year of sale	YearSale	Discrete	"Year of sale"	(Renneboog & Spaenjers, 2012)	
Interior	Interior	Ordinal	1: natural landscape 2: sober 3: Some decorative elements 4: Lavish, extremely luxurious	Ali, 2015	Oriental scenes are often opulent, from clothes to rugs and jewels to daggers. This opulence is "extended

					from the surroundings to the figures represented within"
Luxury	Luxury	Ordinal	1: none 2: sober 3: simple, but accessorised 4: lavishly accessorised/ luxurious fabrics	Ali, 2015	Oriental scenes are often opulent, from clothes to rugs and jewels to daggers. This opulence is "extended from the surroundings to the figures represented within"

More complex variables

- Depiction most important female character(s)

Variable	**Code**	**Type**	**Measurement**	**Literature**	**Illustration, literary framework**
Skin female character fair	SkinF	Dummy	0: no 1: yes 8: not visible 9: no female characters	Kabbani, 2008	the women depicted in Orientalist scenes are fair-skinned (often having light hair too)... the Oriental woman appears to be highly similar to the Western woman
Hair colour female character	HairCF	Nominal	0: hair not visible 1: light 2: dark 3: red 4: grey 9: no female characters	Kabbani, 2008	the women depicted in Orientalist scenes are fair-skinned (often having light hair too)... the Oriental woman appears to be highly similar to the Western woman
Body shape	Body	Nominal	0: not visible 1: straight/rectangular 2: Pear 3: Apple 4: inverted triangle/wedge	Kabbani, 2008 Codes derived from (Dress Silhouettes for Body Types, n.d.) Amarasinghe (2021)	the Oriental woman appears to be highly similar to the Western woman

			5: hourglass 9: no female characters		
Clothing female character	ClothingFemale	Ordinal	1:demure 2:suggestive 3:partially clad 4: nude 9: no female characters	Reichert, 2002; Wirtz et al., 2018; Gaenssle (2024)	
Activity most important female character(s)	ActivityFemale	Nominal	1: physical labour 2: passive/leisure 3: religious 4: dance/music 5: intellectual 6: sensual 7: fighting 9: no female characters	Ali, 2015	There were Orientalists who painted all sorts of scenes, however those who painted more provocative, sensual scenes were more successful

- Depiction most important male character(s)

Variable	**Code**	**Type**	**Measurement**	**Literature**	**Illustration, literary framework**
Skin male character fair	SkinMale	Dummy	0:no 1:yes 8: not visible 9: no male characters	Kabbani, 2008 Codes derived from	men in the scenes, on the other hand, have dark skin (as opposed to the women).
Hair colour male character	HairCM	Nominal	0: hair not visible 1: light 2: dark 3: red 4: grey 9: no male characters		
Facial hair	FacialHair	Dummy	0: no 1: yes 8: cant see 9: no male characters		
Clothing male character	ClothingMale	Ordinal	1:demure 2:suggestive 3:partially clad 4: nude 9: no male characters	Reichert, 2002; Wirtz et al., 2018; Gaenssle (2024)	

Activity most important male character(s)	ActivityMale	Nominal	1: physical labour 2: passive/leisure 3: religious 4: dance/music 5: intellectual 6: sensual 7: fighting 9: no male characters	Ali, 2015	There were Orientalists who painted all sorts of scenes, however those who painted more provocative, sensual scenes were more successful

- Intimacy, based on most important female character(s)

Variable	**Code**	**Type**	**Measurement**	**Literature**	**Illustration, literary framework**
Eye contact	EyeContactI	Ordinal	0: no eye contact 1: indirect 2: direct 1: direct 2: indirect 3: no eye contact 9: no female characters	Syed, 2021	In Orientalism, we find a strong relationship to the European tradition of nude imagery: voyeurism The light-skinned odalisques provocatively look at the viewer, appearing to be waiting for the spectator to join them. “The nude woman looked either directly at the spectator suggesting awareness of being watched, or then, at herself in a mirror, implying surveying herself” (Syed, p10)
Hairdo	Hairdo	Ordinal	0: hair covered 1: hair updo 2: hair semi-updo 3: hair loose 9: no female characters		
Visibility face	Veil	Ordinal	1: face veiled		

			completely 2: face semi-veiled 3: face unveiled 9: no female characters		
Percentage faces unveiled	FaceVisible	Discrete	"Percentage of females in picture whose face is visible" 9: no female characters		

- Hostility, based on most important male character(s)
    - MacKenzie, 1995: feelings of fear, the sublime
    - Kabbani, 2008: The men in the scenes…seem to be an obstacle that prevents the spectator from joining the seductive harem woman

Variable	**Code**	**Type**	**Measurement**	**Literature**
Guard in picture	Guard	Ordinal	0: no guard 1: one guard 2: multiple guards	
Eye contact of most important character male	EyeContactH	Ordinal	0: no eye contact 1: indirect 2: direct 9: no male characters	
Weapons in picture	Weapon	Dummy	0: no 1: yes	

Appendix B

Variance Inflation Factor (VIF)

	VIF	1/VIF
size	29.021	.034
monthsale numeric	28.544	.035
yearsale	15.096	.066
5.auctionhouse1 nu~c	311.748	.003
7.auctionhouse1 nu~c	2669.873	0
14.auctionhouse1 n~c	2759.981	0
16.auctionhouse1 n~c	454.815	.002
8.auctionhouse2 nu~c	9.794	.102
9.auctionhouse2 nu~c	24.741	.04
2.interior	44.133	.023
3.interior	15.699	.064
2.luxury	215.926	.005
3.luxury	67.749	.015
4.luxury	422.334	.002
1.skinff	348.946	.003
8.skinff	42.101	.024
1.haircf	56.83	.018
2.haircf	197.938	.005
3.haircf	48.91	.02
2.body	410.464	.002
5.body	43.728	.023
2.activityfemale	259.039	.004
2.clothingfemale	117.408	.009
3.clothingfemale	42.739	.023
4.clothingfemale	153.63	.007
1.skinfm	251.586	.004
9.skinfm	110.62	.009
2.haircm	178.485	.006
1.eyecontacti	32.398	.031
2.eyecontacti	217.004	.005
1.hairdo	98.199	.01
3.hairdo	144.002	.007
3.veil	233.948	.004
facevisible percen~e	39.986	.025
1.guard	24.026	.042
Mean VIF	289.184	.

Appendix C

Chi square tests and tabulations

Tabulation of authenticity luxury

Authenticity	Luxury				
	none	sober	simple, but accessorised	lavishly accessorised, luxurious fabrics	Total
not signed	0	2	0	0	2
signed	51	44	31	11	137
signed and dated	4	5	11	0	20
9	0	1	0	0	1
Total	55	52	42	11	160

Pearson chi2(9) = 16.7323 Pr = 0.053

Tabulation of authenticity haircf

Authenticity	HairColourFemale					
	hair not visible	blonde	dark	red	no characters with this gender	Total
not signed	0	0	0	0	2	2
signed	23	3	37	2	72	137
signed and dated	0	0	0	0	20	20
9	0	0	0	0	1	1
Total	23	3	37	2	95	160

Pearson chi2(12) = 18.3788 Pr = 0.105

Tabulation of authenticity clothingfemale

Authenticity	ClothingFemale					
	demure	suggestive	partially clad	nude	no characters with this gender	Total
not signed	0	0	0	0	2	2
signed	26	2	9	28	72	137
signed and dated	0	0	0	0	20	20
9	0	0	0	0	1	1
Total	26	2	9	28	95	160

Pearson chi2(12) = 18.3788 Pr = 0.105

Tabulation of authenticity haircm

Authenticity	HairColourMale						
	hair not visible	blonde	dark	red	grey	no characters with this gender	Total
not signed	1	0	0	0	1	0	2
signed	24	1	50	1	6	55	137
signed and dated	6	0	11	0	3	0	20
9	0	0	1	0	0	0	1
Total	31	1	62	1	10	55	160

Pearson chi2(15) = 24.8303 Pr = 0.052

Tabulation of authenticity hairdo

Authenticity	Hairdo					
	hair covered	hair updo	hair semi-updo	hair loose	no characters with this gender	Total
not signed	0	0	0	0	2	2
signed	23	29	4	9	72	137
signed and dated	0	0	0	0	20	20
9	0	0	0	0	1	1
Total	23	29	4	9	95	160

Pearson chi2(12) = 18.3788 Pr = 0.105

Tabulation of monthsale_numeric skinff

MonthSale	SkinFairFemale				
	no	yes	cannot see	no characters with this gender	Total
1	0	2	0	1	3
2	0	0	0	1	1
3	1	2	0	4	7
4	0	0	0	23	23
5	1	6	2	6	15
6	3	7	1	14	25
7	2	5	1	3	11
9	0	0	0	1	1
10	5	10	0	13	28
11	2	5	1	20	28
12	1	8	0	9	18
Total	15	45	5	95	160

Pearson chi2(30) = 41.2748 Pr = 0.082

Tabulation of monthsale_numeric clothingmale

MonthSale	ClothingMale					
	demure	suggestive	partially clad	nude	no characters with this gender	Total
1	1	1	0	0	1	3
2	1	0	0	0	0	1
3	3	2	0	0	2	7
4	18	4	1	0	0	23
5	5	1	0	1	8	15
6	10	5	1	0	9	25
7	2	2	0	0	7	11
9	1	0	0	0	0	1
10	10	5	0	0	13	28
11	17	2	1	2	6	28
12	5	2	2	0	9	18

Total	73	24	5	3	55	160

Pearson chi2(40) = 48.0278 Pr = 0.180

Tabulation of monthsale_numeric guard

MonthSale	Guard		
	no	yes	Total
1	3	0	3
2	1	0	1
3	5	2	7
4	15	8	23
5	13	2	15
6	20	5	25
7	10	1	11
9	1	0	1
10	22	6	28
11	21	7	28
12	16	2	18
Total	127	33	160

Pearson chi2(10) = 7.1058 Pr = 0.715

Tabulation of monthsale_numeric eyecontacth

MonthSale	EyeContactH				
	no eye contact	indirect eye contact	direct eye contact	no characters with this gender	Total
1	1	0	1	1	3
2	1	0	0	0	1
3	5	0	1	1	7
4	20	2	1	0	23
5	8	0	1	6	15
6	14	2	2	7	25
7	3	0	1	7	11
9	1	0	0	0	1
10	12	0	3	13	28
11	17	0	5	6	28
12	8	0	2	8	18
Total	90	4	17	49	160

Pearson chi2(30) = 38.8161 Pr = 0.130

Tabulation of monthsale_numeric weapons

MonthSale	Weapons		
	no	yes	Total
1	1	2	3
2	0	1	1
3	3	4	7

4	10	13	23
5	10	5	15
6	17	8	25
7	7	4	11
9	0	1	1
10	16	12	28
11	16	12	28
12	13	5	18
Total	93	67	160

Pearson chi2(10) = 9.3116 Pr = 0.503

Tabulation of auctionhouse1_numeric activityfemale

auctionhouse1_numeric	ActivityFemale			
	physical labour	passive/leisure	no characters with this gender	Total
Art Moderne	0	0	1	1
Artcurial	0	0	2	2
Artcurial (S.V.V.)	0	0	1	1
Artprecium	1	0	0	1
Bonhams	0	3	3	6
Boureau (S.V.V.)	0	0	1	1
Christies	4	16	24	44
Claude Aguttes	0	0	1	1
Dobiaschofsky	0	1	0	1
Donny Malone Auctions	0	0	1	1
Dorotheum	1	1	0	2
Ketterer Kunst	0	0	1	1
Skinner	0	0	1	1
Sothebys	4	31	56	91
Tajan	0	2	3	5
Total	10	54	95	159

Pearson chi2(30) = 34.2842 Pr = 0.270

Tabulation of auctionhouse1_numeric facialhair

auctionhouse1_numeric	FacialHair				
	no	yes	cannot see	no characters with this gender	Total
Art Moderne	0	1	0	0	1
Artcurial	0	0	2	0	2
Artcurial (S.V.V.)	1	0	0	0	1
Artprecium	0	1	0	0	1
Bonhams	0	3	0	3	6
Boureau (S.V.V.)	0	1	0	0	1
Christies	5	19	3	17	44
Claude Aguttes	0	0	1	0	1
Dobiaschofsky	0	0	0	1	1

Donny Malone Auctions	0	1	0	0	1
Dorotheum	0	0	0	2	2
Ketterer Kunst	0	1	0	0	1
Skinner	0	1	0	0	1
Sothebys	16	37	9	29	91
Tajan	0	3	0	2	5
Total	22	68	15	54	159

Pearson chi2(45) = 57.2960 Pr = 0.103

Tabulation of auctionhouse1_numeric eyecontacti

auctionhouse1_numeric	EyeContactIntimacy				
	no eye contact	indirect eye contact	direct eye contact	no characters with this gender	Total
Art Moderne	0	0	0	1	1
Artcurial	0	0	0	2	2
Artcurial (S.V.V.)	0	0	0	1	1
Artprecium	1	0	0	0	1
Bonhams	0	0	3	3	6
Boureau (S.V.V.)	0	0	0	1	1
Christies	18	0	2	24	44
Claude Aguttes	0	0	0	1	1
Dobiaschofsky	1	0	0	0	1
Donny Malone Auctions	0	0	0	1	1
Dorotheum	2	0	0	0	2
Ketterer Kunst	0	0	0	1	1
Skinner	0	0	0	1	1
Sothebys	25	1	9	56	91
Tajan	2	0	0	3	5
Total	49	1	14	95	159

Pearson chi2(45) = 34.1283 Pr = 0.881

Tabulation of auctionhouse1_numeric veil

auctionhouse1_numeric	Veil				
	face veiled completely	face semi-veiled	face completely unveiled	no characters with this gender	Total
Art Moderne	0	0	0	1	1
Artcurial	0	0	0	2	2
Artcurial (S.V.V.)	0	0	0	1	1
Artprecium	0	1	0	0	1
Bonhams	0	0	3	3	6
Boureau (S.V.V.)	0	0	0	1	1
Christies	2	7	11	24	44
Claude Aguttes	0	0	0	1	1
Dobiaschofsky	0	0	1	0	1

Donny Malone Auctions	0	0	0	1	1
Dorotheum	0	0	2	0	2
Ketterer Kunst	0	0	0	1	1
Skinner	0	0	0	1	1
Sothebys	3	6	26	56	91
Tajan	0	0	2	3	5
Total	5	14	45	95	159

Pearson chi2(45) = 31.6666 Pr = 0.934

Tabulation of auctionhouse2_numeric interior

auctionhouse2_numeric	Interior				
	natural landscape	sober	some decorative elements	lavish, extremely luxurious	Total
Bern	0	1	0	0	1
Boston	0	1	0	0	1
Coutances	0	0	0	1	1
Glasco	0	1	0	0	1
London	14	52	16	6	88
Munich	0	1	0	0	1
Neuilly-sur-Seine	1	0	0	0	1
New York	11	24	5	4	44
Paris	5	12	2	0	19
Sao Paolo	0	0	0	1	1
Vienna	0	2	0	0	2
Total	31	94	23	12	160

Pearson chi2(30) = 37.9628 Pr = 0.151

Tabulation of auctionhouse2_numeric activitymale

auctionhouse2_numeric	ActivityMale						
	physical labour	passive/leisure	religious	dance/music	fighting	no characters with this gender	Total
Bern	0	0	0	0	0	1	1
Boston	0	0	1	0	0	0	1
Coutances	0	0	1	0	0	0	1
Glasco	0	1	0	0	0	0	1
London	6	31	12	2	6	31	88
Munich	0	1	0	0	0	0	1
Neuilly-sur-Seine	1	0	0	0	0	0	1
New York	6	15	9	0	0	14	44
Paris	5	3	2	0	2	7	19
Sao Paolo	0	0	0	0	0	1	1

Vienna	0	0	0	0	0	2	2
Total	18	51	25	2	8	56	160

Pearson chi2(50) = 44.7137 Pr = 0.685

Tabulation of facevisible_percentage skinfm

facevisible_percentage	SkinFairMale			
	no	yes	no characters with this gender	Total
0	2	0	10	12
50	0	0	2	2
71	0	0	3	3
86	0	0	4	4
88	0	0	4	4
100	5	3	32	40
Total	7	3	55	65

Pearson chi2(10) = 4.2405 Pr = 0.936

Appendix D

authenticity

Linear regression authenticity-luxury

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Authenticity : bas~d	0	.	.	.	.	.	
signed	389740.94	60713.56	6.42	0	269286.97	510194.91	***
signed and dated	143276.35	56638.991	2.53	.013	30906.203	255646.49	**
9	-4723	.	.	.	.	.	
Luxury : base none	0	.	.	.	.	.	
sober	169999.67	68757.464	2.47	.015	33586.819	306412.52	**
simple, but access~d	167013.59	80185.737	2.08	.04	7927.373	326099.81	**
lavishly accessori~s	168162.11	75096.392	2.24	.027	19173.002	317151.21	**
Constant	-151276.67	68757.464	-2.20	.03	-287689.52	-14863.819	**
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	149	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	2995.721	Bayesian crit. (BIC)	3009.085				
*** p<.01, ** p<.05, * p<.1							

Linear regression authenticity, haircf

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Authenticity : bas~d	0	.	.	.	.	.	
signed	375766	51986.867	7.23	0	272612.78	478919.22	***
signed and dated	117497.64	26963.286	4.36	0	63996.634	170998.65	***
9	-4723	.	.	.	.	.	
HairColourFemale :~t	0	.	.	.	.	.	
blonde	132679.17	72834.311	1.82	.072	-11839.907	277198.24	*
dark	256930.71	69214.657	3.71	0	119593.81	394267.6	***
red	274682.83	63512.624	4.32	0	148660.01	400705.66	***
no characters with~r	277399.83	65925.04	4.21	0	146590.25	408209.41	***
Constant	-258676.83	65925.04	-3.92	0	-389486.41	-127867.25	***
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	165	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	2995.628	Bayesian crit. (BIC)	3011.665				
*** p<.01, ** p<.05, * p<.1							

Linear regression authenticity, clothingfemale

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Authenticity : bas~d	0	.	.	.	.	.	
signed	375766	51986.867	7.23	0	272612.78	478919.22	***
signed and dated	117497.64	26963.286	4.36	0	63996.634	170998.65	***
9	-4723	.	.	.	.	.	
ClothingFemale : b~e	0	.	.	.	.	.	
suggestive	58960.571	189497.87	0.31	.756	-317044.31	434965.46	
partially clad	204128.57	175307.08	1.16	.247	-143718.71	551975.85	
nude	83366.643	84959.93	0.98	.329	-85212.291	251945.58	
no characters with~r	169385.07	86866.918	1.95	.054	-2977.74	341747.88	*
Constant	-150662.07	86866.918	-1.73	.086	-323024.88	21700.74	*
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	123	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	3000.931	Bayesian crit. (BIC)	3016.968				
*** p<.01, ** p<.05, * p<.1							

Linear regression authenticity, haircm

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Authenticity : bas~d	0	.	.	.	.	.	
signed	350647.53	78927.755	4.44	0	194037.74	507257.32	***
signed and dated	101680.88	57906.337	1.76	.082	-13217.858	216579.61	*
9	-29895.564	88021.416	-0.34	.735	-204549.15	144758.02	
HairColourMale : b~v	0	.	.	.	.	.	
dark	-20054.215	90641.384	-0.22	.825	-199906.39	159797.96	
red	283841.69	79926.97	3.55	.001	125249.24	442434.14	***
grey	-90453.559	113819.31	-0.79	.429	-316295.76	135388.65	
no characters with~r	-143577.39	89006.668	-1.61	.11	-320185.93	33031.15	
Constant	63949.779	65909.669	0.97	.334	-66829.304	194728.86	
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	134	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	2999.534	Bayesian crit. (BIC)	3015.571				

*** p<.01, ** p<.05, * p<.1							

Linear regression authenticity, hairdo

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Authenticity : bas~d	0	.	.	.	.	.	
signed	375766	51986.867	7.23	0	272612.78	478919.22	***
signed and dated	117497.64	26963.286	4.36	0	63996.634	170998.65	***
9	-4723	.022	-215428.24	0	-4723.044	-4722.956	***
Hairdo : base hair~d	0	.	.	.	.	.	
hair updo	166122.5	96564.992	1.72	.088	-25483.394	357728.39	*
hair semi-updo	127124.5	81341.033	1.56	.121	-34273.757	288522.76	
hair loose	17219.4	100931.92	0.17	.865	-183051.43	217490.23	
no characters with~r	201334	95610.25	2.11	.038	11622.522	391045.48	**
Constant	-182611	95610.25	-1.91	.059	-372322.48	7100.478	*
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	134	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	3001.560	Bayesian crit. (BIC)	3020.270				
*** p<.01, ** p<.05, * p<.1							

monthsale_numeric

Linear regression monthsale_numeric, skinff

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
MonthSale : base 01	0	.	.	.	.	.	
2	-385964.85	288896.78	-1.34	.185	-959656.59	187726.89	
3	-291826.56	282695.38	-1.03	.305	-853203.56	269550.44	
4	29192.841	304537.25	0.10	.924	-575557.79	633943.47	
5	-151567.84	280462.76	-0.54	.59	-708511.29	405375.6	
6	-29969.596	292329.05	-0.10	.919	-610477.15	550537.95	
7	-230320.21	287266.83	-0.80	.425	-800775.2	340134.78	
9	-101857.85	288896.78	-0.35	.725	-675549.59	471833.89	
10	-48885.35	284837.2	-0.17	.864	-614515.57	516744.87	
11	-92300.274	297156.35	-0.31	.757	-682393.9	497793.35	
12	-324333.86	277228.64	-1.17	.245	-874855	226187.27	
SkinFairFemale : b~o	0	.	.	.	.	.	
yes	188141.41	77574.506	2.43	.017	34093.819	342189.01	**
cannot see	-52777.82	77305.684	-0.68	.496	-206291.59	100735.95	

no characters with~r	136239.18	82415.893	1.65	.102	-27422.446	299900.81	
Constant	263725.66	287324.53	0.92	.361	-306843.91	834295.23	
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	144	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	3008.287	Bayesian crit. (BIC)	3037.688				
*** p<.01, ** p<.05, * p<.1							

Linear regression monthsale_numeric, clothingmale

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
MonthSale : base 01	0	.	.	.	.	.	
2	-398652.08	243059.17	-1.64	.104	-881319.41	84015.253	
3	-321876.32	243249.69	-1.32	.189	-804922	161169.36	
4	-7049.525	259597.15	-0.03	.978	-522558.02	508458.97	
5	-179479.98	244633.58	-0.73	.465	-665273.8	306313.83	
6	-49834.699	256332.62	-0.19	.846	-558860.47	459191.08	
7	-234991.44	257260.24	-0.91	.363	-745859.3	275876.41	
9	-114545.08	243059.17	-0.47	.639	-597212.41	368122.25	
10	-81178.024	248077.17	-0.33	.744	-573810.13	411454.08	
11	-118274.65	258724.57	-0.46	.649	-632050.37	395501.08	
12	-308330.77	240384.64	-1.28	.203	-785687.03	169025.5	
ClothingMale : bas~e	0	.	.	.	.	.	
suggestive	59745.066	102946.7	0.58	.563	-144686.68	264176.82	
partially clad	257392.01	312689.46	0.82	.413	-363547.28	878331.29	
no characters with~r	5997.698	73908.058	0.08	.935	-140769.06	152764.45	
Constant	412652.08	243059.17	1.70	.093	-70015.253	895319.41	*
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	136	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	3011.283	Bayesian crit. (BIC)	3043.357				
*** p<.01, ** p<.05, * p<.1							

Linear regression monthsale_numeric, guard

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
MonthSale : base 01	0	.	.	.	.	.	

2	-420566.33	256832.29	-1.64	.105	-930442.9	89310.234	
3	-315109.41	259883.68	-1.21	.228	-831043.76	200824.93	
4	10270.496	275419.22	0.04	.97	-536505.79	557046.79	
5	-183023.74	261695.82	-0.70	.486	-702555.63	336508.15	
6	-51868.083	272216.44	-0.19	.849	-592286.04	488549.87	
7	-238970.58	269534.83	-0.89	.378	-774064.87	296123.7	
9	-136459.33	256832.29	-0.53	.596	-646335.9	373417.23	
10	-70704.957	264138.56	-0.27	.79	-595086.31	453676.39	
11	-104314.37	269221.36	-0.39	.699	-638786.34	430157.59	
12	-313953.15	259284.48	-1.21	.229	-828697.92	200791.63	
Guard : base no	0	.	.	.	.	.	
yes	-50173.254	61137.9	-0.82	.414	-171547.33	71200.823	
Constant	434566.33	256832.29	1.69	.094	-75310.234	944442.9	*
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	125	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	3008.735	Bayesian crit. (BIC)	3035.463				
*** *p<.01, ** p<.05, * p<.1*							

Linear regression monthsale_numeric, eyecontacth

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
MonthSale : base 01	0	.	.	.	.	.	
2	-441358.33	262648.89	-1.68	.096	-962926.97	80210.305	*
3	-346495.77	263601.71	-1.31	.192	-869956.52	176964.98	
4	-6681.047	276681.09	-0.02	.981	-556114.86	542752.76	
5	-193892.92	258834.07	-0.75	.456	-707886.08	320100.24	
6	-52529.762	270413.45	-0.19	.846	-589517.29	484457.77	
7	-241372.39	270151.31	-0.89	.374	-777839.35	295094.56	
9	-157251.33	262648.89	-0.60	.551	-678819.97	364317.3	
10	-87997.437	259092.56	-0.34	.735	-602503.92	426509.04	
11	-127225.41	268372.24	-0.47	.637	-660159.48	405708.66	
12	-317901.82	251137.61	-1.27	.209	-816611.34	180807.71	
EyeContactH : base~c	0	.	.	.	.	.	
indirect eye contact	-286717.93	101029.14	-2.84	.006	-487341.78	-86094.07	***
direct eye contact	-25595.615	90699.128	-0.28	.778	-205706.11	154514.88	
no characters with~r	-36780.378	72200.269	-0.51	.612	-180155.8	106595.05	
Constant	455358.33	262648.89	1.73	.086	-66210.305	976926.97	*
Mean dependent var	310307.402	SD dependent var	302042.004				

R-squared	137	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	3011.147	Bayesian crit. (BIC)	3043.221				
*** p<.01, ** p<.05, * p<.1							

Linear regression monthsale_numeric, weapons

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
MonthSale : base 01	0	.	.	.	.	.	
2	-405218.74	265785.43	-1.52	.131	-932869.53	122432.06	
3	-339507.63	264988.12	-1.28	.203	-865575.56	186560.29	
4	-13082.444	277521.75	-0.05	.963	-564032.78	537867.89	
5	-206098.51	267460.88	-0.77	.443	-737075.49	324878.46	
6	-78368.845	278600.4	-0.28	.779	-631460.57	474722.88	
7	-246644.38	272322.93	-0.91	.367	-787273.74	293984.98	
9	-121111.74	265785.43	-0.46	.65	-648762.53	406539.06	
10	-91128.592	268839.53	-0.34	.735	-624842.53	442585.34	
11	-123367.25	274389.33	-0.45	.654	-668098.94	421364.44	
12	-339925.6	263865.55	-1.29	.201	-863764.96	183913.74	
Weapons : base no	0	.	.	.	.	.	
yes	-46042.79	64330.342	-0.72	.476	-173754.67	81669.086	
Constant	465261.53	262847.65	1.77	.08	-56557.036	987080.09	*
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	125	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	3008.655	Bayesian crit. (BIC)	3035.383				
*** p<.01, ** p<.05, * p<.1							

Auctionhouse1_numeric

Linear regression auctionhouse1_numeric, activityfemale

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
: base Art Moderne	0	.	.	.	.	.	
Artprecium	207292.05	88824.131	2.33	.022	30879.656	383704.44	**
Bonhams	93708.75	30303.48	3.09	.003	33523.423	153894.08	***
Boureau (S.V.V.)	3200	.	.	.	.	.	
Christies	371361.56	78298.794	4.74	0	215853.39	526869.72	***
Claude Aguttes	90700	.	.	.	.	.	
Donny Malone Aucti~s	-1780	.	.	.	.	.	

Ketterer Kunst	10200	.	.	.	.	.	
Skinner	287307	.	.	.	.	.	
Sothebys	324774.87	51298.325	6.33	0	222891.97	426657.77	***
Sotheybys	687639	.	.	.	.	.	
Tajan	262311.5	55439.05	4.73	0	152204.76	372418.24	***
ActivityFemale : b~l	0	.	.	.	.	.	
passive/leisure	150637.05	88436.854	1.70	.092	-25006.181	326280.27	*
no characters with~r	168092.05	88824.131	1.89	.062	-8320.344	344504.44	*
Constant	-157292.05	88824.131	-1.77	.08	-333704.44	19120.344	*
Mean dependent var	311739.585	SD dependent var	303111.630				
R-squared	122	Number of obs	106				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	2973.841	Bayesian crit. (BIC)	2989.821				
*** p<.01, ** p<.05, * p<.1							

Linear regression auctionhouse1_numeric, facialhair

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
: base Art Moderne	0	.	.	.	.	.	
Artprecium	39200	.	.	.	.	.	
Bonhams	105155.59	24040.464	4.37	0	57402.161	152909.02	***
Boureau (S.V.V.)	3200	.	.	.	.	.	
Christies	359087.91	83045.271	4.32	0	194128.68	524047.14	***
Claude Aguttes	-79014.16	146914.87	-0.54	.592	-370842.5	212814.18	
Donny Malone Aucti~s	-1780	.	.	.	.	.	
Ketterer Kunst	10200	.	.	.	.	.	
Skinner	287307	.	.	.	.	.	
Sothebys	324198.6	56580.395	5.73	0	211808.59	436588.6	***
Sotheybys	687639	.	.	.	.	.	
Tajan	285205.18	66230.673	4.31	0	153646.08	416764.28	***
FacialHair : base no	0	.	.	.	.	.	
yes	39637.342	122021.27	0.32	.746	-202742.92	282017.6	
cannot see	209351.5	175231.3	1.19	.235	-138723.95	557426.95	
no characters with~r	-23605.015	118146.93	-0.20	.842	-258289.38	211079.35	
Constant	-28837.342	122021.27	-0.24	.814	-271217.6	213542.92	
Mean dependent var	311739.585	SD dependent var	303111.630				
R-squared	145	Number of obs	106				
F-test	.	Prob > F	.				

Akaike crit. (AIC)	2973.078	Bayesian crit. (BIC)	2991.722				
*** p<.01, ** p<.05, * p<.1							

Linear regression auctionhouse1_numeric, eyecontacti

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
: base Art Moderne	0	.	.	.	.	.	
Artprecium	64360.82	71060.26	0.91	.367	-76791.656	205513.3	
Bonhams	106903.87	24633.027	4.34	0	57973.385	155834.35	***
Boureau (S.V.V.)	3200	.	.	.	.	.	
Christies	360521.33	79359.192	4.54	0	202884.04	518158.61	***
Claude Aguttes	90700	.	.	.	.	.	
Donny Malone Aucti~s	-1780	.022	-80553.60	0	-1780.044	-1779.956	***
Ketterer Kunst	10200	.	.	.	.	.	
Skinner	287307	.	.	.	.	.	
Sothebys	328580.22	51731.646	6.35	0	225821.66	431338.78	***
Sotheybys	687639	.	.	.	.	.	
Tajan	266164.41	58709.046	4.53	0	149546.1	382782.72	***
EyeContactIntimacy~e	0	.	.	.	.	.	
indirect eye contact	-269919.4	61240.364	-4.41	0	-391565.86	-148272.94	***
direct eye contact	-45074.652	83188.947	-0.54	.589	-210319.27	120169.97	
no characters with~r	25160.82	71060.26	0.35	.724	-115991.66	166313.3	
Constant	-14360.82	71060.26	-0.20	.84	-155513.3	126791.66	
Mean dependent var	311739.585	SD dependent var	303111.630				
R-squared	118	Number of obs	106				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	2976.296	Bayesian crit. (BIC)	2994.940				
*** p<.01, ** p<.05, * p<.1							

Linear regression auctionhouse1_numeric, veil

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
: base Art Moderne	0	.	.	.	.	.	
Artprecium	105893.7	117478.09	0.90	.37	-127462.1	339249.5	
Bonhams	96426.33	28599.782	3.37	.001	39616.377	153236.28	***
Boureau (S.V.V.)	3200	.	.	.	.	.	
Christies	365568.67	78386.316	4.66	0	209863.88	521273.46	***
Claude Aguttes	90700	.	.	.	.	.	
Donny Malone Aucti~s	-1780	.	.	.	.	.	
Ketterer Kunst	10200	.	.	.	.	.	

Skinner	287307	.	.	.	.	.	
Sothebys	326981.98	51551.486	6.34	0	224581.29	429382.67	***
Sotheybys	687639	.	.	.	.	.	
Tajan	267746.66	57940.506	4.62	0	152654.96	382838.36	***
Veil : base face v~e	0	.	.	.	.	.	
face semi-veiled	131608.28	107464.11	1.22	.224	-81855.971	345072.53	
face completely un~d	169976.66	56986.466	2.98	.004	56780.047	283173.27	***
no characters with~r	198301.98	51551.486	3.85	0	95901.288	300702.67	***
Constant	-187501.98	51551.486	-3.64	0	-289902.67	-85101.288	***
Mean dependent var	311739.585	SD dependent var	303111.630				
R-squared	114	Number of obs	106				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	2974.821	Bayesian crit. (BIC)	2990.802				
*** p<.01, ** p<.05, * p<.1							

auctionhouse2_numeric

Linear regression auctionhouse2_numeric, interior

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
: base Boston	0	.	.	.	.	.	
Coutances	-780027.24	128529.72	-6.07	0	-1035191	-524863.49	***
Glasco	-289087	.	.	.	.	.	
London	-22290.422	40471.963	-0.55	.583	-102637.43	58056.584	
Munich	-277107	.	.	.	.	.	
Neuilly-sur-Seine	-180383.31	92268.515	-1.95	.054	-363559.47	2792.851	*
New York	52471.486	52282.405	1.00	.318	-51322.21	156265.18	
Paris	-161958.8	45079.493	-3.59	.001	-251452.9	-72464.687	***
Sao Paolo	-635531.24	128529.72	-4.94	0	-890694.99	-380367.49	***
Interior : base na~p	0	.	.	.	.	.	
sober	16223.689	92268.515	0.18	.861	-166952.47	199399.85	
some decorative el~s	10800.255	111082.73	0.10	.923	-209726.85	231327.36	
lavish, extremely ~s	512143.93	154883.5	3.31	.001	204661.3	819626.56	***
Constant	281883.31	92268.515	3.06	.003	98707.149	465059.47	***
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	312	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	2975.012	Bayesian crit. (BIC)	2991.049				

*** p<.01, ** p<.05, * p<.1							

Linear regression auctionhouse2_numeric, activitymale

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
: base Boston	0	.	.	.	.	.	
Coutances	-284107	.	.	.	.	.	
Glasco	-327551.25	119569.85	-2.74	.007	-564993.28	-90109.226	***
London	33619.154	107177.68	0.31	.754	-179214.48	246452.79	
Munich	-315571.25	119569.85	-2.64	.01	-553013.28	-78129.226	***
Neuilly-sur-Seine	-161227.81	146315.28	-1.10	.273	-451780.96	129325.34	
New York	132708.88	118967.15	1.12	.268	-103536.29	368954.06	
Paris	-117019.91	121440.16	-0.96	.338	-358176	124136.18	
Sao Paolo	-72497.112	113534.78	-0.64	.525	-297954.69	152960.46	
ActivityMale : bas~b	0	.	.	.	.	.	
passive/leisure	73843.443	114257.27	0.65	.52	-153048.86	300735.74	
religious	35379.191	146315.28	0.24	.809	-255173.96	325932.34	
dance/music	-204594.96	101135.97	-2.02	.046	-405430.95	-3758.974	**
fighting	-68732.137	105577.27	-0.65	.517	-278387.67	140923.4	
no characters with~r	-31734.698	105535.3	-0.30	.764	-241306.9	177837.5	
Constant	262727.81	146315.28	1.80	.076	-27825.339	553280.96	*
Mean dependent var	310307.402	SD dependent var	302042.004				
R-squared	132	Number of obs	107				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	3001.778	Bayesian crit. (BIC)	3020.487				
*** p<.01, ** p<.05, * p<.1							

facevisible_percentage

Linear regression facevisible_percentage, skinfm

price	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
: base 0	0	.	.	.	.	.	
50	61451.8	34745.953	1.77	.086	-9160.472	132064.07	*
86	178441.3	36144.17	4.94	0	104987.51	251895.09	***
88	311614.13	104114.89	2.99	.005	100027.22	523201.05	***
100	127847.06	68742.701	1.86	.072	-11854.917	267549.04	*
SkinFairMale : bas~o	0	.	.	.	.	.	
yes	-243016.56	377567.76	-0.64	.524	-1010326.6	524293.45	
no characters with~r	-358799.3	351637.67	-1.02	.315	-1073413	355814.43	
Constant	500637.5	349916.81	1.43	.162	-210479.01	1211754	

Mean dependent var	290595.024	SD dependent var	249464.798				
R-squared	131	Number of obs	41				
F-test	.	Prob > F	.				
Akaike crit. (AIC)	1140.593	Bayesian crit. (BIC)	1150.875				
*** p<.01, ** p<.05, * p<.1							