## HOMO ECONOMICUS as HOMO AESTHETICUS

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The economist Friedrich Hayek noted perceptively the status of modern man as *Homo Economicus* — self-maximising, economically driven, and rational — in *The Road to Serfdom*, arguing that "under modern conditions we are for almost everything dependent on means which our fellow men provide." Medieval and Renaissance Florence was the hotbed of early capitalism, from which Hayek builds his conception of modern man, and its reputation from the time as *primus inter pares* as a city-state was consecrated with the central role it played in promoting and housing Renaissance men from Dante to da Vinci. The relationship between *Homo Economicus* and *Homo Aestheticus* has been fraught and oppositional in the history of thought since Goethe constructed a dichotomy between rational, self-maximising man and aesthetic man in *Wilhelm Meister's Apprentice*. However, this paper aims to reconcile the two using a reconstruction of the period eye in Florence and an analysis of Perugino's *Virgin and Child with Saints* [Figure 1], a commissioned altarpiece from circa 1500 AD.

It was into a defining period of early capitalism that Perugino operated his workshop, which spent a significant part of their time producing religious images, particularly featuring the *Sacra Conversazione* depicting the Madonna and saints. The

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<sup>&</sup>lt;sup>2</sup> Hayek, Friedrich, *The Reader's Digest Condensed Version of The Road to Serfdom* (London: The Institute of Economic Affairs, 2001), 55.

<sup>&</sup>lt;sup>3</sup> Romeo, Luigi, Ecce Homo!: A Lexicon of Man (Amsterdam: John Benjamins B.V., 1979), 4; 42.

style came into its own, Jacob Burckhardt notes, in the Quattrocento, where it "found its characteristic strength and potential for development," benefitting from "the secret art of perspective" which he considers an Italian achievement.<sup>4</sup> From Vasari we know that Perugino's focus on his output came from a childhood marred by poverty, "raised in misery and privation", adding that "because he [Perugino] always had the dread of poverty before his eyes, he did things to make money which he probably would not have bothered to do had he not been forced to support himself." We see in Perugino an impetus to be the rational, self-maximising individual that is *Homo Economicus* but also *Homo Aestheticus* with a constant desire to strive for beauty through his work — and a shrewd businessman and a fine painter he was. By 1500, Perugino had painted multiple altarpieces of the sacra conversazione type — and this is where we analyse the work.

### The Artist: Homo Aestheticus as Homo Economicus

Perugino's workshop is the appropriate location for such an examination, for it combined aesthetic impulses and economic signals to produce renowned works of art at a significant scale. Vasari notes in his biography of Perugino, somewhat derisively, that "Pietro was a person of very little religion ... he would have struck any evil bargain for money." Vasari did not know Perugino himself, and part of the baggage in his biographical approach is

<sup>&</sup>lt;sup>4</sup> Jacob Burckhardt, *The Altarpiece in Renaissance Italy*, trans. Peter Humfrey (Cambridge: Cambridge University Press, 1988), 90; 73.

<sup>&</sup>lt;sup>5</sup> Giorgio Vasari, *The Lives of the Artists*, trans. Julia C. Bondanella and Peter Bondanella (Oxford and New York: Oxford University Press, 1991), 266.

<sup>&</sup>lt;sup>6</sup> Vasari, *Lives*, 266.

the reputation Perugino developed for excessive commercialisation. However, even Vasari readily admits that "none of his [Perugino's] pupils ever equalled Pietro's diligence or the grace with which he used colours." Perugino was conscious of the financial approach he took toward his workshop, frequently reusing cartoons, as Vasari infamously recounts in the story of Perugino's altarpiece for the Basilica della Santissima Annunziata in Florence.<sup>8</sup> Perugino was conscious of the commercial approach he took toward his own artistic practice, and embodied both *Homo Economicus* and *Homo Aestheticus*. Perugino, Michelle O'Malley argues, engaged in recycling because of the need to "turn out a characteristic and consistent product," a conscious tactic that resulted from an astute analysis of the forces of demand and supply, and of taste. Furthermore, the workshop model was not unique to Perugino — it is a practice that was common among other painters in Renaissance Florence. O'Malley links the origins of the "innovative technique" of reusing cartoons to Andrea del Verrocchio's workshop in the 1470s — when Perugino was an apprentice at Verrocchio's practice. 10

Figure 2 shows a computer-generated sketch of the altarpiece currently under examination, with figures labelled 1–6. For each figure, I will attempt to examine Perugino's oeuvre, concentrating on works produced chronologically close to this one.

<sup>7</sup> Vasari, *Lives*, 267.

 $<sup>^{8}</sup>$  Vasari,  $\mathit{Lives},\,265.$ 

<sup>&</sup>lt;sup>9</sup> Michelle O'Malley, 'Quality, Demand, and the Pressures of Reputation: Rethinking Perugino', *The Art Bulletin* 89, no. 4 (2007): 674–93, 682.

<sup>&</sup>lt;sup>10</sup> O'Malley, 'Rethinking Perugino", 677.

Figure 1 is seen scaled to proportion from Figure D2 from the Decemviri altarpiece [Figure 3], the only formal distinction between the two being the addition of a flowing robe and some facial hair in the Hood altarpiece. Similarly, reduced to the same scale, we see the same figure reappear in the Fano Altarpiece [Figure 4] as F6; this figure also makes an appearance in a Franciscan friar's habit in a painting originally intended for S.S. Annunziata, Florence [Figure 5] made by Perugino and his workshop. The formal similarities can only be prescribed to reproduction from cartoons by Perugino and his workshop. The same methodology, applied to the Madonna figure (numbered 3) in the Hood altarpiece — the figure can be traced to a painting by Perugino's workshop [Figure 6], and to the Madonna figure in the Decemviri altarpiece. The only formal difference in this case is the positioning of the legs of the Christ child, for in the Hood altarpiece he is seated across the lap of the Madonna, whereas in the other works he is shown standing. The Christ child has the same corpulent body with a visibly gaping stomach.

Todd Barton Thurber, the former curator for European art at the Hood Museum, noted that "several figures share a number of design similarities with other examples produced by Perugino and his workshop, such as St. Francis and the unidentified saint to the right of the enthroned Virgin and Child, who bear a remarkable resemblance to Anthony of Padua and Jerome in the altarpiece for San Francesco al Prato in Perugia." Thurber is referring not only to the visual similarities through the reproduction of

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<sup>&</sup>lt;sup>11</sup> T. Barton Thurber, European Art at Dartmouth: Highlights from the Hood Museum of Art (Hanover, N.H: Hood Museum of Art, Dartmouth College, 2008), 38.

cartoons, but also to stylistic similarities across works in the oeuvre of Perugino and his workshop. 12 The development of a recognisable and characteristic style for an artist was part of his 'brand' and contributed to recognition, which, in many cases was the only way of knowing whether a work of art was truly by the master and/or his workshop — signing names was more popular in Venetian art from the Renaissance, less so in Florence. Visual standardisation was the brand. The figure labelled #6 — Saint Anthony Abbot in the Hood altarpiece — is representative of a 'type' that we see across multiple altarpieces by Perugino. His beard is seemingly indented down the middle and his face and body are always angled away from the viewer, never facing us en toto. While Barton believes that "the finished face [in the Hood altarpiece] appears more naturalistic than any of the others ... based on a life study," the type can be seen as F2 in the Fano Altarpiece and D6 in the Decemviri altarpiece as well. 13 This typological standardisation is commonly practiced by Perugino and his workshop to produce visually similar works and reinforce the construction of their brand and unique style, resulting in immediate recognition from a member of the interpretive community described in the following section.

The question then follows: why did Perugino do this? The answers to the questions raised by Perugino and his workshop's mode of working are essential because they show how economic and aesthetic considerations play into each other. While questions of taste are not decided primarily on economic concerns, and vice versa, they interact mutually —

<sup>&</sup>lt;sup>12</sup> Barton, European Art, 37.

<sup>&</sup>lt;sup>13</sup> Barton, European Art, 38.

perhaps even symbiotically. Von Teuffell's discussion of the contract for Perugino's Madonna of Perugino's Vallombrosa altarpiece posits that Perugino rarely made compositional drawings; <sup>14</sup> a consensus shared by other Perugino scholars such as O'Malley, who, in multiple discussions of Perugino and his workshop's production of altarpieces, such as the Madonna of Loretto altarpiece, notes that "the reuse of designs reduced the time and labour spent on planning a work ... the reliable predictability of his [Perugino's] product may explain why Perugino rarely produced contract drawings for new works even though it was a common practice" for his contemporaries in Quattrocento and Cinquecento Florence. <sup>15</sup> This, accompanied by iconographic and visual standardisation to create art that was characteristically Perugino's, within the tradition of notarised contracts that changed little in Florence during the Quattrocento and Cinquecento, will assist in the recreation of the original moment of commissioning. <sup>16</sup>

How do we figure out how much a painting of this 'type' would cost when it was commissioned? For this section [see Appendix 1], I used the *imagemagick* module run in the command line function in OS X's *terminal* to find the 'similarity' between the Hood altarpiece and various other paintings by Perugino and his workshop. The goal of this exercise was to find the probable cost of the Hood altarpiece. With the assistance of a

<sup>&</sup>lt;sup>14</sup> Christa Gardner von Teuffel, 'The Contract for Perugino's "Assumption of the Virgin" at Vallombrosa', *The Burlington Magazine* 137, no. 1106 (1995): 307–12, 310.

<sup>&</sup>lt;sup>15</sup> Carol Plazzotta et al., 'The Madonna Di Loreto: An Altarpiece by Perugino for Santa Maria Dei Servi, Perugia', National Gallery Technical Bulletin 27 (2006): 72–95, 78.

<sup>&</sup>lt;sup>16</sup> For a discussion of contracts, see Michelle O'Malley, *The Business of Art: Contracts and the Commissioning Process in Renaissance Italy* (New Haven: Yale University Press, 2005, 1–9.

statistical model, controlling for the number of figures and in comparison with other works done by Perugino in the same sacra conversazione style, after removal of the cost of raw materials — wood and paint — the model predicted that the 3.01 m² altarpiece would have been commissioned for 83 florins. Compare this to the price of the Decemviri altarpiece, which was executed only five years before the Hood altarpiece, and is larger at 3.96 m² and slightly more intricate in its decorations, cost 100 florins after cost of materials. This method of accounting for the pricing of altarpieces does not take into account the cost of raw materials because of the significant increase it would cause in the required dataset and the reduction in confidence intervals which would make the answer less statistically significant. Figures were counted based on size and complexity — but to the whole the relation is positive. As we move closer in similarity to the Hood altarpiece, the price seems to fall, which fits in with the above postulations of cartoon reuse and workshop efficiency.

The Patron and the Viewer: *Homo Economicus* as *Homo Aestheticus*The alterpiece I examine has holes in its provenance, and so I turn to Michael Baxandall's concept of the 'period eye', which he defines as the "notion of a Quattrocento cognitive style." Baxandall argues that the "public's visual capacity must be his medium", and in this case, the public is defined by "an invitation to the mercantile eye" which has access

<sup>&</sup>lt;sup>17</sup> O'Malley, 'Rethinking Perugino', 691.

<sup>&</sup>lt;sup>18</sup> Michael Baxandall, Painting and Experience in Fifteenth-Century Italy: A Primer in the Social History of Pictorial Style (Oxford and New York: Oxford University Press, 1988), 38.

Aestheticus.<sup>19</sup> While Baxandall understands the absurdity of thinking that "commercial people went around looking for harmonic series in pictures," he looked at this as a "specialisation [which] constituted a disposition to address visual experience, in or out of pictures, in special ways." Those rational, mathematical responses to art, even within a religious setting, can be narrowly but empirically reconstructed from our understanding of 1500 Florence. This also addresses the basis of a shared aesthetic language between painters, patrons, and viewers of a certain commercial and mercantilist class that form what the literary theorist Stanley Fish terms "interpretive communities." Speaking in general terms, it is possible to reconstruct with a degree of accuracy and precision what an initial encounter with this work would have been like.

The Florentine interpretive community is easily defined because of the size and scope of the archives, as well as the prevalence of economic activities that called up specialised mathematical knowledge. By the start of the Trecento, Florence, Goldthwaite posits, had "surpassed the others [Tuscan towns] to become an international capital in all three sectors—commerce, banking, and industry—and one of the four or five largest cities

<sup>&</sup>lt;sup>19</sup> Baxandall, Painting & Experience, 40; 101.

<sup>&</sup>lt;sup>20</sup> Baxandall, Painting & Experience, 101.

<sup>&</sup>lt;sup>21</sup> Fish argues, "I have made the text disappear, but unfortunately the problems do not disappear with it." This understanding of interpretive communities signals the failures of discourse without both empirical backing and empirical evidence; this is why I ground my examination in a painting from the era that embodies these qualities. Stanley Fish, *Is There a Text in This Class?*: The Authority of Interpretive Communities (Cambridge, MA: Harvard University Press, 1980), 173.

in all of Europe."<sup>22</sup> Florentine entrepreneurial mercantilism began with wool in the thirteenth century, but by 1350 the network of bankers and merchants was so expansive that there were more Florentines involved than the all other Italians put together; the Florentine florin was also the money of account for many monarchies and the papacy, much like the US Dollar's status as a reserve and accounting currency today.<sup>23</sup> Florence was an international economic powerhouse, and the mercantile and commercial classes were marked by their social mobility.

Goldthwaite notes that "it is impossible to generalize about the social origins of company clerks...some came from prominent business families, while others were sons of artisans."<sup>24</sup> While generalisations about the social origins of bankers and merchants are not fruitful, the process by which young boys were funnelled into the system is uniquely uniform and singular: boys started at an elementary school where they learned how to read and write, and then progressed to an abacus school that "taught them above all how to deal in different moneys and to make the four basic arithmetic calculations, using what for them was the standard mensural system based on vigesimals and duodecimals," and from which they graduated between 11–13 years of age and proceeded to join a firm as a

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<sup>&</sup>lt;sup>22</sup> Richard A. Goldthwaite, *The Economy of Renaissance Florence* (Baltimore: Johns Hopkins University Press, 2009), 14–15.

<sup>&</sup>lt;sup>23</sup> Goldthwaite notes that during the Avignon Papacy "100 Florentines have been documented active there as compared with 50 from Lucca, 9 from Siena, 6 from Pistoia, 5 from Pisa, and 2 from Arezzo." Goldthwaite, *Economy of Renaissance Florence*, 32: 51.

<sup>&</sup>lt;sup>24</sup> Goldthwaite, Economy of Renaissance Florence, 87.

staff clerk — much like an analyst today at a bank.<sup>25</sup> This process produced, in the words of Benedetto Dei, "a good writer and a good arithmetician [abachisto] and a good accountant" — Homo Economicus and Homo Aestheticus were carefully inculcated.<sup>26</sup> This process remained largely unchanged for much of Florence's economic heyday, which covers the entire Quattrocento and lasts well into the Cinquecento. This group was, as noted earlier, substantial in size and in spread, but what made this commercial class unique is the effects it had on Florentine government. Goldthwaite notes, "their involvement in communal government slowly conditioned them to a moral sense of citizenship, and operating in markets with international horizons, they developed an economic sense of investment as the calculated employment of money for the purpose of making a profit."<sup>27</sup> This was the spirit of early Florentine capitalism — and this spirit, as we shall see, was pervasive and did not leave any part of society untouched, not even art.

Social mobility in the ranks of affluent bankers and businessmen — patrons and viewers alike — was extremely high. Goldthwaite further adds:

"In the course of their movement from one firm to another learning the trade, these youths widened the circle of their personal acquaintances within the business community, which must have heightened the sense of professional camaraderie they felt once they were businessmen on their own."<sup>28</sup>

The class was expansive and pervasive, controlling much of Florentine business activity and social life. This section examines how *Homo Economicus* affected conceptions of taste and viewership, but also significantly intertwined within socioeconomic systems. The

 $<sup>^{25}</sup>$  Goldthwaite,  $Economy\ of\ Renaissance\ Florence,\ 83.$ 

<sup>&</sup>lt;sup>26</sup> Dei quoted in Goldthwaite, Economy of Renaissance Florence, 85.

<sup>&</sup>lt;sup>27</sup> Goldthwaite, Economy of Renaissance Florence, 8.

<sup>&</sup>lt;sup>28</sup> Goldthwaite, Economy of Renaissance Florence, 86.

commercial and the intellectual in Quattrocento and Cinquecento Florence were not mutually exclusive categories. A 1494 treatise on accounting by Fra Luca Pacioli — a Florentine Franciscan friar and mathematician — makes clear the links between humanistic intellectual pursuits and religion, in furtherance of Baxandall and Goldthwaite's recognition of the "notion of a Quattrocento cognitive style."<sup>29</sup> There was a singular system for ensuring proficiency in the world of business through the scuola d'abaco, and Pacioli's popular treatise, Summa de Arithmetica, Geometria, Proportioni et Proportionalita, one of the oldest recorded 'bestsellers', provides crucial primary evidence for the basis of this contention. Written in Italian instead of Latin, it was aimed not toward university students but rather to the commercial class that considered the treatise to be a handy guidebook toward all forms of essential knowledge — "generic (i.e, nontrade specific) information they [merchants] needed to run a business."<sup>30</sup> Pacioli's chapter on 'Important Documents' from the double-entry accounting section of his treatise includes categorical references to Dante's *Inferno*, Horace's *Satires*, and to the Bible all in one page!<sup>31</sup> Pacioli himself is known "for his association with two major artists: Piero della Francesca (whose mathematical treatises Vasari says Pacioli published under his own

<sup>&</sup>lt;sup>29</sup> Baxandall, Painting & Experience, 38.

<sup>&</sup>lt;sup>30</sup> Alan Sangster, Gregory N. Stoner, and Patricia McCarthy, 'The Market for Luca Pacioli's Summa Arithmetica', Accounting Historians Journal 35, no. 1 (1 June 2008): 111–34, 131.

<sup>&</sup>lt;sup>31</sup> Luca Pacioli, Particularis de Computis et Scripturis, trans. Jeremy Cripps (Seattle: Pacioli Society, 1994), 9.

name) and Leonardo da Vinci (who made drawings of polyhedra to illustrate one of Pacioli's works."32

The period eye's refinement can be broadly construed as the application of basic, common knowledge to the work of art in the process of viewership. For the first step in the recreation of the spatial representations of Perugino's Virgin and Child with Saints, I produced a bird's eve view plan using scaled measurements [Figure 7]. Geometrically, the space can be abstracted to a series of cubes and arc segments. The space is represented by a full arch span flanked by a 1/6<sup>th</sup> arch on either side toward the front; this adds to a total of 4/3, which is the first harmonic mean for Plato and the fourth for the Pythagoreans.<sup>33</sup> The ad quadratum nature of the space is complemented by the further use of cubes and cuboidal figures in the throne and pedestal. Save for the arches and divine figures — even the capitals for the square pilasters are Tuscan in order and are circumscribed squares, each smaller than the one above — the foreground is devoid of any curvilinear forms. When viewed at an angle of between 30 and 40 degrees from the horizontal — the same angle one would be when one is kneeling at a pew in a chapel and looking diagonally upward to the altarpiece — the space begins to exhibit three

<sup>&</sup>lt;sup>32</sup> J. V. Field, 'Reviewed Work: Luca Pacioli e La Matematica Del Rinascimento. Atti Del Convegno Internazionale Di Studi. Sansepolcro 13–16 Aprile 1994 by Enrico Giusti', The Burlington Magazine 141, no. 1154 (1999): 300–301, 300.

 $<sup>^{33}</sup>$  Paul Calter, 'Geometry in Art & Architecture: MATH5, Unit 6', The Center for Mathematics and Quantitative Education at Dartmouth, 24 November 2019,

https://www.dartmouth.edu/~matc/math5.geometry/unit6/unit6.html.

dimensional characteristics that can be easily visualised by those with knowledge of geometry, proportionality, and ratios.

The calculations below show, in detail, the different ways in which a graduate of the scuola d'abaco would have conceived of the space intuitively, and even sized the space which was represented by the painting. A series of simple calculations using an algebraic method [Calculation 1] or the rule of thirds [Calculation 2] shows the intuitive nature with which one can quantify such spaces, even with a basic knowledge of arithmetic — both calculations took me less than a minute in my head, timed an hour apart.

Calculation 1: Volume of enclosed space:  $\frac{4}{3}(volume\ of\ cube)$  +  $\frac{4}{3}(volume\ of\ cuboid\ formed\ by\ arches)$ . Taking x as the span [diameter of the circle forming the arch, to be precise] — which is also the side of the cube, we get volume =  $\frac{4}{3}(x^3) + \frac{4}{3}(x \times \frac{1}{2}x \times x)$ , which can be simplified to  $\frac{4}{3}x^3 + \frac{4}{3} \times \frac{1}{2} \times x^3$ . Rewriting this expression after following the appropriate order for the actions — multiplication followed by addition — we get a convenient answer:  $2x^3$ . The volume of enclosed space, measured with a quick approximation, is twice the cube of the span of the arc, a calculation that does not require the use of any irrational constants like  $\pi$  because as can be seen, the spans spring from the pilasters at right angles and do not form a dome: they merely support a horizontal roof.

<u>Calculation 2:</u> The method I showed above is an intuitive way of calculation, one undoubtedly used then as seen in the exercises for Pacioli's *Summa*. If we are to strictly

speak in terms of the rule of three, we can stick to the Florentine *braccio* as our unit of measurement *and* approximation and chain together multiple calculations. 1 *braccio* is defined by Leon Battista Alberti in *De Pittura* as a third of the "precisely the height of a normal human body."<sup>34</sup> Since it would be truly absurd to reckon that a merchant in Florence took a sexton, protractor, and footscale when he went to church, I am going by an eyeballed approximation for this:

- a) If one *braccio* is a third of the height of a man, then how many *braccia* tall is a man?

  1:  $\frac{1}{3} = 3:1$
- b) Eyeballing the size of the pilaster, we roughly get a pilaster that is a third taller than a man if we consider the figures directly abutting the column. If a man is 3 braccia high, how tall is the pilaster? 1:3 =  $\frac{4}{3}$ :4
- c) If the pilaster is 4 braccia high and spaced the same distance away from each other, then that is also the span of the arch. What is the volume of this enclosed cube?  $4 \times 4 \times 4 = 64 \, sq. \, braccia$
- d) If the arch is a perfect circle, it is only half as high as it is wide: it is high as tall as the pilasters, but the span of the arch is equal to the height of the pilaster. What is the volume of this body? The dimensions of this section are  $\frac{1}{2}$  of that of the cube. Therefore, we get: 1:  $64 = \frac{1}{2}$ : 32

<sup>&</sup>lt;sup>34</sup> Leon Battista Alberti, Leon Battista Alberti: On Painting: A New Translation and Critical Edition, trans. Rocco Sinisgalli (Cambridge: Cambridge University Press, 2011), 39.

e) If the volume of the space is  $4/3^{\rm rd}$  the amount of space in (c+d), then what is the total volume enclosed by the pavilion? Using simple arithmetic, we get:  $\frac{4}{3} \times (64 + 32) = 128 \, sq. \, braccia$ 

Note that the answers using both methods are identical because of the nature of the expression we use — they are different methods of expressing the same idea. In this case, our x value is 4 braccia, consequently our area is  $2x^3$ , which is 128 sq. braccia. I have used contemporary forms of representing ratios chained into rules of thirds because of limitations in word-processing software.

The first calculation gives an abstract yet relational answer based on the height of a pilaster; the second uses the *braccio* to estimate with a series of rules of thirds the area enclosed by the space. A basic knowledge of geometrical forms, similarity, and arithmetic carried over from exercises in perspective and modelling — essential skills for any businessman, not just a banker — yield an insightful period eye. Even the representation of space is symbolic of a loggia, a space that in Florence held special significance for its relationship to commerce, as outlined by Lauren Jacobi, who emphasises the role of the mercantile loggia and its use "to spatially demarcate places of commerce." The architectural precedent for the represented space further reinforces its recognisable nature to a member of the interpretive community.

<sup>&</sup>lt;sup>35</sup> Lauren Jacobi, 'An Anachronism of Trade: The Mercato Nuovo in Florence (1546-1551)', in *A History of Architecture and Trade*, ed. Patrick Haughey (New York: Routledge, 2018), 128–41, 129.

While the period eye is narrowly defined, bounded by the interpretive community and forms of knowledge it presupposes, it is fruitful to consider the work of the mathematician, scholar and cardinal Nicholas of Cusa, particularly *De Icona*. The text reflects early phenomenological concerns, and Michel de Certeau notes that "the exercise that is to permit the transformation of the 'perceptible' visual experience into a theory of mystic vision is for Nicholas of Cusa a mathematical operation." Certeau adds that, for Nicholas of Cusa,

"Between the two forms of *videre*, the Cusan mathematics constitutes a space of coincidence — a geometry. The 'seeing' of the mind here coincides with the 'seeing' of the eye; an intellectual intuition, with an ocular perception; the universality of a 'form', with the concrete singularity of a figure. Conversely, he who can see in one way but not the other is no mathematician. Geometry thus supplies the model of a *scientific* order in the very moment in which ... it is detached from its former ontological function."<sup>37</sup>

Even mystical phenomenological experience with works of religious symbolism was theorised with the assistance of that same *lingua franca* of visual geometry and mathematical expertise that we see in the application of perspective and geometry by other Renaissance theorists such as Leon Battista Alberti and Luca Pacioli. This body of common knowledge, though associated commonly with commercial application on a regular basis, also formed the basis of scholarly knowledge for many, and such a mode of

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<sup>&</sup>lt;sup>36</sup> The unfortunate result of my poor comprehension of medieval ecclesiastical Latin and its local dialects, as used by Cusa, mean that I have to take Certeau's article at face value, as a reliable source. I did manage to cross-check some of the theoretical information with Jasper Hopkin's introduction to Nicholas of Cusa's oeuvre. Michel De Certeau, 'The Gaze Nicholas of Cusa', trans. Catherine Porter, *Diacritics* 17, no. 3 (1987): 2–38, 14; Jasper Hopkins, *A Concise Introduction to the Philosophy of Nicholas of Cusa: Includes English & Latin Versions of Nicholas' Trialogus de Possest.* (Minnesota: University of Minnesota Press, 1978).

<sup>&</sup>lt;sup>37</sup> De Certeau, 'The Gaze', 9. Italics as per original.

viewership certainly did receive the approval and sanction of church authorities, as can be construed from their appointment of Cusa as a prince of the Church.

Although this section has focused on the mathematical relationships in the work of art, *Homo Economicus* and *Homo Aestheticus* are conflated and influence each other in questions of taste and patronage. I consciously engage with questions of general motives in commissioning images, a series of questions Baxandall finds "not very profitable to speculate about." Baxandall's warnings are merely a safeguard against heteroscedasticity, but when the particulars of the commission are lost to the sands of history, it is rather profitable to lay out a series of motives present and consciously linked to the manner in which a work of such a nature would have been produced to satisfy, a profit which is hidden within the regression to the mean found in so many statistical situations.

I will briefly use the framework provided by game theory and as applied to works from the Florentine Renaissance by the art historian Jonathan Nelson and economist Richard Zeckhauser.<sup>39</sup> A summary of their discussion can be found in Shakespeare's *Henry V*, where before the Battle of Agincourt, Henry V boldly tells his troops, "By Jove, I am not covetous for gold, Nor care I who doth feed upon my cost; .... But if it be a sin to covet honour, I am the most offending soul alive" (H5 4.3.2259–64). Patrons took their understanding of financial capital and applied them to the accumulation and discernment

<sup>&</sup>lt;sup>38</sup> Baxandall, Painting & Experience, 2.

<sup>&</sup>lt;sup>39</sup> Richard Zeckhauser and Jonathan K. Nelson, *The Patron's Payoff: Conspicuous Commissions in Italian Renaissance Art* (Princeton: Princeton University Press, 2008).

of the other types of capital, which, in this case are the two distinguished by Pierre Bourdieu: social and cultural capital.

Bourdieu defines social capital as "aggregate of the actual or potential resources which are linked to ... to membership in a group"; cultural capital is embodied "in the form of long-lasting dispositions of the mind and body", in cultural objects, and in cultural institutions.<sup>40</sup> The same rational, self-maximising impulse governs the manner in which works of art were commissioned, and the same applies to Perugino's work. The patron's oeuvre is a matter of investigation as much as the oeuvre of an artist, particularly because of transferred qualities and selective applications of aesthetic taste in the project of branding one's association with a certain group — precisely the same projection of membership in a group that requires in Bourdieu's conception both cultural capital and social capital. Zeckhauser and Nelson use the term 'conspicuous commissioning' to refer to commissioning of works of art, particularly works for public viewership, to signal certain behaviours and virtues. 41 This discourse on the accumulation of different forms of capital took place in Quattrocento Florence as well, and is not merely a projection of contemporary sociological and sociocultural historical scholarship and trends, but rather of a recognisable projection of *Homo Economicus* into more aesthetic pursuits. Zeckhauser and Nelson note that "already in the early 15<sup>th</sup> century, the renowned scholar Poggio

<sup>&</sup>lt;sup>40</sup> Pierre Bourdieu, 'The Forms of Capital', in *Readings in Economic Sociology*, ed. Nicole Woolsey Biggart (Oxford: John Wiley & Sons, Ltd, 2008), 280–91, 286; 282.

<sup>&</sup>lt;sup>41</sup> Zeckhauser and Nelson, Patron's Payoff, 4.

Bracciolini understood that his contemporaries saw antiquities as a means for collectors to 'accumulate symbolic capital'."42

Within the framework of conspicuous commissioning, the aesthetic and economic rationales for the reuse of cartoons in search of a characteristic painterly style find analytical validity. By the time this altarpiece was painted, Perugino had developed a characteristic style and brand. Some of his most prominent altarpieces — the Vallombrosa and Decemviri altarpieces among them — had been finished in the preceding years. His early fame came partly from his work in the Sistine Chapel at the Vatican, where early in his career he found himself in the enviable position of having four prominent paintings, including one right above the altar.<sup>43</sup> There were certain stylistic qualities that can be readily ascertained from his work until 1500 including a linear perspective marked by a recession into space accompanied by Tuscan pilasters and capitals and a reuse of cartoons to produce a series of easily recognisable and characteristic figures. The risks of negative reception — this is before, if we are to believe Vasari, Perugino was named and shamed for his practice of recycling — was minimal, and therefore did not add to the financial cost and risk that the patron bore the responsibility for when the work was being commissioned. Further risks with conspicuous commissioning in this case would arise from a misreading of the audience, but the iconographic and stylistic standardisation and

<sup>&</sup>lt;sup>42</sup> Zeckhauser and Nelson, Patron's Payoff, 68.

<sup>&</sup>lt;sup>43</sup> Vasari, *Lives*, 262.

simplicity in Perugino's *Virgin and Child with Saints* was a 'hedge' against this uncertainty of reception.

The role of *Homo Aestheticus*, particularly in the Florentine context, was not too far away from the world of business. It was a branding exercise that was unique in the signalling it engaged in, but also the cost of procurement and display within the religious context that amplified the signalling and perceived increases in social and cultural capital that the patron benefited from. These increases, however, also had strong correlations with financial capital: Zeckhauser and Nelson show conclusively that a businessman with "a prominent family chapel would find traders, silk merchants, and fishmongers more willing to accept his promises of repayment, and those of his servants and family, in exchange for their goods."44 While this may seem unusual within the contemporary world of business, there was, as Goldthwaite points out, no legal distinction between firm and person in the eyes of the law; he notes that within the traditions of Florentine law "it was taken for granted that partners were subject to unlimited liability with respect to the affairs of the firm."45 The firm and the individual, in the case of a partner of the firm, were understood to be the same entity, socially as well as legally. The work of art was a brand enhancer for Homo Economicus, and this generation of cultural capital was a mode of signalling recognisable by those who needed to know — and be in conversation with the class of patrons thus being referred to.

<sup>&</sup>lt;sup>44</sup> Zeckhauser and Nelson, Patron's Payoff, 51.

<sup>&</sup>lt;sup>45</sup> Goldthwaite, Economy of Renaissance Florence, 65.

However, if the branding exercise — for the firm and for the individual alike — was to have any reasonable chance of success, there would be a key concern posed by an artist with a changing style and reputation. When a patron approached an artist, they engaged in a zero-sum game with the general understanding that the patron would be competing with other patrons for a spot in the artist's schedule, and artists regularly "could and did turn down uninteresting offers, such as one from an undistinguished patron."46 The artist's own social and cultural capital would be affected, for even though an undistinguished patron would be paying the same, the costs the artist would incur in his own branding would prove detrimental. One may only turn to Vasari's Lives to examine the manner in which this hurt artists' brands: Perugino's works in Perugia, then a provincial town paling in comparison to Florence and Rome received less attention from Vasari. This would and could be a vicious circle for an artist with a weaker brand and poorer reputation than that of Perugino, for the reduction to provincialism would ensure that distinguished patronage such as that of prominent families and confraternities would go to a painter who would actively inculcate his network and social and cultural capital within major centres such as Florence and Rome. The capital that each actor and agent brought to the transaction in this case defined both the transaction costs and the chances for a continuation of the economic relationship; in other words, the artist and the patron would match their level of effectual demand and supply of different forms of capital to provide

 $<sup>^{46}</sup>$  Zeckhauser and Nelson,  $\it Patron's~Payoff,~60.$ 

the 'appropriate' match for the commission in continuation of the pattern of conspicuous patronage. Modelling such a transaction would be second nature to a man of business.

#### CONCLUSION

As we can see above, the lack of a single methodological approach can be mitigated in part by relying upon multiple modes of thinking about the work of art and the society and culture in which it was produced. By anchoring the application of different forms of social and cultural history in the two conceptions of man — *Homo Economicus* and *Homo Aestheticus* — we find a rational and even somewhat mathematical and geometric reconciliation. This is not to say the above investigation does not draw on elements from iconographic analysis, formal and visual analysis, and biographical approaches to works of art. The importance of both a clear methodological approach and engaging with a series of specific abstractions assist in the creation of an understanding for a work of art whose provenance from the time of commissioning is unknown.

A critical application of the method, however, does not presuppose methodological fetishism but a coalescence of intellectual pursuits in the goal of truly interdisciplinary understanding. This treatment may seem mechanical to some but takes inspiration from Hegel's maxim in *Aesthetics*: "Only beyond the immediacy of feeling and external objects is genuine actuality found."<sup>47</sup> The somewhat impersonal nature of this intellectual exercise is rooted in that very conception of man that is common to *Homo Aestheticus* and *Homo* 

 $<sup>^{47}</sup>$  G.W.F. Hegel, Aesthetics: Lectures on Fine Art, trans. T.M. Knox, vol. 1, 2 vols (Oxford: Clarendon Press, 1975), 8.

Economicus, and with the cold, prying eyes of the disinterested viewer and the self-maximising individual, we find a mode of thought grounded in that which is characteristic of the modern world. What this is not is an exercise in moral learning or application: for the cultural historian Sir Ernst Gombrich, "the 'classic solution' is indeed a technical rather than a psychological achievement." However, from Michael Baxandall's discussion of what Gombrich refers to as the 'classic solution' — linear perspective — we also find that the solution is also intricately related to morality at the time. 49

Theory and methodology are essential considerations, as we see above, for any student of art history. The avowed universality of the theoretical and methodological frameworks we thus choose are intended solely for the elucidation of the work of art, the artist, and the sociocultural milieu in which they were produced, and yet, for many works the same methodology cannot be said to apply because of fundamental changes in their spatiotemporal situation and moment of creation that are dissonant with that of the method and its considerations. The approach I have taken so far to Perugino's altarpiece, Virgin and Child with Saints, comes with its own limitations — it does not consider the function of the altarpiece in a religious setting or any of its aesthetic qualities and significance save for the articulation of reception aesthetics through a brief excursus of the period eye of a defined interpretive community. Like most art historical methods, the approach I have taken is methodological syncretism — particularly in considerations of

<sup>&</sup>lt;sup>48</sup> E.H. Gombrich, Norm and Form (Chicago: University of Chicago Press, 1966), 95.

<sup>&</sup>lt;sup>49</sup> Baxandall, Painting & Experience, 105.

business and economic activity, game theory, and appropriation of contemporary statistical tools.

From the general principles thus established, we can only hope to recreate the original context of the work of art. Wolfgang Kemp emphasises the role of this within the study of the history of art, noting that the "aesthetics of reception has (at least) three tasks: (1) it has to discern the signs and means by which the work establishes contact with us; and it has to read them with regard to (2) their sociohistorical and (3) their actual aesthetic statements." It is this that guides in major part the investigation into the interpretive community defined in the second section. The actuality of the aesthetic statements and demands made upon a work of art are construed in economic terms and through the lens of man as an aesthetic being — a concept near and dear to Romantic philosophers and aestheticians from Hegel through Schiller, whose letters expound not only on the nature of universal history but also the necessity of an aesthetic education.

There may well always remain a hole in textual primary sources about the altarpiece under consideration, and things we may never know about it. There, however, remains no question of its purposive role in the praxis of the history of art and of social and cultural history. To deal with the generalised and the abstract is helpful insofar as it

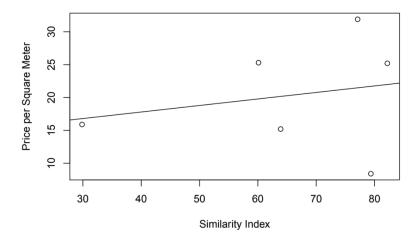
<sup>&</sup>lt;sup>50</sup> Wolfgang Kemp, 'The Work of Art and Its Beholder: The Methodology of the Aesthetic of Reception', in *The Subjects of Art History: Historical Objects in Contemporary Perspective*, ed. Mark Cheetham, Michael Ann Holly, and Keith Moxey (Cambridge: Cambridge University Press, 1998), 180–96, 183.

assists in the understanding of how things are put in motion by the forces that they are subject to and simultaneously responsible for putting into motion.  $\clubsuit$ 

APPENDIX 1: THE PRICE OF PERUGINO'S VIRGIN AND CHILD WITH SAINTS

SUBJECT	SITE	YEAR	$\frac{\mathrm{PRICE/SQ}}{\mathrm{M.}^{51}}$	SIMILARITY INDEX
Madonna and Child with Saints	S Maria Nuova, Fano	1497	31.9	77.1
Madonna and Child with Saints	Palazzo Comunale Decemviri	1484	25.2	82.19
Madonna della Consolazione	S Maria Nuova Perugia	1498	25.3	60.11
Assumption	Vallombrossa	1500	15.9	29.86
Family of the Virgin	S Maria degli Angeli Perugia	1502	8.4	79.37
Madonna di Loreto	S Maria dei Servi Perugia	1507	15.2	63.91
Virgin and Child with Saints	?	1500	?	100

A simple regression model was made to find the price of the work of art using R and RStudio. The graph for similarity to the Hood altarpiece and price per square metre showed a significant positive correlation:



<sup>51</sup> Adjusted price per square metre in florins, not including cost of materials and wood. Information from: O'Malley, 'Rethinking Perugino", 691; Plazzotta, et al, 'Madonna de Loreto', 94-95.

At 100% similarity and 3.01 square metres — the area of the Hood altarpiece — while controlling for the number of figures, we get a price of  $^{\sim}83$  florins.

# APPENDIX 2: IMAGES

Figure 1: Perugino (Pietro di Cristoforo Vannucci) and Workshop. c. 1500. Virgin and Child with Saints. Painting.



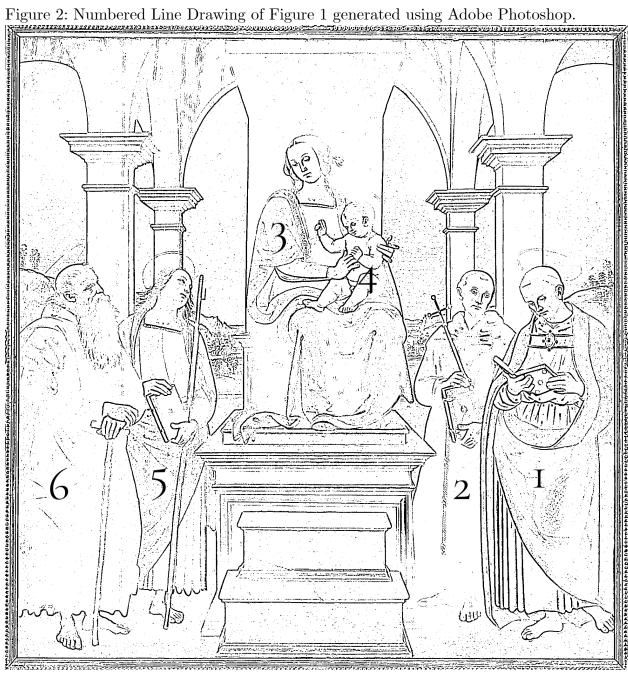


Figure 3: Perugino. 1495-96. Madonna and Child with Saints Lawrence, Louis of Toulouse, Herculanus, and Constant, Altarpiece of the Decemviri. Painting. Place: Pinacoteca Vaticana. <a href="https://library-artstor-">https://library-artstor-</a>

org.dartmouth.idm.oclc.org/asset/SCALA ARCHIVES 1039488688.

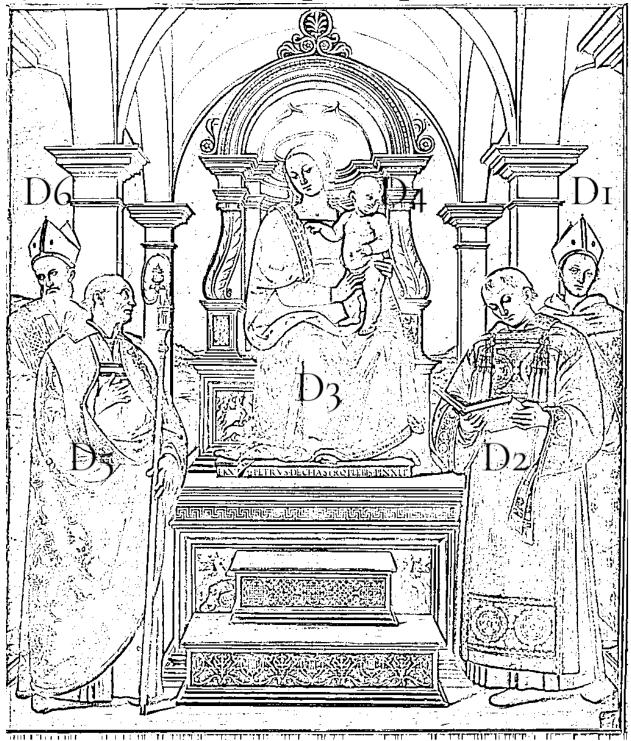


Figure 4: Perugino. 1497. Fano Altarpiece (Madonna and Child Enthroned with Saints John the Baptist, Peter and Paul, Francis, Louis of Toulouse, Michael Archangel and Mary Magdalene), Durante Altarpiece. painting. <a href="https://library-artstor-org.dartmouth.idm.oclc.org/asset/SCALA">https://library-artstor-org.dartmouth.idm.oclc.org/asset/SCALA</a> ARCHIVES 1039613875.



Figure 5: Perugino and Workshop. Santo Servita. Painting. Place: Basilica della SS. Annunziata.

 $\frac{\text{http://catalogo.fondazionezeri.unibo.it/entry/work/21426/Vannucci\%20Pietro\%20\%28P}{\text{erugino}\%29\%2C\%20Santo\%20servita}$ 



Figure 6: Vannucci Pietro (Perugino), scuola. 1500–24, Image date: 1900–1930. Madonna con Bambino. dipinto, Image: positivo. Place: Collezione E. Volpi, Firenze, Firenze, Toscana, Italia, Provenance: Italia, Umbria, Terni, Terni, Collezione privata. https://library-artstor-org.dartmouth.idm.oclc.org/asset/AZERIIG 10312624825.



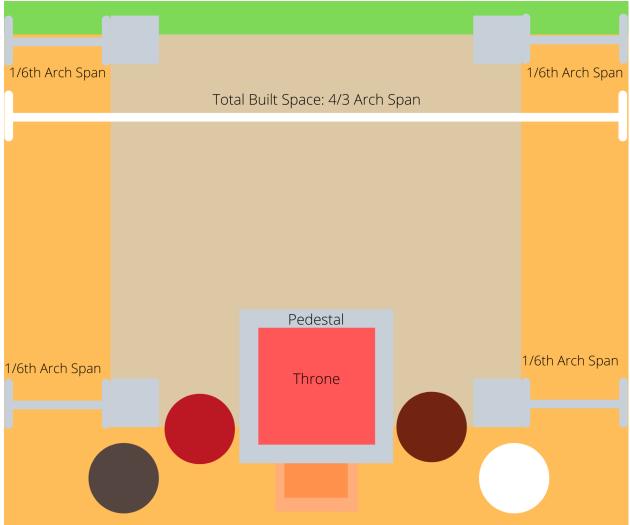


Figure 7: Bird's Eye view of Figure 1. Generated.

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