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Thesis

Multi-Eyed Ways of Seeing

a new look at another way of approaching the study of Art History
in the Digital Realm with case study

Supervisor
Ch. Prof. Paolo Berti

Co-supervisor
Ch. Prof. Stefania De Vincentis

Degree Candidate
Katje Kroncke-Wisdom
904050

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Introduction

This thesis argues for a new approach to the study of art history that moves away from a solely era-based structure because it is vital for the continuation of the field. This is demonstrated as an important need through previous theory and experimentation, trying to put a Contemporary work of art into a digital iconographic database. This has the implications that in order to continue the work of the field, creativity must be employed as is possible in the digital sphere; however, the field of Art History study must be prepared to change its point of view fundamentally in order for real change to be possible using digital tools.

The main themes of the thesis are based on the research question, "How can we incorporate the Middle Ages into the future of a digital art history and how is all this connected?" The primary theme starts with the understanding of a possible direction for Art history which could permit and explain continuity of practice and symbology over eras and medium; then through the case study it is revealed the relationship of the aesthetics of digital artistic practice to the digital archive in which it is supposed to be placed in the future; it rests with the understanding of continuity within art, which, even though it has already been demonstrated, has revealed a desperate need to be rehashed within art historic institutional practice. Starting from the origins of the field to contemporary practices used today, this thesis offers a new structure of art historical study, along with a new term in order to aid in the definition of a movement. The revelation of why we should care about the Middle Ages lies between the aesthetics of digital art and its relationship to the archive, because the flexibility and interconnection of both our Contemporary era and the Middle Ages reveal outdated rigidities within the archival space and therefore within any institution that shows or educates on art. This concerns the future of art history if the field is ever to change and grow, and this concerns the field of digital humanities if we want to be sure to develop effective digital tools for art historical research.

This paper, therefore, will describe how this research comes from a place of alarm, where an entire section of Medieval Art History is being swept away under recent determinations on institutional levels as being "unimportant"; thus, this thesis acts as an attempt to describe why we should care, among the many reasons, of course. Joanna Drucker's theories on the present incomplete and unhelpful state of digital art historıcal practıce are also consıdered an important crisis point in this thesis since the future of art historical archiving is at stake both for the Middle Ages art history and for digital art history. (Drucker, 2013) Then from there Alexander Nagel presents the main theory behind this work, which is to reconsider the arch of art historic structure in order to refine and productively, with great intention, recreate the practice of art historical

research. Nagel reveals a need to move beyond era-only classification, which caused the separation of Modern and Medieval art, and did both eras a disservice. It is demonstrated as a present problem as well through our digitally-born case study that evokes ancient symbology and the encoded experiment in Iconclass. This thesis will reveal the heavy interconnectedness of the artwork, which is inherent in digitally-born art, and why our current digital databases are terribly under-equipped to properly classify artworks of this nature that take on and invoke symbologies of the past. From this point, the effects of the digital medium are considered both for the aesthetics of the work of art in the case study, but also for the medium's ability to categorize, organize, and present this kind of art. The disconnects revealed in the digital realm, however, lie within our ways of seeing art, as taught even at the university level, and with the added practices of "digitization" instead of "digitalization," have amplified the problem within the digital sphere. (Drucker, 2013, p. 7) While the problem is exacerbated in the digital medium, its origin is much older. The implications of the history of Nagel's theories is then explored with an understanding of almost a century's worth of theory, all of which pointed to an important need within the study of Art History to reconsider itself as an era based study and the impact the era-based approach has on our abilities as societies to organize, speak of, refer to, the past and the present of art. In light of the case study, this theory reveals new possibilities for art historical approach that could reconcile the current disjunctive nature of hierarchical research structures. We have already seen the result of exclusive art history: an entire millennium is on the brink of disappearing, and with it will go these Contemporary artworks, too. What we can do instead, which is described next, we must remember the theory that once broke open art historic practices of the "old days", but this time we must use it as an inspiration point for inclusivity, accessibility, and a true, detailed description of artworks and the movements of art history.

The theories demonstrated in Nagel's work are recreated in the case study. A historical thought continuity is revealed in recent Contemporary digitally-born artworks in various ways, but are we as art historians able to curate or archive these pieces? It is shown using Laurant Grasso's *Panoptes,* which is a profoundly interconnected work of art, that current digital iconographic systems are unprepared to correctly demonstrate the true interconnectivity of this type of art and therefore to shelve it properly due to its aesthetic. An experiment was done in Iconclass that reveals, through network analyses, a limitation of bridges that will need to exist in order for this piece and any artwork like it to be correctly incorporated into future Contemporary art historical practice, in either the university or the museum institutions. Why is this true? Partially, it is due to the aesthetic theory of Digital Art itself, which Grasso's piece falls under, but it is also due to the theories of archivism, which are revealed to have been very reactionary in the past and therefore are creating Drucker's problem and ours too of a limitation within current digital art history and a need for proper creativity in the field in the future. (Drucker, 2013) While Iconclass reveals within its coded system some of the state of present digital scholarly work, other previously explored digital systems, such as CLIP and ICON are considered as well

for their attempts in archiving, but also for their limitations regarding an entire inclusivity of artworks or accessibility.

There have been theories since the 1920's, some from the study of the Middle Ages, but others are more general, that not only reconstructed the field of art history fundamentally, but they also called for a need to consider the impact of academies and the words art historians published in the prior centuries. These areas were interconnected with the art of their time, just as our work should be too. Their legacy left the theories of Alexander Nagel, who, in his book *Medieval Modern,* shows the importance of understanding the artworks and the theory together. What this work also reveals, however, is the gateway that leads us to the relationship of Medieval to digital art. In fact, while the theories that were challenging older forms of art history were being made, the same base principles were simultaneously being created within the art that precedes directly digital art. In this way, digital art is deeply rooted within an extraordinarily complex past that both broke away from old practices while reclaiming Art Historic forms in new ways. The computer as a machine is in this context also created, whose ability as a machine to archive was deeply seeded into twentieth century philosophy and shares common psychological roots with the movements in art history mentioned earlier. That being said, Joanna Drucker very succinctly and clearly states the problem, which is that while art has shown innovation, lately the field of Art History has resettled after the advent of Warburg and Panofsky and is no longer showing necessary innovation, especially within the digital realm, in order to keep up with the art being produced in our current time. (Drucker, 2013; Panofsky, 1970; Warburg, 2020)

The implications of the case study within the literature are multifold. Firstly, it is an awareness of the current state of the field of art historical research and its overly *"digitized"* transfer into the digital world that lacks the innovation needed for the future of the field. Second, there is the urgency of this change since the art field seems to be ahead in the sense that these pieces of art are coming out now, before the institution that is supposed to house them (either physically or digitally) is prepared to research or present them properly. Within this thesis, this has prompted an investigation firstly into the implications of the digital medium and what makes it different within the spaces it inhabits, and then into the digital archive and previous art historic practices that have been retained within art historical research in the digital space. This thesis, in offering a solution, proposes a continuation of past theory into the digital realm. In the effort to explain Nagel's theory of a "different history" that has prompted me to reach my conclusions on a solution to the problems, most of his past theorists are examined, including Schapiro, Eco, and McLuhan. This is from the purely "old-fashioned" and not so digitized Art history perspective. After and through the case study and the results of experimentation within the database, this thesis adds ties for Nagel's theory into the Digital by presenting the problem of "digital" versus "digitized" as is revealed by Joanna Drucker. Christian Paul and Charlie Gere bring us to the

space digital art aesthetically embodies, and how the root of Archivism will affect the treatment and placement of the digitally born artwork as a result. Since the symbol of the case study came from ceramics and mosaic, the medium is important to consider and brings us to the theories of Derrida which are also wrapped up with the theories of Schapiro through Freudism. (Camille, 1994; Derrida, 1996) All of these intersections describe our state dealing with not only continuous symbologies in general but continuous symbologies within the digital medium; all these points describe the multi-faceted nature of the implications. With a continuity of limitation within the field of art historical study is also a massive loss and inability for creativity within the digital realm, which is sorely needed in order to pursue an inclusive, more accurate, and accessible new practice of art historical research in the future.

In order to reveal a more accurate art history that would permit not only the inclusion of current works of art, but would also refine the study that is already there, a pivot in viewpoint is described from primarily era-based study (for example humanism happens in the Renaissance), to a school of thought based study, (for example, humanism started in the nine hundreds and rose in popularity multiple times). For this new perspective, because of the theories of Warburg, Panofsky, and Battisti, who revealed on micro and macro levels the power of situating symbologies, pathos, and gesture as a continuity and the danger of restraining art historical study to only eras, it is possible to do the same with schools of thought such as humanism, mannerism, and impressionism. (Battisti, 1989; Panofsky, 1970; Warburg, 2020) Instead of confining these artistic approaches to specific time periods, it would reveal massive interconnectivity if they were thought of as lines that rise and fall over time and across civilizations. This permits the network-based approach that would both include all of the art history out there, and would provide an important structure for future digital tools for art history.

To do this practice as in our main case study in question and the massive ramifications of its isolated symbol on iconographic and iconology levels, first I reveal what those are using the principles of Mitchel, Panofsky, and Warburg, tying them also to the Middle Ages since their mechanism of mechanical reproduction is also heavily wrapped within this period. Of course, since mechanical and post-mechanical reproduction is considered, Benjamin is also included, since even he felt also in the angelic image, like that which the eyes of Argos become, as a symbol of the convergence of the past and present, just like our case study embodies. In this case, the piece falls within Byzantine icon practices and orders of angels, which followed a specific form of thought and artistic approach wherein the artwork was meant to embody its symbol as a sort of language that would stand for the spiritual being but was reproduced in this way. Unlike later forms of art, we have no specific term for this kind of approach; therefore, I suggest we call it “referentialism”. Coming from literature, wherein a word represents a specific idea and is clearly designed so, this refers to art that is specifically made with the intention that the piece would embody the spiritual or other earthly meanings of its symbol. Using the theories

of Panofsky, Warburg, Nagel, and others, we can now draw a line of thought coming from the four hundred years until now, and the intersectionality of Grasso's *Panoptes* is no longer an outlier but becomes part of a line with ancestors within art history. Using digital tools, someday we will demonstrate the iconology that reveals the incredible intersectionality of these pieces and great continuities of ways of seeing. This thesis not only creates a term and posits a new form of Art historic study, but it also extends the lines of art history from the past back to Ancient Greek and Byzantine art into the digital and even post-digital sphere. This is not just a study of the past; it concerns the future.

During this study, I have seen and been approached by several contemporary artists with similar issues of belonging to a past but creating a contemporary piece; therefore, as demonstrated, this is a phenomenon that will likely be my life's work. It is not only a matter of how do we use the digital tool correctly, it is also a matter of how we prepare the field for the impact of the tool. As Nagel, Drucker, Panofsky, and others have said, we must examine ourselves as synthesists and the impact of our art-historical research approaches on the material we study. (Drucker, 2013; Nagel, 2012; Panofsky, 1970) The possibilities are endless, but the institution has remained within older parameters and the change of the field is not happening at a parallel rate to the art itself. This is about the future of art history. This is my job, and a world without art because it was not handled properly is not something I want to imagine.

In conclusion, this is described as a start, an evocatıon to see again in the field of art history. If we were to pivot our perspective to a continuous point of view, this reconciles the true interconnectivity of artworks while including all eras as important, and as a result, provides a more detailed perspective. As a professor of mine and one of my greatest mentors once said, "He who simplifies Art History is a fool. It is our job to complicate." Art history is complex, and right now, inaccessible. We must pivot, and as Drucker and Nagel reveal, the potentiality is utterly limitless when we create an inclusive field. (Drucker, 2013; Nagel, 2012) I want a future, my colleagues want a future, and I someday want to say I can give a future to my university students. This thesis is the start of my trying to build that.

Chapter 1

1.1 Purpose of the Research: Worries about the Middle Ages

This thesis stems not only as a culmination of my Master's degree, but as a compilation of my entire career thus far in university, from my very first day in ARTH 100 in the United States. I have always had a great passion and interest not only in art, cultures, and societies, but also during my studies, something about the Middle Ages always drew me towards it. You see, I was supposed to be a Medievalist, and in a way, I will always be one. I will always be drawn to this

era due to its quirks and multi-perspective approaches, heavy with symbolic references. Over time and with the passage into finding my niche in the vast world of art history, I have come up against the problem (which is globally true) of the Medieval in Humanities studies which is outlined as an inability to, "satisfy both the general reader, the colleagues in the modern fields, the university administrators, and, above all, educational politicians who often tend to disrespect the Middle Ages…" (Classen, 2020, p. 338) We are faced with this problem of existing outside of prioritized time periods, which has brought great difficulty on an institutional level, trying to maintain any sense of relevance within this part of the Art Historical field. To be clear, we are talking about a global history spanning at least about nine hundred thirty years, one thousand years according to some, which is not generally considered "relevant" to the education of any culture's citizens. There is no question about the importance of history in general to reconstruct identity and cultural understanding, values that the world is in some ways increasingly considering in new perspectives, but in other ways is becoming more difficult with time to defend for its importance. With so much expectation on "forward thinking" in education, it sometimes confuses the necessity of "past understanding" or even how this contributes to present realities. There is still so much we have left to understand, and history is supposed to help the future (this thesis aims to do that as well). The future, though, will not be made in a vacuum, just like our current state is being made with its past in the mix; it would be simply irresponsible of us as cultural historians and theorists of art to ignore the past when educating the future, because of how much the past is being brought up also in the present.

Luckily, I love art so much that I choose to stay with art no matter what, even if I had to leave my niche, but what would this entail? Well, I found through Digital Humanities (actually something my Medievalist professors helped me find) a possible place of how and where the continuation of my Artistic studies might continue, and where greater general leaps of Art study are also taking place. Bizarrely, though, even in Digital Humanities, we are faced with problems of division within the Humanities fields of pro and anti-digital. It is believed that the Digital is a problem, "because the increasingly digitized and robotized world we are living in is painfully focused on the present, and this to the disadvantage both of the past and the future." (Classen, 2020, p. 383) Ironically, though, I have found that in the end not only could I continue my study in the arts but I could also continue my study and research of Medieval art, actually by considering the options the digital has to bring instead of considering it a problem. This reveals, however, further problems and divisions in the academic world wherein yet again we are at risk of losing an almost one thousand year span of history in the humanities due to a feeling that we cannot, "convince any university administrator, educational politician, student, or anyone in the public that Medievalists have certainly a place within the academy or in the wider discourse." (Classen 2020, p. 340) This is dangerous because, as the name suggests, it lies in the "Middle" of our historic development; it is significant, and without the metaphorical "trunk" of this historical "tree," the whole thing collapses. Studies such as colonial studies, mapmaking studies,

continuations and rebirth of Ancient ideas in the Renaissance, and so much more, all have a very strong and important tie or start in the Middle Ages, and without it, we really are left in a "Dark Ages" as uneducated humanists. This thesis reveals how, by acknowledging the Middle Ages, we already have integrative methods that would also help the understanding of Contemporary, digitally-born artworks that have come out in the last year, and continue to be made. This reveals, on the contrary, that the Middle Ages ARE relevant, and in fact they can be used and prove to be useful in the future when re-imagining possible art historical approaches.

The Digital Humanities adds important components to Medieval study in every way, in that the field applies semi-scientific and quantitative methods to add to the previously explored qualitative methods, and it reveals broad views and intersectionality of elements in order to paint a more "full" picture of the era. Joanna Drucker reveals this potential power, describing how Digital Humanities tools could be used to scientifically analyze and study the pigments of the *Arnolfini Portrai*t by Jan Van Eyck. (Drucker, 2013, p. 6) While this is not a Medieval piece, Drucker reveals how a scientific approach might aid in the necessary "looking again" that digital tools could use in order to fundamentally revamp the field of artistic study in every way. (Drucker, 2013) Another example where scientific study has proven effective in understanding the Middle Ages has been Jörg Feuchter's work on Parchment DNA in the genetics lab, offering a new understanding similar to the pigments study based on recent genome-extracting methods through technology that finally allow us to understand not only the previously-known process of making parchment but the actual breeds of sheep used and needed for this process in the first place. (Feuchter, 2019, p. 110) While this takes us from manuscripts to DNA and agriculture, it is also technology being used to describe the original materials with which we stored knowledge, providing a greater history, even into the computer, the current technology with which we store knowledge today. In this way, this question of the relevance of the field is actually answered by science as "yes, it is still relevant, there is still more to know." However, this means we must as Medievalists become "prepared for this future." (Feuchter, 2019, p. 111) A future wherein we, as all forms of historians, are prepared to use digital and post-digital tools to further expand and describe our respective fields.

Reassuring relevance using quantitative and scientific methods takes, however, interdisciplinary studies, and widening of any humanities field to which it is applied, and while we have seen it in other places, for the study of Medieval artistic objects and cultural heritage, the need is incredibly real. True expansion and revamping or creation of the field is reflective also of "an urgent need for more critical engagement, which should hopefully also provide us with more complete overviews…" (Feuchter, 2019, p. 99) While these are being used in the examples of genetics studies in the Middle Ages, it is also applicable to Digital Humanities because of this polarity wherein the technology could be helpful to the study of the Middle Ages, but on the institutional level of art historical research the collaboration between art history and

technology is not widely considered. If technological research tools were applied to the Middle Ages they would not only reveal a greater and more accurate study of it but in the process they could describe the relevance of the Middle Ages amongst Humanities studies that would reflect on an institutional level so that students like me do not end up having to sacrifice their field due to a lack of resources. Therefore, the scientific approach is at least one of the possible approaches that Medievalists must consider, as the Middle Ages is given such institutional stigma as a study.

On the collaboration with science, this actual change from the perspective of the study of the Middle Ages and how exactly we, as humanities researchers, need to participate is that, more than anything, we must be active. For art historians at large from all eras, as we expand the general field, expansion itself in an active sense goes beyond admitting what we are not trained for and becoming "mere contributors of data" for the scientific field. Active participation in the sense of true collaboration with the scientific and Digital fields to be "involved actively in the fundamentals of the research design process" to provide "insight into each other's disciplinary limitations." (Feuchter, 2019, p. 111) True combination and intersection of knowledge requires those of us in the disciplines to be open to this and to actively participate in this way. As mentioned, this is created as a response to the worry and concern surrounding specifically the Middle Ages; that being said, truly the entirety of Art history as a discipline, along with many Humanities studies, are finding ourselves in difficult situations institutionally, and the collaborations with other fields are a possible answer to the question: "So what is the future of the field?" It was never irrelevant, but it is simply rephrasing it to remind the institution of why we are still relevant. Active participation in the sciences could be beneficial on both sides, for the sciences offering new material and for the humanities offering new perspectives. Together, expansions are made, but before we can broaden the horizon, we must ask the fundamental question… Is the field of Art History ready in its current setup as a discipline within the institution it is housed in to actively participate in interdisciplinary processes that will broaden its horizons?

Art History of all fields, at its essence, is in fact interdisciplinary, is in fact very broad, and that should lend itself ideally to be a perfect field for active participation and collaboration. We saw this when the field of art history was being questioned and rebuilt during the twentieth century. One of the art historians on this turn of the discipline was Henri Focillon whose work primarily is known for his work in the, "nuanced and complex attempt to understand the relationship between art and life as an aesthetic." (Emerling, 2022, p. 1) While Focillon's entire work is less the point of this thesis, he did make an important point that many art historians are starting to see as vital to the broadening and interdisciplinary approaches to art historical study which is that art itself seems to display two almost opposing but interestingly interconnected points that each artwork is at once, "an attempt to express something unique," while the corpus of all art is "likewise an integral part of a system of highly complex relationships." (Focillon,

1992, p. 31) This means that while each work of art can be considered entirely "whole" or "complete" in itself, the whole corpus acts as a highly interconnected web of meanings, associations, and cultural values. (Focillon, 1992, p. 31) We know from the treatment of Medieval art how this can also present us with multiple meanings from the same work of art. The thing is, while at its essence Art History as a discipline is increasingly being viewed at this level, institutionally we have remained at the segmented, hierarchical, and codified field that was described in the sixteenth century, heavily codified in Enlightenment thinking, and set into instruction in the nineteenth century.

This thesis therefore demonstrates why Art historical study would need to change on an institutional level in order to participate in active interdisciplinary participation necessary to describe the relevance of the study back again to the institution in which it is to be housed. This thesis comes from a place of concern regarding the potential institutional erasure of an entire millennia of history and the similar struggle of Humanities to remain relevant to the education of world citizens, and proposes a way the field of study could change to see its future expand inside of quantitative and scientific inquiry using the current state of art in Digital Humanities to several of the present issues that are preventing the field from moving forward and how those could be addressed. We have seen here, from the essence of art historical study as Focillon points out, that it is very much possible for the field to expand in every way and actively participate, even flourish in said expansion, but we as art historians must be willing to change our methodologies if we are to embark on newer forms of study successfully. (Focillon, 1992)

1.2 State of the Art

During the process of research regarding this topic, it was not possible to find direct prior research or findings describing explicit Medieval or symbolic continuities into Digitally-born art or even in Digital art theory. Specifically in the world of digital art, there is no direct research on the effect of digital iconography on reappearing symbols in Contemporary digital art, regardless of Focillon's claims on the interconnectivity of forms within artworks.(Focillon, 1992) This research stems from Joanna Drucker's question in her essay "Is There a 'Digital' Art History" and is based on the theory from Alexander Nagel's *Medieval Modern*. Nagel's work included many of the art forms of the twentieth century but asked for a "different" history that understands in a profound manner the impact of the continuity of Medieval symbology throughout the eras. (Nagel, 2012, p. 7) In Nagel's theories, he mentions the theorists who came before him, who are explored briefly to extrapolate a bit on this point of a continued Middle Ages and why it is supposedly existing so predominantly within the field of Contemporary art from the Art Historical perspective. What is shown through Alexander Nagel, however, are also the precursors to digital art history without considering that they actually go into the Digital medium. What we

see is a string of Medievalists during the twentieth century, who continually were re-writing the theory of art historical approach alongside the art of their time. This was Nagel's point as well.

Looking then through the light of the case study, after I demonstrate how Nagel's point actually does translate into the digital and how the relationship of art to container is so confusingly constructed, we must now consider in this study all the impacts of these pieces, and for this, the impact of the digital medium must be considered along the lines of both art making and archiving said art. Ironically, both are highly intertwined, even though not in an easy way. It is revealed easily within the exploration of the iconographic history and iconology implications of one artwork of this kind, incredible amounts of intersectionality, but in sources that never seem to happen together. Further regarding the theory of this artwork in itself, philosophy and psychology are briefly visited since there are important intersections coming also from the medium of this piece and the Medieval Art Historical theories that Nagel was describing. This also reveals how the cross-over into the Digital world, even though in an aesthetic sense it has never been explored within literature, is in fact not a surprise, and moreover, it participates in Nagel's "different history".

The case does not stop there. It includes an experiment within the database of Iconclass, and it reveals, using network structure, the incredibly interconnected nature of this work of art. While interconnectedness on many levels including in the relationship between medium and content, art historical scholarly research is still debating the incorporation of newer models of approach and consistent applications of new methods is yet to be adopted including in the digital sphere. For the development and future work needed, we must also consider the perspective of the database briefly and experimentation within the digital archive, such as ICON, that has tried to reveal important multi-level intersectionalities of artworks, even if at the cost of accessibility.

But then, regarding all these implications, what does this mean to the field of art historical study? Almost a century ago, art historian and theorist Aby Warburg built his Mnemosyne Atlas, an attempt to demonstrate his theory of a continuation of art forms as seeded within cultures across borders and centuries. His theory of psychological motifs revealed major cultural symptoms through images regardless of their origin or era, which becomes an approach that the field of art history at times has difficulty with, since it asks moving beyond the academic boundaries created so long ago in the field. Later, Erwin Panofsky, in his work "Iconography and Iconology: An Introduction to the Study of Renaissance Art", describes the various levels of art historical understanding from the very base, to the iconographic identification, and finally to the iconological thread of the emergence of these images as ideas within cultures. Both these theorists revealed that the true understanding of the thread of art history is not simply in understanding eras, but what lies beyond, which is so interconnected within and without itself that it is impossible to merely define by eras alone. Symbols and images act both as symptoms of and within the context of cultures. The work, then, of *Image Science* by W.T. J. Mitchel is also

considered in the lines of theory history, tracing us to this moment of this line of thought. It is, however, this line that provides me with my answer, one that is not found in literature, as no direct prior research has been conducted regarding the phenomenon specifically of very old symbologies being evoked and applied in digital art.

Do we have the digital spaces to store what we make with this material? This is partially what this work deems to answer. Through the structure of Panofsky and Warburg, I will consider Nagel's tendency through the digital medium and its implications for the future of digital Art Historical research.

1.3 Analytical Procedure

This paper applies a mixed qualitative and quantitative approach to reflect upon Joanna Drucker's "Is There a 'Digital' Art History?" and to consider Nagel's theory of "Not a Longer History, a Different History" as a possible approach to further democratize the study of art history within the digital field. An in-depth qualitative critical reading was applied to all literary sources. Further, the history and pamphlet of Iconclass were reviewed in detail. Then the codes and hierarchies were extracted and analyzed quantitatively through network visualizations. The research draws on published literature, pamphlets of iconography hierarchies, and the video of the artwork. The literature spans from philosophy to art history, to biblical sources, to the theory of digital art, and even to psychology, all considering the temporal context of the literature published. This information is constructed and critically synthesized together to consider the ramifications of Nagel's phenomena that lie behind the case study. It further includes code that takes in pdfs created from the online databases and creates a network based on similarity, in the case of Iconclass as numeric similarity refers to objects belonging to the same category. This coding is based on literature coding processes in Python to create nuanced quantitative results.

The analytical procedure takes on a conical approach coming from the most specific theoretical backdrop of the thesis, and that prompted it to the broader ramifications. We have already discussed the reasons behind this study, the tendency necessitating a new approach, and the philosophy through the literary framework.

The research proceeds, therefore, using a four-chapter approach:

A. Description of the motivation and the needed continuous perspective in art history using art theory from the present

B. Exhibition of the active existence and therefore the effects of the case study within the currently active database systems of Iconclass and others

C. Consideration of how the digital medium has changed in the last twenty years and will continue to profoundly affect the phenomena of continuous symbology through archivists' tendencies that are globally accessible

D. Taking into consideration all the last three points it is described the art historic theory that could be used for the future of the study and how it would create a more accessible and inclusive future of art historic studies using digital tools properly

The analytical procedure itself uses inside-out description through:

1. Presenting art history by Nagel and the crisis of Drucker (Drucker, 2013; Nagel, 2012)
2. Recounting very specifically the case study of Laurent Grasso's Panoptes and its ability to exist in the digital iconographic space alongside other case studies
3. Reflecting on the specificities of the digital medium that have enhanced these theories through digital art aesthetics and archivistic practices
4. Concluding by discussing the impact of Warburg, Panofsky, Mitchel, the future of art historical study, and how the previously revealed gaps perhaps should be connected with the role of digital research

These are Contemporary pieces I am encountering and discussing. How does the academy propose to incorporate artworks like Laurant Grasso's *Panoptes* in a way that would expand our vision?

1.4 Limitations

This study comes with its own limitations due to the time, nature of the study, and the state of the author as a scholar who is entering the field.

This study does not include in-person interviews and therefore, the works of art as represented do not include verbal statements from the artists themselves. Due to the scope of the study, the time, and the questions being provoked, I look forward to engaging with this topic throughout my career as its breadth is simply too large to include every instance, every artwork or every solution that must be applied to create a democratized art history. This particular study serves as a starting point for the greater problem with the first proposed term within a framework. As I learn and grow, the answers and possibilities may change. Further, within the theoretical framework, for the purpose of this thesis, the study stops at this time at one explanation of neural networks; it does not consider further developments such as Artificial Intelligence.

Due to time and focus I was unsuccessful at constructing a pixplot or higher-level technological constructions. The package dependency failures were too numerous to reconcile for this study. I look forward to future work creating software and quantitative studies that provide more methods of solving the problem of the overly hierarchical art history using technology, as this is a central tool currently in use by scholars such as Sofia Barroncini to resolve this issue.

1.5 The Crisis of Artistic Eras Disappearing and the Combination of Digital Creativity and Inter-Era Approach

Jumping right in, within the field of Digital Humanities at the point where it intersects with the field of Art History, there was the scathing wake-up call left to our field that many theorists have tried to recover from that moves beyond and yet addresses the crisis of the Middle Ages being axed from the field. Joanna Drucker's essay pointed out a lot of things the field has to pay attention to. She pointed out that the twentieth century saw an amazing reconstruction of the field of Art History, asking those at the time to truly and fully reconsider the study. Drucker likens the new twentieth-century considerations of "ideological values…participation in the hegemonic order…existence as discursive formations, social agents, and desiring machines" of artworks to the heavily technique-dependent prior formations of the study. (Drucker, 2013, pg. 6) Moreover, Drucker explains that it was important that these new and aforementioned considerations concerning artworks impacted the field because we saw something new, a new technique was shown, and the future of the Art Historical discipline mattered. (Drucker, 2013) However, when regards technology's impact in the field of art history, Drucker brings out her point that for technology to reveal a similar impact on the research of art history, the digital tools we use must provide us with the same magnitude of change in our already pre-established Art History research methods. (Drucker, 2013, p. 6) Therefore, while technology has produced a lot of questions in the field of Art History study, as brought up by Classen as well, in reality, movements into digital technologies have not produced a whole lot of change to the field of study, at least not in the same way as the past theorists did. (Classen, 2021, p. 338)

Drucker calls on researchers to reconsider the massive extent to which we could be using digital tools to reshape the field of Art History, especially along the lines of situating art "within the many networks from which it gains meaning and value…" (Drucker, 2013, p. 6) Drucker calls out precisely my point, that under the understanding of artworks as being heavily invested with and therefore connected to societies, cultures, and their meanings and values any artwork is heavily interconnected with a cultural iconographic past and therefore a complex iconology from which it is also heavily interconnected with other images, thoughts, beliefs, traditions, and ideas that shape who we are and how we express ourselves. The digital realm could be that place to

explore this expanded idea of art history as cultural history, but that intent must come from the researchers doing this work and using digital tools accordingly.

While the ability of technology has produced quite a stir in the art-historical institution of what it "might" do, there is little consideration of what "has been done". While it has proven to create something different on an artistic level, what about art history? Why has this field been left out of the innovation? There have been advancements in the sense of the mass migration of high resolution of digital photographic reproductions of artworks making up gigantic and open online databases with accurate, high resolution images (Drucker, 2013, p. 7) This being said, Drucker rightly points out an important definition, "This is *digitized* art history, one built on the use of online resources." (Drucker, 2013, p. 7) She is describing that since the tactics have not changed, only the medium has; are we making full use of the medium this way? Drucker says no, and it has awakened many authors, especially in the field of art history, to define and understand the full meaning of using technology in this field of art historical research. (Drucker, 2013) The migration is only the first stage; it is now what we do with that data that is really important at this phase of art history research. Another important point of that migration is how it happened, which Drucker also points out is still heavily "embodied in its nomenclature and classification systems." (Drucker, 2013, p. 11) This is both an unimaginative and not different way of thinking about or working with art historical data, especially if the Digital medium were to actually live up to its potential of disturbing space and older time constructions meant to hierarchize and even limit art. This is precisely the problem my case study reveals, in fact, which stems from an overly "*digitized"* rather than *"digital*" art history because the digital tools are used, but not for anything different than the methods used within printed books. There has been no positive impact from new tools to reimagine or expand art history.

It is believed that, in the hands of Digital Humanities, we might be able to see beyond the older methods of art history research. Drucker defines, "a clear distinction has to be made between the use of online repositories and images, which is *digitized* art history, and the use of analytic techniques enabled by computational technology that is the proper domain of *digital* art history." (Drucker, 2013, p. 7) It is this latter point that we must look for as historians in Digital Humanities, but is the field of art history outside of Digital Humanities ready to be torn apart again, and what would this mean? Sticking with the medium, on a computational level, there are a myriad of things we could do (if planned correctly and executed with intention). We must be aware of the "remediated" process of Digital photographic encoding that happens when we use the digital tool. This is true, and all the considerations of digital tools must be used as we embark on any research using them. It is also possible, though in the digital state, to perform machine-based analyses on the micro and macro level, and art history study could have a Warburgian effect where, for example, "evidence that arises when long-lost or ignored artists turn out to have been popular, or a market for a particular genre or circle of artists appears to

have been active in ways formerly unrecognized." (Drucker, 2013, p. 10) Therefore, Drucker does believe it is possible, and she even does offer examples wherein great creativity could be employed using digital tools to create this expansion of art history. (Drucker, 2013) Even Drucker ends by expressing the questions we desperately need to hear as art historians dealing with the Digital as a medium: "What can we parameterize? To what values might we assign a metric? And how might computationally generated studies produce a very different object of inquiry than the longstanding techniques of observation with the eye?" (Drucker, 2013, pg. 12) These questions being posed though, we also understand from Drucker's and my point of this overly "*digitized"* rather than "*digital*" art history, wherein all the old practices are simply transferred over in medium rather than challenged, expanded upon, or reconsidered, using a new instrument, that as long as this is the practice within the digital we are left with something that describes itself as progress that is not progressive. (Drucker, 2013)

It will be important we utilize all our knowledge also of the tool to intentionally use it in a way that, "models of knowledge made possible by digital technologies that arise directly from art historical knowledge." (Drucker, 2013, pg. 12) This is my point as well which we will see in the case study, that without actually utilizing the capabilities of the digital intentionally the tool cannot actually do anything new and actually makes itself obsolete in that it cannot even handle art it produces. This reveals that the current "*digitized*" and hierarchical system will have to stop being used eventually due to its inherent rigidity, when the digital tool offers itself to something more, but as Drucker points out, that something more needs to stem directly from the study of art history and the spaces in which that study is being conducted right now. (Drucker, 2013) In this way, the question is two-fold: one, are the spaces producing art history research ready for the potential breakthroughs that could happen in "*digital"* art history that might force current researchers to take sides and questions approach, and second, if we were to embark on a digital expansion of art history research, what would that look like?

If we as art historians were to try and expand the field in a way that would be more inclusive of the Middle Ages and Contemporary art we would need to think outside of our box of "traditional" art historical approaches. One way a new method could be possible has actually already been posited by art historian Alexander Nagel. Nagel, like Erwin Panofsky, is a Renaissance art historian who has published theories of the placement and development of the Renaissance according to our academic system of Art History. His book *Medieval Modern: Art Out of Time* continues to underline points of continuity and intersectionality of art historical symbols and practices within twentieth-century Contemporary art. In his first chapter, "Not A Longer History, A Different History", Nagel asks for just that, a different perspective on both Modern and Medieval art history instead of forcing a longer history that remains within the old bounds of past art history practices. (Nagel, 2012) This reconsideration starts by delineating what has made the twentieth century, or the "modern" era remain separated from all other previously

delineated eras of art history in that, “Some people even believe that Contemporary art does not adhere to any kind of historical progression at all.” (Nagel, 2012, pg. 7) It is precisely this assumption, however stemming outside of the digital in the field of art history study, that when applied in the digital, as we saw with Drucker, produces the rigidity and hierarchy that makes art history unable to expand. (Drucker, 2013) Nagel takes this background assumption on Contemporary art and continues by describing how the Middle Ages, in fact, could help move outside this assumption. (Nagel, 2012, pg. 8) By approaching the modern era with a new perspective that comes from the Middle Ages, creativity, expansion, and a new vision are also possible. This is easier to see in the current field of art history due to our current remoteness from the Modern era. We can synthesize the Modern era more clearly this way, and it is therefore possible to reconsider the approach using the Middle Ages. (Nagel, 2012, pg. 12) Therefore, not only is the Medieval rethought, so is the Modern. This being said, the Modern’s relationship to the contemporary means this theory is therefore possible to be applied even to art made now, such as that of the case study.

The Modern era seems to parallel the Middle Ages due to several of its tendencies. One is the consideration of art outside the institution, as Nagel puts it, “ The modernist critiques of the museum, the academy, the easel picture, optical naturalism, the idea of the original work of art, and of the artist as singular creator regularly produced both implicit and explicit rapport with the art that preceded these institutions and conceptions.” (Nagel, 2012, p. 14) In this way, among others, Modern art brings back important themes we have not widely seen since the turn of the Renaissance. In the Middle Ages, the work of art inhabited space in a less-codified way which meant both the parameters around how the work would inhabit a space, a person’s behavior towards a work of art, and in the reverse the medium of what a work of art could be and the space it would need to fit into, were less ceremonial than the actual use of the work of art itself. Nagel refers to artistic expression within Medieval churches and domestic decoration as an example. (Nagel, 2012, pg. 18) As we move forward into new spaces, don’t we too need to consider these types of ramifications? Modern art sought to break free of the previously codified artistic expectations laid down in the Renaissance and through Enlightenment thinking. The digital space truly acts as an active agent just for this kind of disturbance of the expected hierarchy. Nagel offers many examples of the trajectory into the twentieth-century modern period of how this breakaway was happening in stages since the latter half of the nineteenth century, many of which included very specific neo-Medievalisms that acted as a line against previous Enlightenment thinking results on society. As a result, great parallels are drawn in almost every experimental media of the later twentieth century, many of whose inspirations are in fact from various artistic forms of the Middle Ages. Since there are so very many examples and approaches to this parallel, Nagel rightly points out, “we are beyond individual encounters and are talking about a relationship that is woven into the texture of twentieth- century art.” (Nagel,

2012, p. 16) This is truly a phenomenon in this way, which should not be ignored, as this thesis is showing, it is also an important ingredient to understanding Contemporary art as well.

Regarding technology specifically and therefore Contemporary digital art, many of these terms, “indexicality”, “ritual”, “repetition”, “anonymity of authorship” bring us into some important current considerations of Contemporary, digitally-born art. Nagel even brings up Walter Benjamin’s “Art in the Age of Mechanical Reproduction” by describing how, in the Middle Ages, authorship was understood as less important in many contexts than the purpose of the artworks. Nagel therefore asks, “How does the unearthing of this model allow a rereading of Walter Benjamin’s essay” (Nagel, 2012, pg. 19-20) Walter Benjamin's concerns about the uses of mechanics in artistic and art historical practice are revisited because part of what makes particularly the Modern period of art creation so suitable for this kind of “chronology-folding” study is the way in which budding technology challenges the “space” and the “hierarchy” of artworks. (Benjamin, 1968) The changing of how we make, consume, and interact with art includes authorship practices which were codified alongside everything else regarding the study of art. When talking about Adolf Behne’s work, defining the Middle Ages against Constructivism, Nagel describes that technically art, no matter the era, still comes from its highly “indexical” and “useful” history as images made for “worship”, the hierarchies that followed are partially owed to religious tradition, it’s only the deity that seems to have changed. (Nagel, 2012, p. 250) By taking the image off the wall and adding elements of interactivity, reproducibility, and even unexpected nature, the ideas of expected space are disturbed because the artistic image is no longer identifiable under museological parameters. No space is more active in this breakdown of the expected space in which art is “supposed to” inhabit, like the plain white cube of the museum or gallery, than the digital.

Interestingly, the tension between body, space, and the tactile experience of artworks was also often explored in Medieval manuscripts as well. Here, as Nagel points out, in the 1920’s experiments with installations that included interactive elements, had an immense effect on the movement of space. Instead of that space and raw interaction with an artwork being the privilege of only the curator (one individual usually), it became the choice of the viewer as well to create a personal interaction that is unmediated. In this way it is possible to see any perspective from the artwork. The immense subjectivity of curation is revealed in the resulting process, and our interaction with artworks becomes “ a three-dimensional rendering of a two-dimensional image-construction,” which, since the Renaissance, has also sought to be a rendering in some way of inhabitable space. (Nagel, 2012, p. 252) This way, the art installation disturbs the previously clearly delineated space between the viewer and the art object. That being said, the institutionalization and “behind the glass” expectations of art, while they may have their origins also in the altar, Medieval art was not so strict, especially about spaces as depicted in manuscripts and other two-dimensional images. Further, Panofsky points out how era and

artistic, not to mention technological, contexts significantly change the way we interpret space. (Panofsky, 1970, p. 34-35) We see for example in the Uta Codex that Medievalist Professor Eliza Garrison points out in her keynote speech describing how the authors and illuminators of, “the Uta Codex also constructed the miniatures to simulate from various angles the space of the Nederminster Abbey as a material extension of Christ's own body in doing so the designers of these illuminations went to hitherto unexplored lengths to represent and construct the space of the word as a tangible archetectonic structure.” (Garrison, 2021, 8:22-8:59) (see Image 1 below) The codex in this case plays such a multifaceted meaning that goes beyond just this statement; that being said, the space inhabited is so important due to its very ability to be of multiple meanings, just like Modern and later, digital art strives to do. Thus, the play of spaces and interaction within those spaces, while hierarchical, was played with in the Middle Ages often, and as we have already noted, the differences in the lack of hierarchy and the ability for art to participate as a useful addition to the space also created a similar sense of “playing with space” that modern, and later, digital, art does.



Image 1. Abbess Uta of Niedermünster, *Uta Presenting the Evangeliary Carpet page, Quattuor Evangelia/Uta Evangelistar/Uta Codex,* single folio, 38 x 27 cm, München, Bayerische Staatsbibliothek, Clm 13601, https://www.digitale-sammlungen.de/en/view/bsb00075075?q=%28Clm+13601%29&page=4,5.

Like the Uta Codex, we understand that possible interactions with digital artworks as an ability simply of the medium, and that while it disturbs our usual interaction with artworks which is highly codified and specific, it is also understood in our current culture as something inherent to the digital medium itself. Like Panofsky’s point that we can suspend imagination to

understand suspended infants in the air in various artworks in different ways based on our knowledge of the artistic expectations of the era, so too can we suspend our understanding in the digital to understand that it will, no matter what, act as a challenger of our knowledge of and experience with analogue space. Augmented reality has already revealed this point. The digital space has already bridged things such as era, that analogue reality is incapable of fully mimicking. Therefore digital art, existing within this paradigm instead of existing within the rules in analogue space, inhabits similar spaces of playing with the animalistic, and human, expectations of analogue spaces. This is especially true of the hierarchical space that art is "supposed" to inhabit, such as the white wall of the gallery, uninhibited from any other distractions but also taken so utterly into a synthetic atmosphere forcing the viewer to see the work as above, or apart from their own experience.

While Medieval manuscripts and images therein may have been in a special position to play with space in a specific way, we know from basic museology that the absoluteness of the relationship between the body and the space of art or even of cult imagery, does not fully emerge or institutionalize until after the Middle Ages. However, Nagel delineates that as the artistic image was being codified, interestingly so was the spiritual space, which in the Western world was the church, "now became a theater of visual experiences focused on the high altar…" (Nagel, 2012, p. 259) Here we are going from art acting as a semi-useful addition to places like the Church, to the Museum institution, an academic institution primarily created through the successive Enlightenment thinking, that would put art at a distance, behind a glass, and heralded therefore in a distanced manner. This is post-Medieval thinking. In this context, even the Church, the Western previous housing of many forms of artworks during the Middle Ages, would also change its tone and focus, placing art now into a very hierarchical position it was not solely relegated to in the previous centuries.

It was this mindset of necessary hierarchy between viewer and artwork, however, that concerned Walter Benjamin in his well-known essay "Art in the Age of Mechanical Reproduction", Nagel points out that Benjamin's concern in the age of only mechanical (photographic) reproduction is that, "This new image-space is no longer separate from the "space of the body." It no longer involves the contemplative distance of the traditional bourgeois work of art." (Nagel, 2012, p. 260) We are seeing the multi-effect from the previous forms of institutionalization of art (which comes with hierarchy, necessity of more rigid definitions, and so forth) wherein the space is highly codified and regulated between the viewer and the work of art.[1] As we know, this not only constructs very clearly the spaces within which analogue art consumption is staged, but in reverse it also dictates very clearly what art is allowed to be, and by clearly stating the "bourgeois" form of art in this case, Nagel is pulling out the "expected

[1] This is further explored as a relationship between viewer and artwork from the time of artistic creation to presentation in the book *Only Connect…Art and Spectator in the Italian Renaissance.* (Shearman, 1992)

three" (painting, sculpture and architecture), but more precisely (history painting), which was considered by the old academy the "highest" of artforms. This written-down hierarchy of art is something Nagel describes as also being able to be read in Benjamin's later works on architecture; the comparison between the post-Enlightenment museum style of "seeing" seems to be the ideal for Benjamin, as its sense of "focus" or lack of clutter helps reinforce certain points of the old art hierarchy of art spaces. (Nagel, 2012)

While the white cube is so central to the setup and enforcement of Enlightenment-style hierarchies of art display, viewing, and general study, there is also a point in history where artists moved away from this form in general with or without technology. Nagel points out, the rigidity of the institutionalized space, is considered generally too much starting in the eighteenth century wherein at least the Impressionists did not at all adhere to academic beliefs, neither did Francisco de Goya y Lucientes as another example. With technology, a potential destruction of that very relationship happens rather naturally because, in a way, Benjamin was correct, the photograph would act as a great open door for image equivalency across genres, forcing the old, and very rigid, definitions of "important" images to be revealed within the subjectivity they were always placed. (Benjamin, 1968) This made it possible for images to be considered "art" that did not perfectly inhabit the previously codified definitions of art forms, it made the cultural historic perspective of Aby Warburg possible, and it offered the ability for art to inhabit multiple spaces, including useful spaces, or spaces of subjective authorship, as it was in the Middle Ages too. What is also interesting is the reverberation we have in Umberto Eco's writing, where he talks about the difference in treatment of the Medieval architectural monument to that of Antiquity. (Eco, 1995) In the European continent at least, while Ancient architecture when preserved is by nature still uninhabitable and therefore kept on its own pedestal, at a distance, Medieval architecture once preserved is in fact still used today, which Eco attributes to our contemporary societies having a very real "need" for those parts of the Middle Ages since we are more based on them than we would like to admit. (Eco, 1995) This means too that our relationship with the Middle Ages is different in imagined proximity to our Contemporary era than our relationship is with Antiquity. We return therefore to Nagel's way of thinking that there is created instead another type of "chronological folding" but instead of it being between Antiquity and Renaissance forms, it is between Medieval and Modern frames of artistic approach.

This chapter and these observations, however, bring us to something important in Digital Humanities. One of the influential artists in the circle of Behne at the time was the Hungarian artist László Moholy-Nagy, known as one of the grandfathers of technical art. Nagel describes that Moholy-Nagy's stance was the replacement of older forms of art for newer (and largely technical) mediums of art making (Nagel, 2012, p. 254-255). As mentioned, Moholy-Nagy was not just simply a Modern artist; he was actively a Modern technical artist who used machines to make art and believed in the future of mechanical art. It is artists like Moholy-Nagy and those

who followed him, that we credit with the line of art history leading to the Digital Art of Grasso and others today. Moholy-Nagy actively advocated for the future of artists to also be proficient in "technical matters." (Nagel, 2012, p. 255) Nagel adds onto this the repeated point that the very same technology Moholy-Nagy is referring to, is also that which has returned us to the concentrations of artistic signature being lost in the midst of technological production of art. (Nagel, 2012, p. 255) Interestingly, the origin of importance placed on artistic identity lies in the academic, artistic hierarchies of art from the Renaissance as well. This shift away actually mimics Medieval modes of art making and use of artistic objects. In this way, technological and digital art like that of our case study, in its mode of shifting the gaze of importance from artistic identity into the object that is generated, and whose message is more important than a sense of individuality, actually reverts to the Medieval way of seeing artistic objects. It was also this discourse that Benjamin reacted to with a strong opposing voice, warning against the same "serial reproduction" Moholy-Nagy was promoting alongside Behne. (Nagel, 2012) Behne was also a bit forward-thinking and accurately so when he described that this exact shift away from the individualized, author-based thinking towards mechanical generation would also create "the virtues of an active art of *Konstruktion* that would overthrow the static *Komposition* of the bourgeois easel picture." (Nagel, 2012, p. 255) We are seeing here the very interconnectedness of the academic hierarchical values and importance of individual artistic identity in that, once the active, reproduced art appears, it is not only a matter of anonymity on the part of the artist, but an utter breakdown of older methods of seeing art that is at stake.

Nagel also mentions direct artistic inspirations from the Middle Ages to Moholy-Nagy's personal artwork. This is true of many mechanically-based Modern artists, but in the case of Moholy-Nagy when making a machine to reveal the creations of color and light, "Only in Medieval art, namely in stained glass, did Moholy-Nagy find a precursor for the modern projected and moving colored image…" (Nagel, 2012, p. 255) In this way, the mechanical reproduction that Walter Benjamin concerns himself with, is coming, at least partially, from the Medieval due to the art's ability to move spaces and be transgressive of medium. (Benjamin, 1968) In the case of Moholy-Nagy we have reproducibility through the artwork's positioning, just like every day as the sun rises through the stained glass windows of the Gothic church. This effect also reproduced in the projected image of our case study, wherein the lights and patterns are constructed not only within architecture, like a church, but they disturb the expected art historical space. Instead of relying on the expected forms of art formulated within the academy, such as a painting revealing the light, or a sculptural piece meant to redirect or constrict the light, these are projected actual pieces of moving lights themselves. We are no longer using art to describe the light, but light as a medium to describe the subject of the artwork, further underlining the point that within the artwork, the technique is of less value than the content, again a form of thought and seeing from Medieval tradition.

Nagel finishes by summarizing that the “critique of the contemplative visuality associated with the bourgeois-era easel picture ” as was done by the avant-garde throughout the Modern era, became in fact the “motivation of experiments” that included technological and mechanically reproductive art on the side of artists, and corresponding theory by Walter Benjamin and others. (Nagel, 2012, p. 262) This led to a rise in installation-based art that, like in the Middle Ages, moves away from any concept of artistic individuality that is clearly and separately delineated within a controlled space, and moves towards group work or medium-based work with artistic anonymity whose participation within space is entirely linked to the architecture itself and inseparable from its medium. (Nagel, 2012, p. 262) Further, though, and I cannot stress this enough, the changes in art at the time were also of great concern to the art theory of the time (Nagel, 2012, p. 262), and no one was separated from the other the way Drucker shows we have become. (Drucker, 2013, p. 5) We have here between Nagel and Drucker the culmination of the description of the mode of art that loses its artist so to speak, and disturbs the traditional making of art historic space, and this is found in art that just barely predates mainstream mechanical artistic production and all of which have become increasing concerns in all levels of the contemporary artistic field especially as it addresses the institution, who, like Benjamin so eloquently points out, is not built for these kind of interventions of artistic expression. (Benjamin 1968; Drucker, 2013; Nagel, 2012) The uses of technology and the digital already in practice by artists who have not only continued the previous mention of Dadaist replications also points to the precursors of current mechanical and digital art that includes things such as instructions similar to ritual, needed repetitions and in our case, a projection that describes a distinct heritage of forms, therefore we are seeing this “chronological fold” that Nagel is describing and this text is vital to our understanding of the ramifications of these types of works within the digital art field.

Chapter 2

2.1 Panoptes: The Case Study

But why should we care? Is the arts field actually going into the Digital direction? Is it really necessary to create ties between the Middle Ages and the Modern periods? Even if it were relevant in 1930, why would it matter now? The issue at hand as mentioned by Drucker is not only are we technically still preoccupied with the same questions that were raised in the field of art historical research throughout the twentieth century, but moreover the access to the archive is creating something that, as Joanna Drucker warned us is overly *digitized* Art History which is simply a transfer of outdated art historic perspectives that cannot be universally applied. (Drucker, 2013) As a result, top-of-the-line tools would incorrectly synthesize Contemporary works of art that have already moved into new periods of their own discourses away from that of the twentieth century. As Drucker points out, at least back then Art History was trying to move

with the art that was being created, but that art of the twentieth century is also the context through which Contemporary artworks are being created. (Drucker, 2013) Therefore, it is relevant to now because not only do we have the same problems, but they have become bigger with time and neglect.

As part of the Seoul Lights Festival of 2025, French artist Laurant Grasso created as part of his series, *Panoptes,* his first gigantic digital animation. As an artist Grasso is known for creating, "mysterious atmospheres that challenge the boundaries of what we perceive and know." ("Laurent GRASSO - Artist - Perrotin", 2026) He is a hybrid artist who has also explored the Medieval as a style in various media. His work, " reveals what lies behind common perception and offers us a new perspective on history and reality." ("Laurent GRASSO - Artist - Perrotin", 2026) The artist specifically aims to use the medium to create distortive art in order to bring forward truths that we know is also possible from history. Culture is forced to reflect on itself using its own language of symbols and therefore his artworks ask to be read as explorations of cultural meaning of images and motifs by creating "anachronistic" situations that isolate the symbol in order to explore its meaning and potency as symptoms of culture.[2]

In this series, Grasso has isolated and explored the eyes specifically of the mythological giant, Argos Panoptes, even ironically on ceramic ware, harkening back to the original images from Greek Antiquity found painted on vases. On this particular artwork, the eyes were animated and projected in a digital format onto the facade of the Dongdaemun Design Plaza designed by Zaha Hadid, therefore adding the architect's world-renowned work to the artwork through the optical illusion of the projection. The eyes move up and down as well as side to side on the building and blink at different times making their behavior unexpected. It was projected with music composed by Warren Willis, creating an immersive if not tactile experience. The artist statement describes, "Inspired by the mythological figure of Argos Panoptes, the work reverses the process of seeing: it is the viewer who becomes the observed object." (Grasso, 2025) We see the isolation of the symbol and a very active use of its meaning from the past, deeply embedded into cultural literature.

Also, this project stemmed from, "research on observation systems, from surveillance to astronomy…" (Grasso, 2025) Grasso explicitly invokes the symbol of Argos's hundred eyes in the Ancient past and the most recent consequences and reincarnations of the symbol with technology as well making the medium of the artwork very intentional by describing the consequences of surveillance. By projecting the symbol onto a building, the complete meaning

[2] Exploring the anachronisms and the tension of timeline categorizations with the semi-timelessness most artworks present has also been explored in the Renaissance. Artworks that bring out the tensions of timelessness tend to also bring out points of what is included in the canon and the general art historical research approach, like we see in *Anachronistic Renaissance.* (Wood, 2010)

of the symbol from its every incarnation in the past to the present is realized as, “Panoptes transforms architecture into an observing body and the sky into a territory of anticipation, where vision seems to have its own autonomy.” (Grasso, 2025) Grasso, therefore takes on as everyone in the past has, the questions of vision, protection, and autonomy that have always surrounded the figure of Argos Panoptes and the myth in general. (Grasso, 2025) The artwork very clearly asks to be read along the lines of the traditional meaning of the polyommatic motif.

Art like this that is made with the intent of embodying the historical and deep cultural meaning of symbols even if using new tactics that provoke core questions of all existence including artistic existence, as Alexander Nagel has explained, is not only heavily steeped in history of meanings on the level of the contents of the image, but even in the practices of its making it harkens back to previous approaches before the heavy codification and regulation of art, wherein art could and did freely perform as an active agent of understanding. Today, the result of Medieval and later methods of understanding frame our later encounters with symbols, especially those whose origins are in Greek and Roman Antiquity. Unlike the ceramics, in this case the artwork takes on both the un-embodied form of being at its core a projected manifestation, or “remediated” version, interpreted again by a machine and placed somewhere with meaning in the analytic world (in this case a building) to be interacted with. The anonymity of the artist being the creator of an image that has to encounter machine interpretation before human viewing refers to anonymity of Medieval artistic authorship, wherein simply the importance was more the contents and use of the image than its origins. Just like this too, the interactiveness of an experience meant to be considered in a multi-sensorial way by the viewer harkens back to cathedral architecture and again the importance of pure light being recreated using art. This is not the artwork that can be hung nor does it ever, really, fully exist to all senses beyond hearing and seeing, therefore it refuses to participate in the gallery or museum setup, and its viewers cannot partake in the traditional way of simply looking. Furthermore, through the projection and the actions therein of the installation, the space itself is subverted yet again and the building itself is forced to take on the eyes of Argos, but this is temporary, technically anything could become the next “embodiment” of the Argos Panoptes and his eyes, which again speaks very directly to the history of various cultural re-interpretations and imaginations of the symbol through an active art. Now that the eyes of the giant can be embodied anywhere through their “haunted” Digital version this current artwork takes on the past through the change into the Digital medium. The eyes actually do “follow us wherever we go” this time, but this was always true, it was just never so fully outlined before due to the eras of expected staticisms of artistic production, and viewing expectations. Are we as art historians prepared for active art again?

In order to move forward with a true art historic understanding of this piece, if someday it were brought into the institution (academies, universities, museums), the needed creativity of art historical study will no longer be a question of importance, it could become an emergency if

ignored and we must as art historians be ready to adopt “different history” perspectives linking artworks together in order to explain these pieces fully by situating them in the complex web within which they belong and being able to include them in the grand arch of art history. The institution does not have to close or be devalued if it moves with the art that is being created and from this point, Medieval art, all art is just as important as ever. What is not so helpful is hierarchical understanding of art historical discourse that frames each era with a little too much neatness, because history is a bit too messy to exist in only just one place and in one way. We need to be able to employ larger views and synthesize tactics that would provide a more complex understanding of art history but at the benefit of inclusivity and a more complete art history.

2.2 Byzantine Polyommatic Angels as a Comparison

2.2.1 Iconography

While this Contemporary artwork is held within the Digital medium, which is very specific to our time and era, the symbol inside is millennia old and throughout the world holds power and meaning. Since the artist is known for considering a motif’s history and playing with our current perceptions of reality, we must consider the meaning of the symbols of the eyes of Argos Panoptes as a motif with great cultural history and value. This artwork therefore was chosen for this thesis to be considered alongside other historical pieces with whom it shares many ties of cultural value and meaning. To demonstrate *Panoptes’*s particular tie to the Middle Ages, we will explore the Medieval connection in this case to polyommatic angels and the latter imagery tied to industrialism and technology regarding the eyes of Panoptes and vision. This comparison, however, will reveal the incredibly multifaceted cultural importance of the symbol and why it will likely live in our imagination for a millennia to come. It will also reveal the inherent intersectionality of the digital artwork itself, and why the artistic institution will need to pivot to a network-based approach to fully explain how these artworks participate in the Art Historical canon.

Argos Panoptes was a giant and son of either Inachus, Agenor, or Arestor (it is not clear), who, according to Greek mythology, was charged by the goddess, Hera, to guard the high priestess of her temple Io. Io had fallen in love with Hera’s husband, Zeus, who turned Io into a cow in order to protect Io from Hera’s anger. Hera, however, persuaded Zeus instead to give her the cow and entrusted her priestess to Argos Panoptes to ensure Io and Zeus would not meet again. The name “Panoptos”, comes from the Greek, “All-seeing”- pan (all) optos (eyes, seeing, the one who sees) particularly the suffix comes from the Greek “opsis” which has over millenia become a semi-congugated form entering the English language from Latin. (Merriam-Webster) The origin base refers in general to both “appearance” and “vision” and thus takes both the active form of the seer and the form of the seen. (Merriam-Webster) When looking into the noun’s

proliferation and use in the English language we find such diverse definitions as “opinion” and “optical”, the first referring to thought processes (likely based on “seen knowledge”) and the second very directly to the mechanism of the eye. (Merriam-Webster) We know from this point that the noun itself has many meanings from how we perceive to also how we think. “Because of his special ability to simultaneously watch everything around him, he was thought to be the perfect protector.” (Mohamed Shideed, 2025, p. 171) In the story, even though the giant was supposed to be the optimal protector for the job, one day the god, Hermes, lulled the giant to sleep with his flute. When Argos was asleep, Hermes killed Argos. Hera transferred the eyes of Argos into the tail of her favorite bird, the peacock, and sent a gadfly to force Io to wander the earth. Crossing the Bosphorus, Io returned to her mortal self and gave birth to Epaphus.

In Ancient Greek and Roman pottery various scenes from this tale have been frequently illustrated. The figure of Argos was often depicted mostly nude and, “In depictions on certain vases he is two-headed. Most later versions refer to Argos' body as completely covered with hundreds of eyes,” (Diamandopouiou-Drummond et al, 1993, p. 422) The many eyed version of Argos is more prominently known and would be used as a later template for the Byzantine creations of Cherubim and Seraphim.

Focusing on the later part of the story, the transfer of Argos’s eyes into the peacock has its own very complex history that Hera chose the peacock because, “first the peacock was considered as a symbol of vigilance, as she wanted to keep her eyes all the time on Io and these eyes are going to fulfill this mission. Moreover the peacock had 100 eyes and Aragos had the same number of eyes as number 100 in Greek mythology refers to the completion or the perfection.” (Mohamed Shideed, 2025, p. 175-176) This association between Hera and the peacock became a phenomenon that went from the mythology to religious tradition as was seen also in the keeping of peacocks at Hera’s physical alter, and therefore the eyes of Argos were taken from his image and added into the bird. (Betjes and Joubert, 2025, p. 8) The cultural connection was also made to the immortal realm through tomb imagery because, “Keeping Argos eyes by Hera was not accidentally done but it was assuring that his soul would continuously live even after his death, because the eyes were considered the windows communicating between the deceased and the outer living.” (Mohamed Shideed, 2025, p. 175-176) This was yet another way the eyes of Argos were used to redescribe vision. In this case it had to do with a sense of spiritual vision instead of any other kind, but it was exactly this spiritual vision that would transfer to polyomatic Byzantine angels with identical characteristics to Panoptes through the extraction of only his eyes. This manifestation into cultural tradition was, however, through Ancient Roman tomb traditions. “On their death, the Emperor was thought to be delivered to the heavenly world by an eagle, and the deceased Empress — by a peacock.” (Peter the Great Museum and Vasilikov, 2023, p. 85) The sarcophagus took the eyes of Argos, through the peacock this time, to carry the soul of the Empress to Juno, not only the eyes

of the giant. This Imperial association was then transferred into Early Christianity also through the sarcophagus. “Early Christianity adopted and developed the mythology of the peacock that took shape in the Classical world. The peacock became associated with fundamental notions such as the soul’s immortality, resurrection, the mystery of Communion, and bliss in Paradise. The first images of peacocks or peacock feathers appear on the walls of Christian catacombs and numerous stone coffins (*sarcophagi*). Two peacocks are often represented on either side of the Communion chalice, a vase, or a mortuary urn.” (Peter the Great Museum and Vasilikov, 2023, p. 85) Through the eyes of the Argos in the tail of the peacock, the association is carried, but we see a small morphology of the image.

We see in the move already to the peacock, the image of Argos Panoptes starts to change, and this is partially due to its movement from myth to nature, but also to what and how the movement has happened. As mentioned, the eyes specifically of the giant were what moved to the peacock, those particular features were what was inherently possible in Ancient Greece to bridge between the living and the dead. (Mohamed Shideed, 2025, p. 175-176) However, as an animal, specifically a partaker of the Garden of Eden, the peacock as a component of nature had to in its motif manifestation partake differently in art because, “The temporality of the animal image, then, embraces both past and future… either in a narrative of a return to a utopian Eden, where human nature finally achieves its potential, or in a return (via the “worship of brutes”) to the nasty, brutish, and short existence…” (Mitchel, 2015, p. 83) We then see the peacock both acting as a symbol of the divine, but only as long as it mirrors a part of humanity, our consciousness. It is through the animal we are either able to ascend or fall back into the earth from which we came and thus both a decision of nature as much as a spiritual awakening is possible. Even an awakening itself would require an inner vision. There is really no place in which Argos Panoptes loses his impact on ourselves as creatures constantly trying to “see beyond“ or to “see again”. The eye is the organ at the command of the mind like the other four human senses and it is this one that is further connected with knowledge, one of the few human parts at our essence to make us different from other mammals.

For this spiritual-type and utterly human reason, peacock imagery was not only reticulated on tomb imagery but painted and placed on walls of Churches through mosaic. The eyes of Argos are found again in the Bible this time. The angels, Cherubim, are described in the Book of Ezekiel as, “And their whole body, and their backs, and their hands, and their wings, and the wheels, were full of eyes round about, even the wheels that they four had.” (Ezekiel 10:12) It is further noted that the translation of “body” comes from the word “Heb” meaning “flesh”. Therefore the description of the angel is truly quite similar to that of the giant as well. Since also in the case of Argos Panoptes in Ancient description, “He is frequently shown with several eyeballs covering his body, perhaps even on his back and limbs.” (Mohamed Shideed, 2025, p. 172) In both these instances eyeballs written as found in the flesh and specifically the back are

mentioned, thus the two creatures share more than their multi-ocular characteristic, but also some specific physical descriptions. For Cherubim, we know as the Greek society moved from the multi-deistic society into a newer, Christian empire, this symbol transferred from creature to creature and from ceramic to clay and later, glass covered materials. Regardless, as we know the eyes of the peacock speak to a central human tendency, as the symbol transfers into a new empire serving the same tendency as the original myth becomes fitted into new literature. The image, based on these descriptions changes by very little physically as a result.

Interestingly, "The cherubim were composite emblematic figures…chiefly (1) as bearers of the Deity; (2) as guardians of sacred things." (The Book of Genesis, p. 60) Therefore not only have the eyes of Argos been carried into Christianity onto the tail feathers of the peacock, but simultaneously, within the Bible itself emerges another creature quite identical to Panoptes with even the same properties as an "all seeing" protective being. The eyes of Argos continued in cultural imagery, motif, and even meaning centuries beyond the body of the giant himself into the description even of the flesh of angels in Byzantium. Similar to the mosaics in Santa Maria Assunta, in Torcello, "From earliest Christian times, artistic representations of those angels who were entrusted with the special duty of guarding Paradise showed them as the possessors of multiple eyes in their wings. (Diamandopouiou-Drummond, 1993, p. 423) (see Image 2) Within Byzantine mosaic tradition we see here the return again of Argos but through another creature, the polyomatic angels of Cherubim. They still serve as protectors of the divine through their multi-ocular characteristics just as Argos Panoptes did, but in this case within the literature narrative of the Christian Bible, as stated though, the cultural value of the multi-ocular creature retains its importance and resonance into a new era. In this way the Byzantines do not "forget" Ancient Greece like we were taught they do, but the same motifs are re-translated into something else that better serves the early Medieval societies.



Image 2. Detail of entry to Paradise Last Judgement mosaic with Cherubim at doorway, Santa Maria Assunta, consecrated 1006, Venice, Italy, Ismoon (talk) 09:25, 8 February 2019 (UTC), CC BY-SA 4.0 https://creativecommons.org/licenses/by-sa/4.0, via Wikimedia Commons

The issue is, like much of Medieval imagery, the eyes of Argos were not only found in the peacock, but their participation in the cultural artistic manifestations of Cherubim created both a literate and artistic crisis in that, imagery still could not quote the Bible directly, it is after all a Commandment from the Old Testament, Exodus 20:4 "You shall not make for yourselves an idol, nor any image of anything that is in the heavens above, or that is in the earth beneath, or that is in the water under the earth:" (Exodus, 20:4 etc) This was often tested by Medieval imagery, however, those boundaries could not simply be crossed. Thus, while the image and the description would transfer in literature, and as we saw in image as well, this transfer based upon new cultural tradition was not so simple, but as a result it was more fluid. Under this new Christian tradition, as described no image could directly describe spiritual Biblical creatures such as Cherubim are to avoid blasphemy, thus the image of Argos could not simply be transferred into the new Byzantine image tradition without some extra intermediaries. Since direct quotation of the main literature is not possible this means that a "lack of a unitary Scriptural discourse with respect to their appearance has led to iconic morphologies that are not consistent with the Holy Scripture." (Paşca‐Tuşa and Popa-Bota, 2019, p. 6) The images of many angels as a result have a very different way of being described within imagery than within scripture that comes from various additional liturgy and cultural symbols. Now, thing is what this meant in Byzantine iconography, is that the properties of Argos Panoptes's eyes specifically were transitive to any spiritual character playing the same role as the giant, of spiritual protection in some form, even though this is not ever described within the text of the Bible specifically. Therefore, there become many types of Byzantine images of polyomatic angels within image traditions that reference other spiritual texts outside the Bible itself. Primarily, in post-iconoclastic Byzantium (about after 700) we have the liturgical texts of St Dionysios, and specifically the reaction to said liturgical texts in the fields of Byzantine art, architecture, and expectation that permitted the permeations, continuations, and transformations of Panoptes's eyes into the Early Medieval Christian spiritual realm.

Saint Dionysius the Areopagite lived in the 500's, he was known for his influence on the artistic and architectural traditions of Byzantium. In our case, specifically his liturgy, On the Celestial Hierarchy (De caelesti hierarchia) was in fact the text that permitted the symbolic use of Panoptes' eyes within the angelic orders. (Заров, 2003, p. 157-158) The movement of Pseudo-Dionysius continued throughout the iconoclastic period in the following centuries on both sides for the reason that it considered through a combination of Biblical literature and Ancient Greek philosophy questions of religion and aesthetics, which were central themes of the iconoclastic eras in the search for, "Идејата за богоподражавањето {8m;.tff..1r;τον) еден од начините на вонсознајното разбирање на Бога КреаiТшвносШа е и.миШација, но u.мuiiiација на совршенаШ.а, невидлива убавина…" [The idea of divine imitation {mimēsis) is one of the ways of the non-rational understanding of God. Creativeness is imitation, but an imitation of perfection, is invisible beauty…] (Заров, 2003, p. 160) It is precisely this sense of

“beauty” and “purity of divinity” that inspires Pseudo-Dionysius to format a hierarchy of orders in many ways, for humans and for divine beings. Since, however, this liturgy is a mixture of Biblical and philosophical sources, it speaks of Biblical stories, themes, and even characters in a different light that permits a certain fluidity for the characters once depicted in imagery. In this way, it is less about exact literate re-depictions of stories than it is art being used for this religious purpose of finding a specific kind of aesthetic “beauty” that would serve to tell the essence of those stories. Images could therefore employ devices such as the eyes of Panoptes, even out of context, if the character was producing the characteristics of Panoptes. Such a character could take on his properties in order to create this “imitation” of divine beings according to a philosophical hierarchy, rather than sticking to the original literature. This is also spurred since the questions of iconoclasm are also spurred by the same passage that does not permit exact images of divine and godly beings directly from the text. The various treatises of Dionysius would therefore become important to the continuation of discourse during that period as his works discuss precisely the divinity possible within images and of course how that divinity enacts in the cases of “making art” in a very Platonic way. (Заров, 2003, p. 163)

As a result we have something interesting where the properties of Cherubim are transferable according to image tendencies of the Byzantium, just like those eyes were transferable in this case as well. The symbol of the polyomata was given to any order of angels demonstrating to be of the same “divine purity” as the Cherubim, but also performing the same role as the Cherubim. Therefore, “artistic representations of those angels who were entrusted with the special duty of guarding Paradise showed them as the possessors of multiple eyes in their wings.” (Diamandopouiou-Drummond, 1993, p. 423) In this way, we have the ability of Seraphim also to take on the role of Cherubim, and therefore their image due to this equivalency and due to the treatise of treatises of Dionysius that put Thrones, Seraphim, and Cherubim on the same divine levels because these orders of angels, “кои просветлението (гд фии{(Etv) го добиваат директно од Бога.” [who receive enlightenment (rd phi{(Etv) directly from God.] (Заров, 2003, p. 161) In this way, the symbol of the eyes of Panoptes creates an imagery language of its own that transcends even the literature of the Bible to equivocate the angels of Seraphim in order to describe the angels as divinities whose power is closest to God and simultaneously as protectors or intermediaries between the divine and humans. (Заров, 2003, p. 161) Technically, according to the Bible itself, Seraphim are not mentioned as being polyomatic and they are mentioned to have six wings, rather than four that Cherubim have, “with twain he covered his face, and with twain he covered his feet, and with twain he did fly.” (Isaiah 6:2)

These angels further, as opposed to Cherubim mentioned in the garden of Eden, Seraphim instead are mentioned in the Apocalypse very specifically. Again, both these scores of angels are classified by Pseudo-Dionysius as closest to the divine, and therefore a certain conflation is possible of course. Beyond this however, in both cases it is mentioned further that both these

orders of angels protect the throne of God in moments when the divine is revealed to man. Another type of confusion in this case is also within the descriptions of other angels in the book of Ezekiel where in the descriptions of Tetramorphs (four headed angels), “As for their rings, they were so high that they were dreadful; and their rings were full of eyes round about them four.” (Ezekiel 1:18) Now this is also appealing to another “issue” within literature also regarding Argos Panoptes wherein his multiple eyes were sometimes manifested in images as, “In depictions on certain vases he is two-headed.” (Diamandopouiou-Drummond et al, 1993, p. 422) Depicting creatures with the power of Argos Panoptes as multi-headed has a history of its own as we can see. Another reason though the Tetramorph are sometimes confused as well is the mention of “flaming swords” in the possession of Cherubim at the fall, (Paşca‑Tuşa, 2019, p. 7) that also add more connections with Cherubim and other angels.[3] Therefore, actually due to the lack of clear orders within the Holy Scripture itself, it took not only the liturgy of Pseudo-Dionysius but also the liturgy of patriarch Miron amongst others to add definitions to these various angel types.(Paşca‑Tuşa, 2019, p. 15) This gave a certain freedom of artists to describe polyomatic angels in a manner as best suited their role in that particular scenario, but it also meant angels were able to take on the symbol of Argos Panoptes’s eyes mostly based on liturgical rather than Scriptural description.

Further, by “confusing” or giving Seraphim the powers of Cherubim in this instance, it takes on the point that Seraphim are also protective angels who perfectly bookend humanity’s access to Paradise from the fall to reentry. This is because Cherubim are clearly described in both the Biblical scripture and in mosaic imagery (such as that seen above) as guarding the Garden of Eden, meanwhile as described from Isaiah Seraphim appear at the end, in apocalypse scripture. (Paşca‑Tuşa, 2019, p. 7) This is important as these features “proclaim the unity of sacred time, both important features of early Christian apse decoration and of Byzantine art in general.” (Shilling, 2020, pg. 358) We know this to be a very central part also of Pseudo-Dionysius who also “Целокупната структура на неговите хиерархии почива врз естетски принципи во кои доминантна улога имаат симетријата и аналогијата.” [The entire structure of his hierarchies rests on aesthetic principles in which symmetry and analogy play a dominant role] (Заров, 2003,

[3]This confusion or rather symmetricality creates a bridge to the seven angels of Judgement Day. This is also semi-explored by the Contemporary Humanist artist Panda in his Phygital series *Art Angels* which is, “a contemporary physical-digital, 7 part series (I-VII) exploring the Angel as a symbolic presence rather than entirely literal. The figures are an archetypal presence markers of transition, authority, consciousness, creation, and passage-positioned within contemporary cultural space.” (artist statement in exhibition) In particular in this series it is noticed that *Angel III* also banishes a flaming sword with an eye inside it, creating again a mirror between beginning and end of the Biblical narrative with a fairly clear reference to the images of Cherubim and Seraphim at the gates of Eden. Re-framing this into an angel that is meant to be both contemporary and within the Humanist perspective wherein the Angel instead of being solely a symbol of a deitic creature, “embodies strength & judgment not brute force, but moral clarity and righteous judgement to cut through illusion. The eye within the blade symbolizes discernment and seeing truth with precision.” (artist statement in exhibition) Thus the symbol is combined and pivoted from the Byzantine and Early-Medieval narrative into a Contemporary semi-digital Humanist one creating a tangential tie also to Grasso’s work while incorporating many other elements.

p. 159) Therefore this symmetry that bookends the human access to the divine plays very perfectly also within the Byzantine sensibility of divine art while maintaining the symbology of the polyomatic guardian who acts as a gateway between worlds. This would be possible in how images also of Seraphim and Cherubim were used in the Medieval world, it is mentioned that, "In the context of the liturgy, the fans serve to protect the Eucharist from flies or insects. Symbolically, they recall the guardians of the Lord in heaven, the seraphim and cherubim, with which they are decorated." (Shilling, 2020, p. 356) This refers to fans that were part of the vestments of the church, evidently including images of polyomatic angels. (see Image 2 below) Therefore, not only was it a matter of the images themselves, but also in how they are interacted with, this is interactive art as well as contemplative art whose purpose is to enact the protection of Argos Panoptes also within their physical manifestations. These, however, similarly to Grasso's work, are manifestations meant to reference something beyond physical capability to experience.

Since the descriptive possibilities of angels within the Byzantine world described a greater freedom than specific rigidity, this point of angels acting as a gateway between worlds was also possible to be illustrated using peacock feathers as well. As we know, this refers to the last part of the myth of Panoptes wherein his eyes are taken to Hera/Juno and this would carry into the Christian world itself. (Shilling, 2020, p. 353) While the peacock by itself is a very complex symbol whose very morphology from mythical being to animal means changes in the meaning of the symbol as well, that being said, the eyes of Panoptes and their properties were still very active in peacock, and peacock-related imagery in the Byzantine era. In fact we even see another conflation wherein peacock feathers are used to describe the eyes of Cherubim and Seraphim (see Image 3 below). Again, this is possible due to the vagueness within the Holy Scripture itself that liturgical interpretations, many of which very directly went to guide Byzantium through its eras of iconoclastic discourse that created heightened needs to mindfully use symbolic imagery. Within this context, "The traditional symbolism of the peacock, combined with biblical descriptions of the seraphim and cherubim in the visions of the prophets, led to the embellishment of angels with wings of peacock feathers." (Shilling, 2020, p. 354) This "embellishment", however, was neither unintentional nor without meaning. By taking on the eyes of Panoptes using peacock feathers this meant any angels displaying such, "suggests their conflation with other angelic beings…" specifically those of Cherubim, Seraphim, and Tetramorphic angels both in the Book of Ezekiel and the Book of Revelations. (Shilling, 2020, p. 355) Again this crossover imagery is possible due to both a myriad of descriptions within the Bible itself and an accompanying range of liturgical interpretations, leading imagery to use the polyomatic creature for its meaning as a morphology of the giant Panoptes himself, this goes along with the meaning of his eyes.

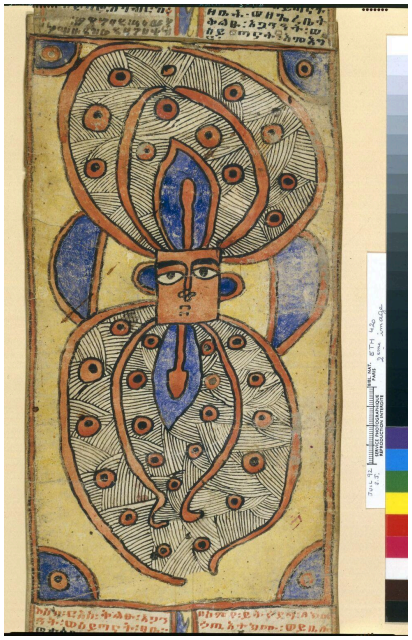


Image 3. *Talisman of Cherubim, Magic Prayers,* scroll, Bibliothèque nationale de France, Éthiopien 420, https://mandragore.bnf.fr/ark:/12148/cgfbt13906p

While the conflation between Tetramorphic angels, Seraphim and Cherubim is explainable through the liturgy of Pseudo.Dionyisius, the connection to Archangels was purely due to uses of the peacock-feathered wings. This happened only a few times in mosaic imagery but, contrary to Pseudo-Dionysius, this does not cross-over within the same order of angels or according to description, but rather it takes angels from the lowest order and creates an equivalence based on how they appear. By creating this "assimilation" for "Michael and Gabriel to the Seraphim and Cherubim, the two highest orders of angels, by means of the peacock-feathered wings, allows them to fulfil multiple functions in relation to the liturgy and the Virgin and Child. They serve as guardians and attendants of the holy figures and the altar, praising God eternally in heaven and in the Eucharist, and therefore as models for the priests and congregation." (Shilling, 2020, p. 361) This is to say that, we are actually seeing Archangels perform the duties of Cherubim and Seraphim, this time not within the liturgy or Holy Scripture, but through their participation on Altar imagery, they are now performing the similar tasks for the congregation. This is possible through their peacock-feather wings that transition onto these particular angels the ability to become polyomatic and therefore to take on the role of Argos Panoptes as a result. In this case the peacock acts as both a guardian between worlds and as the living-embodiment of the multi-eyed giant all at once. The eyes transferred from the bird to the Archangel carries with it all its meanings of the original myth. Like Cherubim guarded the Garden of Eden, now Archangels can guard the divine characters within the altar mosaic, acting as a bridge to the human parishioners to the divine world, signaled by their ability to "watch" through the eyes of Panoptes found within the peacock feathers on their wings.

The fact these images are found near the altar is also a point of Pseudo-Dionysius “Секој дел од црквата има своја мистична интерпретација, имено, наосот го симболизира човечкото тело, свети-лиштето-душата, олтарот умот.” [Each part of the church has its own mystical interpretation; namely, the nave symbolizes the human body, the holy soul, and the altar the mind.] (Заров, 2003, p. 165) Therefore, the altar itself according to Byzantine thought embodies specifically the more theoretical part of the church building as a “body”, even according to liturgical thought. Therefore, to have the images of guardians to the divine, able to personify this point specifically through the human as it transitions from the holy soul to the mind which will include the divine in contemplation. In this case the angels Michael and Gabriel act also as guardians to the human experience, between what we are familiar with what is immediately accessible to us as human beings and something beyond. Just like with Grasso, who describes this point of gaze and watching, but also through the digital medium, it goes beyond anything we can easily manage as human beings within the analog world alone. It is therefore no surprise that, “Even today, polyomata are still painted close to the altar in many Greek churches” (Diamandopouiou-Drummond et al, 1993, p. 424) Due to this history, this phenomenon makes sense, and further underlines how the idea of transition into the contemplative within the church space has continued. Nagel also points this as technically the first “unreachable” wherein the artwork reached its place that exists beyond human interaction. Within the church space that is true, this is only true in this one space because of the part it is meant to embody, the mind. Further, “the peacock with the imitation 'eyes' in its tail, symbolises the "all-seeing eye" of the Orthodox Church…” (Diamandopouiou-Drummond et al, 1993, p, 424)[4] In these cases as well, similar but a greater, maybe deeper reflection of the myth of Argos Panoptes wherein the eyes are also used as a metaphor for “knowledge”. Even in this case however, the eyes are still as a “guardian,” thus this extra reflection of the Panoptes’s eyes still carries the same properties as the original and speaks to the digital artwork created now.

[4] Within this collocation of “all-seeingness” several eye symbols are called, since in particular the peacock has traversed the Asia/Europe divide. One particularly powerful, very ancient Mediterranean eye symbol that actually has different origins but has an iconography that runs a bit parallel to that of Panoptes is the Turkish nazar. Similar to the Panoptes symbol, but instead of being described as multi-ocular or multi-headed it is focused on one eye that is, “a symbol of vigilance and God's protective power.” (Sevim, 2019, p. 1) Further using the peacock as the gateway between the spiritual and human world by having beyond-human vision the nazar is believed to be, “the eye of the heart is the eye through which man sees God and God sees man.” (Sevim, 2019, p. 3) Therefore not only is the eye expected to be a bridge into knowledge or wisdom but also comes into this idea of divine versus analogous worlds. What this also means is this eye lies between all divides, divine and human, but also good and bad come from, “essentially the same eye.” (Sevim, 2019, p. 9) Thus knowledge on the super human level is therefore very simply knowing and protecting which runs both ways to either good or bad. The eye can pick and choose for whom or what it will protect and whether it looks towards good or evil is in fact highly indexical for the eye symbol at large. What is also interesting though is that contemporary remakings of the nazar have also been largely about surveillance just like for Grasso, revealing the contemporary turn of the eye motif and the psychological bridge between the nazar and Argos himself. In a recent Contemporary piece considering the nazar and surveillance that the, “cameras often leave their presence visible, albeit in a limited way, reminding us that surveillance and control are everywhere.” (Sevgim, 2019, p. 10) We really return then to the technological impact on the symbol of super human vision which will be further explored below.

2.2.2 Implications

What is profoundly revealed in the various Byzantine polyomatic angels is that Grasso's work comes from a very long history of separating the eyes of Panoptes from the giant himself in order to describe or enact the powers of the symbology. Argos Panoptes was given his eyes in order to protect, oversee, and be all seeing, or all-knowing. The result then of the first transfer of Panoptes's eyes into the peacock is a messenger with the same capabilities, but who is also able to transfer from the world of humans to other greater dimensions of the world of the gods. In the Byzantine world, these qualities are re-interpreted for the first time into divine guardians that both mark the transfer from the human world to worlds beyond and act as protectors and mediators. Coming from an artist whose work "challenges knowledge" who also very clearly invoked all the various incarnations of the eyes of Panoptes within a very fluid form, these angels speak very intimately to the work of art for their roles as bringers of a certain knowledge within very fluid shapes they have taken over scripture that take on the symbol of the eyes of Panoptes in a very complete way by taking his duties of protection even within the context of a very different literature. The image continues to speak the same language and is therefore connected to its ancestors. This is true also of Grasso.

Moving also into the medium, it should also be noted that for the peacock, it was not just the eyes created in the tail of bird but further the, "симболот на опашката на паунот бил избран поради многуте шарени и брилијантни „очи", манифестирани преку светлината, која се прекршува и се отсликува во човековото тело и на неговата аура" [many colorful and brilliant "eyes", manifested through the light, which is refracted and reflected in the human body and its aura.] that interested also Medieval alchemists and caused it to be collected with the goddess of the underworld Iris. (Pilickova, 2022, p. 14) The use of pure light projections by Grasso not only reclaims the stars and the heavens where the peacock returned the eyes of the giant to Hera/Juno, but it also reenacts Medieval alchemy concerned with the way in which light plays a central role in the bridge between the living, analog world and worlds that are untouchable by humans. This piece by Grasso, therefore very closely participates in the exchange with the Middle Ages that Nagel brings up for us, not only for its mechanics, and for its symbology but also for the fluid and light-oriented way in which it is presented that re-enacts senses of guardianship, and all-seeing nature of creatures beyond human reach, as were the angels of Byzantium, who were meant to "watch" the parishioners as well, creating the same "two-way" vision Grasso is invoking as well. For Byzantium this "other dimension" regarded spirituality rather than technology, but the essence is of practically no difference between this sense of "crossing over" into another dimension using the polyomatic symbology to do so.

Ultimately, it is interesting to generally note that there has also been asserted a sense that in general, specifically deitic creatures with polyomatic features, “symbolized ultimate power and allowed man to feel secure in the belief that a multiple-eyed god would be invincible, and thus be the supreme protector of mankind.” (Diamandopouiou-Drummond et al, 1993, p, 425) The fact that Grasso chose a building, a structure to protect humans from forces greater than ourselves to enact that “ultimate protection”. Further it was harnessed in a material beyond human’s analogous senses that generally is used to store knowledge and information. Grasso really went far to completely enact exactly these points brought up through Byzantine multi-ocular angels of protection, gaze, guardianship, and the very fluid capabilities of the giant's eyes to ultimately protect and transfer our knowledge into something beyond a single human’s capability to “see”. By invoking the stars, perspective, and the protections onto the walls of the building, this time the polyomata becomes the building itself both watching us, being watched by us and in that sense enacting our senses of what we see, what we know, and what we believe similarly to harnessing the Psuedo-Dionysius meaning of peacock feathered angels from inside the “head” altar of the church.

2.3 Panoptes After Byzantium

2.3.1 Panoptes, Angels, and Technology

Of course another important artistic point of *Panoptes* by Laurant Grasso is its mechanical nature, thus a small understanding of the mechanical points and surveillance that also invoked the myth of the giant are important to understand. While the polyommatic angels took on the “all-seeing” job through divine symbology, the development of the Panopticon later would physically manifest the uses of “gaze” and “watching” through a mechanical system. In the case of late eighteenth century confinement architecture, the Panopticon works by a central tower with large windows that is surrounded by a circular building. Within the circular building, it is divided into cells that, “each of which extends the whole width of the building; they have two windows, one on the inside, corresponding to the windows of the tower;” (Foucault, 1995, p. 200) This way anyone inside the central tower could see all the figures in the cells by the traveling of natural light inwards through the cells. It was a markedly different mechanism of imprisoning that instead of darkness, and solely confinement, “Full lighting and the eye of a supervisor capture better than darkness, which ultimately protected. Visibility is a trap.” (Foucault, 1995, p. 200) In this way the eyes of Panoptes were re-employed, this time, again under the narrative of “protection” but in the practice of this infinite interior visibility, primarily is born a machine of forced visibility.

The result of this use of the “many eyes” as a type of seeing created for those encased in this machine, “He is seen, but he does not see; he is the object of information, never a subject in

communication" (Foucault, 1995, p. 200) Thus the objects being watched are not willing nor even considered participants, they are in this way forced into a certain subjectivity where an "all seeing" human power is remains perpetuous. It was a prison architecture that, "is a machine for dissociating the see/being seen dyad: in the peripheric ring, one is totally seen, without ever seeing; in the central tower, one sees everything without ever being seen." (Foucault, 1995, p. 202) Thus while the inner walls of the ring are completely accessible by the tower, the tower is not seeable from its outside by the ring surrounding it. In this sense, the actual amount of "eyes" in possession by the tower are not discernible at all by those being perceived by it and any sort of "seeing" or "knowing" power balance is thrown off between humans through the physical design of the institution. Foucault explains the "perfect symmetry" of this imbalance as the essence of "power", not that it belongs to any one thing but that the institution continues to work by forcing a lack of "seeing" or "knowing" by some and redirects all that power to a certain entity. (Foucault, 1995, p. 202) In this way, amongst others a surveillance is born that in this case, "is permanent in its effects, even if it is discontinuous in its action," because it forces, "the inmate a state of conscious and permanent visibility that assures the automatic functioning of power." (Foucault, 1995, p. 201) What this means is that it is less a matter whether or not there are in fact many eyes physically perceiving the movements of the inmates from the tower, but the stripped-down sense of a constant visibility has already forced that power relation, even within the architecture of the building itself. In this case, contrary to it being a matter of divine versus human power wherein "all-seeing" regards to a sense of spiritual knowledge, it is now a matter of knowledge collected with civil freedom and civil authority.

The "eyes" of Panoptes in this sense have multiple powers, they have the ability of "all-seeing" ness that comes with a certain point of power that when it is relegated to a super-human element refers to higher senses of "seeing" and "knowing". The giant in essence, "He is the individual who looms over everything with a single gaze which no detail, however minute, can escape:" (Foucault, 1995, p. 217) In the sense of guardianship this can lead to various "levels of seeing" from a knowledge perspective, but it was also the point of Argos Panoptes of keeping a situation under divine control. When it falls as a mechanical, human driven control in the case of the Panopticon it became a, "point of junction of the monarchical, ritual exercise of sovereignty and the hierarchical, permanent exercise of indefinite discipline." (Foucault, 1995, p. 217) That while it was at the hands of those with the power to be "all-seeing" and "all-knowing" in the case of imprisonment architecture to enforce its function, (Foucault, 1995. p. 203) the architecture by itself creates an undeniable efficiency by employing also scientific methods of distanced observation in order to ubiquitously study/enforce a heavily controlled group. (Foucault, 1995, p. 206) When this symbol then creates its morphology into a play of human power, it retains a very different meaning that still comes from the senses of "all-seeing" and "all-knowing" but beyond being a play of light or transformation into the

peacock, it reveals another side of the Hear/Juno story which is the point of control and all power being put into the control of the eyes of Panoptes.

In society the consequences of the act of surveillance moved, as we know, far beyond solely the mechanism of the prison into society at large, pointing to senses of “control” and “guardianship” that sprang from human hierarchy this time. Foucault’s treatise focuses on the extent and meaning of this powerful action due to the specific point that the effects and the power imbalance of the Panopticon would spread. It also brought itself into child-rearing through the power imbalances of a society that defined what a citizen strictly is, using this multi-eyed based threat of a disciplinary power. Therefore, within this society the fear of this power, “has infiltrated the others, sometimes undermining them, but serving as an intermediary between them, linking them together, extending them and above all making it possible to bring the effects of power to the most minute and distant elements.” (Foucault, 1995. p. 193). It is therefore no surprise that from the industrial revolution comes the technological age, the security camera and the advancement of surveillance. The eyes of Panoptos are therefore mimicked very clearly in machinery effectively creating a network that, “assures an infinitesimal distribution of the power relations.” and forces the members of society to be ever aware of the potential “gaze” of those around. The “control” now of the “all-seeing” into the human society is now complete, not as a symbol to be imprinted or painted meant to guard dimensions and protect humans from the wrath of deities, but is now become a very different action meant under the similar guise of the “protection of a society from itself”. Either way, we know therefore the industrial revolution very much continued the symbology and deepest meanings of the eyes of Panoptes in their own mechanical way. This motif has therefore never been irrelevant to cultural understanding or lived experience even after higher formalizations of art have occurred.

Similarly, moving past the digital into the post-digital and reverting as a result to the mechanism of the camera itself (the machine most closely resembling an “eye”) we see another contemporary artist closely related to the development of Foucault's surveillance technology, Oliver Laric, who is known for his style of, “re-objectification’ from analog to digital and back again.” (Crowley, 2021, p. 63) Laric presented his work *Idealplastik,* where the practice at hand was to create, “a photo sculpture” by taking “synchronized photos of his models with twenty-four cameras placed around them in a circle” this is accompanied by a pamphlet describing the history behind 3D modeling, a type of process being used by many digital artists as well. In this sense, by employing the photo camera machine, we arrive again into a contemporary analog and therefore post-digital model of the Panoptic “eyes”. Again this time the enactment of the “multi-eyes” effect is enacted through the machine. With the Panopticon the “all-seeing” came from a forced visibility from the inside outwards, this reveals a type of “visibility” and knowledge gathering from the outside inwards by revealing surface detail on a minute scale. In both cases the use of the camera substitutes the “eye”, the power of visibility in

this case is not tied to control as it is tied to the act of creating and storing information that is, again accessed through the points of "seeing"/"discerning" and therefore "recreating". Laric actually actively takes on the intellectual recreations of art historic objects through mechanical reproductions, mimicking academic approaches of the past academic artistic expectations. (Crowley, 2021, p, 82)

Using the machine the way Laric does, the information like for Grasso has to be defined, discerned and then recreated using machines but then recreated outside the machine itself, it is remanifested in the analogous world, therefore the post-digital. This moves a bit beyond Grasso, who keeps his creation within the digital sphere, but it also speaks to a future wherein the symbol of the eyes of Panoptes is continuously enacted and therefore it does reveal a future of the use of the symbol. While this does recreate the nightmare of Benjamin of a very mechanical reproduction, Laric is an artist making a point throughout the use of the digital as he strives to "draw attention to their very status as mediated information" (Crowley, 2021, p. 83) This corresponds instead to both Drucker's point of the mimicry of information between the analog and digital world and Nagel's point of how the mechanical reproduction refers to many past forms of artistic reproduction that have been ongoing for a long time. (Drucker, 2013; Nagel, 2012) By merging the two, Laric brings out also what Grasso has done but in the post-digital format of using the digital to bring out this very relationship wherein the digital both mimic past forms of reproductions and offer something a bit different in that it reaches further back. In this way Laric works to create, "a methodical pursuit of operationalizing distinctions between analog and digital modes of representation." (Crowley, 2021, p. 83) What Laric is both doing is describing the current relationship between past and present forms of the artworks as they transfer medium and the relation between those transfers. He thus in essence describes, "the interstices between one medium and another while simultaneously making visible the material differences in their systems of signification." (Crowley, 2021, p. 84) By pointing out the relationship and the reinterpretation, or "seeing" and changing of information through the multi-eyed scanning capability, Laric is both performing the act of the multi-eyed giant through the many cameras interpreting information through the process of overlapping photography, but is also as a result revealing the actual relationship also present in the work of Grasso between the history of iconography analogical reproduction and the material differences as the information is absorbed and processed digitally.

2.3.2 Implications

In the presentation of *Panoptes* by Laurent Grasso, the artist states, "Delving into Grasso's research on observation systems—from surveillance to astronomy" (YouTube, online) The history of the Panopticon, not only takes on the name of the giant, but took on the symbology and the part of the myth concerning control, this time instead of in a

multi-dimensional or spiritual way, in a mechanic way. The artwork of Grasso being a digitally-born artwork has taken the process of the motif of Panoptes's eyes and has "mediated" said information into a digital format that is ultimately reinterpreted by machine a computer and projector in order to exist on the side of the building to then be interpreted by the human eye. This mechanism of the "all-seeing" is stated to be directly related to every space that currently employs the use of technology for similar types of surveillance, which Foucault was right, it would only permeate more and more into our society, creating more and more spaces through the uses of cameras and digital technology making us constantly aware of how the eyes of Panoptes were not only congregated into one power holding threshold but then multiplied in innumerable number. The control no longer is conducted from one tower to observe but from so very many, and Grasso reminds us through the digital medium of his piece, of the so very many types of tracking and surveillance we live under as a group, this mechanism of which came from the human attempt to harness the power of Panoptes in order to create a specific society, divided by the ability to "see" or rather to "know" by invoking the treatment of animals for people. (Foucault, 1995, p. 203) As described, with cameras and digital technology, we today encounter a similar sense of the Panopticon, an enlisted, expected, and enforced sense of visibility that within it retains a control in our actions and behavior through the practices of scientific-like observation that determine what happens next, and if corrective procedures will be necessary. Grasso makes it clear that by changing the "gaze" of his work of art and by retaining its digital nature, he intends to take on the properties of the machine that has also in itself multiplied and enforced on a human level, the power and control of the eyes of Panoptes.

Foucault revealed that the human mechanism of placing all the power of the eyes of Panoptes into a mechanized system would permeate and effect society in a spreading way. This is also the point that Grasso is making. It is easier for our society to be aware of and familiar with this type of use of the symbol, we can easily recognize the sensation of the "glance" or of the mechanical "watching" that has, as a result of the Panopticon machine becoming so ubiquitous in the digital age. This is only another side of the artwork, a very conscious one of its own medium as a digital piece. Within the digital world, we are currently aware of a mass of various algorithms constantly tracking, informing, "seeing,", and "knowing", which has as a result made us very familiar with the mechanics of a system that very closely has the potential to monitor our shadows, regardless of consent, even if there is no one actively monitoring. While the sense of surveillance is a property simply of digital technology, when art is born digital, it cannot help but take on the meanings of its own medium as well. This is partially due to the way in which the medium interacts with humans in general which is different from the artistic forms we are accustomed to. This being said, it is also indicative that in general, medium or support becomes significantly more central to the message of almost all digitally-born artworks. It is practically co-constitutive to image content and motif and therefore must be considered on the same level when performing art historical research analysis.

Oliver Laric takes this point even further and allows us a future potential of the eyes of Panoptes symbol beyond the digital by describing in an artistic method exactly what the act of the transition into the digital does. Laric describes through his art the point of the work of Grasso as well, a more general point but still something to understand that is central also to any digital artwork. This is the fact of mechanical artworks, that they become in the course of their "mediation" into the digital realm, digital or computed information and it is this that is then reinterpreted using a mechanical process into the analogous realm of the humans again. Through his work, Laric brings out that process and relationship that actually recalls that even with the digital, even with the mechanical, "nothing that has ever happened should be regarded as lost for history." (Benjamin, "Art in the Age…", 1968, p. 2) By recreating specifically Classical artworks which, under the hierarchical academy were used for that exact purpose, to be studied and reproduced in an intellectual fashion describing our tie to a "dreamt" classical past (Eco, 1995, p. 1) By using the multiple cameras and employing the 3D modeling inwards in this fashion, Laric is using the many eyes of Panoptes to "interpret" and store this information in order for the machine to do exactly as past artists did. In this way, the machine-artist team-up is brought to a similar level as the original studios of great academic artists. This brings out the same point as with Grasso, who, alike the artists interpreting fifth-century Byzantine liturgy and inscribing these icons into the walls of cathedrals (which we remember reveal the morphology possible in the eyes of Panoptes while simultaneously retaining the motif's significance), in Grasso's digital artwork the machine interpretation of the same thing also retains symbolic based significance that provokes a sense of interaction with powers greater than one person. The digital/mechanical artwork further eliminates the need for the artist's own brushwork to be viewable, and also invoke Medieval perspectives in this way. The medium invokes the same fragments of light intended by the Byzantine glasswork invoking the eyes of Panoptes in the stars while also acknowledging our present relationship of the mechanics more recently created in surveillance all through the consideration of the "gaze" of art. The machine, in the "mediation" of this information has relegated itself to the same level of the mosaicists and in doing so a complex but vital message is brought forward as to the true relationship of the computational system with art and artistic production.

This is why this case study needs to be applied to both Nagel's theories and to the art historical academy as the art historical institution seems to continue the point of digital as a question, when these artworks of Grasso and Laric make it very clear in the world of art, it is not a question and we are already seeking and doing beyond. By enlisting the aid of the machine, by manifesting art through the machine, the artist has already brought the act of using the mechanics to be as relevant as the mosaic tile or the plaster cast. This means the theory behind the digital medium and understanding exactly how much this will impact the field of art history means taking on different approaches like Drucker calls for and like Nagel explains is possible.

(Drucker, 2013) With a broader and greater look at the arch of art history, the immense intersectionality inherent in both the iconography and the act of creating and interacting with the works of Laric and Grasso can participate and be described fully. This however is the flood gates, by creating an inclusive art history, everything will participate, but at the benefit of a greater, more detailed, and more accurate description of the participation of images and motifs in all human-made things, even in the digital space. Admitting this within the academic circles of art historical practice brings the institution to the level of the art being created and prepares the museum, the gallery, and the university to teach, and exhibit said works of art with great academic discourse and critical approaches even to our own time.

2.4 Construction of the Co-Occurrance Networks in Iconclass

The code takes in the problems of the case study which posits "within the hierarchy as it is where would a piece of art that intends to recall history the way Nagel describes belong?" The code uses a series of experiments of the symbolic elements of the case study in Iconclass against similar experiments using terms from Christian Paul's *Companion of Digital Art.* For Laurent Grasso's "Panoptes" in Iconclass the terms: "argus", and "eyes" were searched. Following Paul's definition taken from the book the terms: "computational", "digital", and "multi-media" were searched in Iconclass. As Paul teaches us the terms for digital or computational art are incredibly varied and further, "these characteristics are not exclusive to digital art (some of them apply to different types of performative events or even video and installation art), they are not intrinsic to objects such as digital photographs or prints." (Paul, 2016, p. 2) Even though Paul's terms had a wide range of applications, sometimes searches came up blank. Each search was exported as a pdf. If the results were positive (as in results were shown), the pdfs were processed further.

The nature of our database had to be considered. Iconclass was originally designed as a book, the database recounts that, "The classification itself went through several phases, after its first edition as part of the Decimal Index of Art of the Low Countries or D.I.A.L., in 1968." ("ICONCLASS", 2026) It is the first attempt by its author, Henri Van Der Waal, to create a complex categorical model that could aid in the understanding of motifs and their literary counterparts. (van den Heuvel, 2026, p. 3) The original publication "In its completed form it was published as a printed publication in 17 volumes." ("ICONCLASS", 2026) This was then transferred and translated into an online database meant to sort and place symbols and motifs based on a numeric system, like the Dewey Decimal System that it claims and has been studied for the database's ability to link said artistic motifs to keywords and concepts within literature. No direct mention is made of medium in this framework of the database, nor in the development of the database ever recorded, but under the parent number 4 (Society, Civilization, Culture), is a list that includes both technological advances and material supports of artworks, thus the entire

point of media within the Iconclass database is all filed all together and separate from the content. The current digital hierarchy is used also by art databases such as: Arkyves, Bildindex der Kunst und Architektur, and the Rijksmuseum in Amsterdam. It is also linked to emblem databases such as Emblematica Online, and Emblem Project Utrecht. Unfortunately, while Iconclass is a helpful online resource, it is an example of Drucker's "digitized" art history wherein the digital world still heavily mimics the print and older art historical limitations. (Drucker, 2013) When confronted with digitally born art, we see more clearly the limitations of the database to handle newer models of art historical thinking and a future need for adaptation. Further, Iconclass is not equipped for cross-lingual or cross-cultural emblematic study to any degree and is only a Western art database.

The code itself is very light and runs quite smoothly, although PyMuPDF and fitz must be reimported each run. It starts by loading pdf files (multiple) as each search was its own pdf file multiple needed to be entered. This was using the os and files from google collab itself and turns them into a list. It prints the filenames to show it is finished.

```
>>> from google.colab import files
import os


uploaded = files.upload()

pdf_filenames = list(uploaded.keys())
print("Uploaded filenames:", pdf_filenames)

#os.rename(filename, "Iconclass1.pdf")
#print("Renamed to Rye.pdf")
```

Then PyMuPDF is installed and the fitz package is imported for the next early steps of the processing.

```
>>> !pip install pymupdf
import fitz
```

From this a function definition is created that takes in each file, since several pdfs were uploaded. It uses the aforementioned fitz package to open each file and to extract the text. The function appends the text and closes the documents. Outside of the function definition, the text is stored in a dictionary extracted_texts as it iterates over the previously created list of pdfs pdf_filenames over and a sample is printed to reveal the result with a "\n" + "-" * 50 line to separate each text neatly. Then a new TXT file is opened using utf-8 encoding and the text in the dictionary is written into the new file. Finally the files from google.colab. This is important as the material inside the TXT file is now iterable and able to be cleaned. All of the information from all of the loaded pdfs is now saved into one single TXT file as only similar groups of pdfs were loaded when they were needed.

```
>>> def extract_text_from_pdf(file_path):
    """
    Extracts text from a PDF file and returns it as a string.
    """
   #Opens each pdf to get the text source:
    doc = fitz.open(file_path)
    text = ""
    for page in doc:
        text += page.get_text()
    doc.close()
    return text

# Initialize a dictionary to store extracted texts
extracted_texts = {}

# Goes over each pdf and iterate over it to add the text to the dictionary
for pdf_file in pdf_filenames:
  text_content = extract_text_from_pdf(pdf_file)

  #Revealing a sample to show it was successful
  print(text_content[:1000])
  print("\n" + "-" * 50)
  extracted_texts[pdf_file] = text_content

#Writing into a txt which is easier to work with
with open("Eyes.txt", "w", encoding="utf-8") as file:
    file.write(text_content)

from google.colab import files
files.download("Eyes.txt")
```

For Iconclass, cleaning since it was shown in the inspections of previous cells the code was found always in lines that included a series of "·" characters. In this case since something specific could be called and singled out, the re library was used to isolate the codes. First the values from the dictionary extracted_texts. Then a new file is written with the same name usually as the previous TXT file using utf'8 encoding and within this file using a filtering for loop that iterates over each line and the regular expression research(r"·",line) in order to append only the lines with that punctuation present into the new variable "cleaned". This same variable is then split and put into a list and then a set in order to take out parent code repetitions in the patterns and return a list of unique Iconclass codes. The new variable cleaned_unique_lines is then joined again and the results are printed for inspection.

```
>>> #Using a regular expression cleaning the txt docs to isolate the elements I
need
import re

# Concatenating all extracted texts from the dictionary "extracted_texts"
combined_text_content = "\n".join(extracted_texts.values())

with open("Panoptes_vs_Digital.txt", "w", encoding="utf-8") as file:
    file.write(combined_text_content)

# Keeps only lines that contain a middle dot anywhere in the line
#(we can observe these lines are the ones containing the Iconclass codes)
```

```
cleaned = "\n".join(
    line for line in combined_text_content.splitlines()
    if re.search(r'·', line)
)

#Inspecting results
print(cleaned)

# Remove duplicate lines from the cleaned text by making it a set
cleaned_unique_lines = list(set(cleaned.splitlines()))
cleaned_no_repetitions = "\n".join(cleaned_unique_lines)

#Inspecting results
print(cleaned_no_repetitions)
```

This new cleaned text is saved as a TXT document using files from google.colab and downloaded.

```
>>> # Save the current content of the variable `text` into a new file called
'Panoptes_cleaned.txt'
with open("Panoptes_vs_Digital_clean.txt", "w", encoding="utf-8") as file:
    file.write(cleaned)

#Download the file
files.download('Panoptes_vs_Digital_clean.txt')
```

For Iconclass the visualization chosen was a network system wherein only nodes with same parent codes would be given edges. First the library matplotlib is installed. Then the following code is actually based on character co-occurrence code but instead of showing how often characters interact, it does the same purpose with Iconclass codes revealing the relationships of multiple searches about the same subject. It uses networx, matplotlib, from itertools the combinations package, from collections the defaultdict package, and the files package from google.colab. First the cleaned TXT is opened and a filtering for loop appends only the code into a list called “codes”. Then a function definition measures the common prefixes in order to determine if an edge will be drawn between the nodes. If the length returns one or more, the length is appended. Then the graph is created first by adding each code as a node and then adding an edge if the common prefix length is equal to or less than three as this is roughly the similarities that tend to happen between Iconclass codes. Then the parameters of the visualization are determined. After inspection the visualization can be downloaded.

```
>>>#This is based on our Character Co-Occurrence Network,
#but instead of mapping character's interactions it maps the interrelations of
Iconclass Codes
import networkx as nx
import matplotlib.pyplot as plt
from itertools import combinations
from collections import defaultdict
from google.colab import files #I added this to save and download the
visualizations
```

```
#Opening the cleaned file and appends only the codes found before the dot
sequence
with open("Panoptes_vs_Digital_clean.txt", "w", encoding="utf-8") as file:
    file.write(cleaned)
    codes = []

    for line in cleaned_unique_lines:
        parts = line.split("·")
        if len(parts) >= 2:
            code = parts[0].strip()
            codes.append(code)

   #Comparing each item in the list for the similarities in the prefixes
    def common_prefix_length(a, b):
      """
      Returns the length of the longest common prefix between two strings in
      order to attach the codes by an edge.
      """
        length = 0
        for x, y in zip(a, b):
            if x == y:
                length += 1
            else:
                break
        return length

# Creating the graph
G = nx.Graph()
for code in codes:
  G.add_node(code)


# Connecting nodes based on prefix similarity (in order to show relationship)
for a, b in combinations(codes, 2):
    prefix_len = common_prefix_length(a, b)
    if prefix_len <= 3:
        G.add_edge(a, b, weight=prefix_len)

# Plot the network
plt.figure(figsize=(10, 8))
pos = nx.spring_layout(G, k=0.9, seed=42)
nx.draw_networkx_nodes(G, pos, node_size=700, node_color='skyblue')
nx.draw_networkx_edges(G, pos, width=[G[u][v]['weight'] for u, v in G.edges()])
nx.draw_networkx_labels(G, pos, font_size=12)
plt.title("Code Co-occurrence Network")
plt.axis("off")
plt.savefig("Panoptes_vs_Digital.png")
plt.show()


#Downloading the visualization
files.download("Panoptes_vs_Digital.png")
```

The work in the field of Digital Humanities, as the results will show, has a while still to go. Unfortunately Drucker is very correct about the distinction between a “digitized” and “digital” art history, we are still in great need of a real democratized digital art history and while many models adopt nodes and so forth to try and create a Warburgian “formeln” approach, the models’ need to rely on the iconography hierarchy make them just as randomly exclusive as the

original state of the field. (Drucker, 2013) We do need further development, even Impett wrote so in “There is a Digital Art History” by describing of their model, “Our case studies– using CLIP to illuminate the urban fabric of Paris, while at the same time illuminating the sociogeographic biases of the model; using CLIP to operationalize the naked–nude distinction, while at the same time exposing the model’s gendered visual logic–have no more than hinted at potential areas of application and critique. They are demonstrations, first and foremost, of what still cannot be operationalized.” (pg. 203) This potentiality of operationalization could become an invaluable tool for demonstrating how real waves of thought actually progressed over the ages as cultural symptoms, and it could provide a more detailed view of art historic knowledge, if only it were expressed in a not hierarchical way. As long as the currently operational models continue to take on hierarchical approaches, the exact lack of creativity described by Drucker does not permit accurate, in depth, and inclusive art history that would not only describe the arch of art history more clearly, but it would further create the backgrounds needed to explain digital artworks such as that of *Panoptes* by Grasso. (Drucker, 2013)

2.5 The Co-Occurance Networks Found in Iconclass

The results of the searches were varied, and the results of the code were even more illuminating on the ability for Grasso’s artwork to participate hypothetically in a categorical system such as Iconclass.

When searching the figure of Panoptes or Argus through Iconclass, there were results in list form, thus the results were varied and rich in connections. The first major parent node to be noticed was 97 metamorphosis-classical mythology under 9 (Classical Mythology and Ancient History). This particular parent showed several important parts, one big group of which was under 97CC6 (Io changed into a cow: to avoid detection by Juno, Jupiter changes Io into a cow (Ovid, Metamorphoses | 611)). Within this are three various episodes of the story involving Argus (see Image 4, 5, and 6 below). They primarily tell the story of the classical myth and offer renderings over centuries of the story.

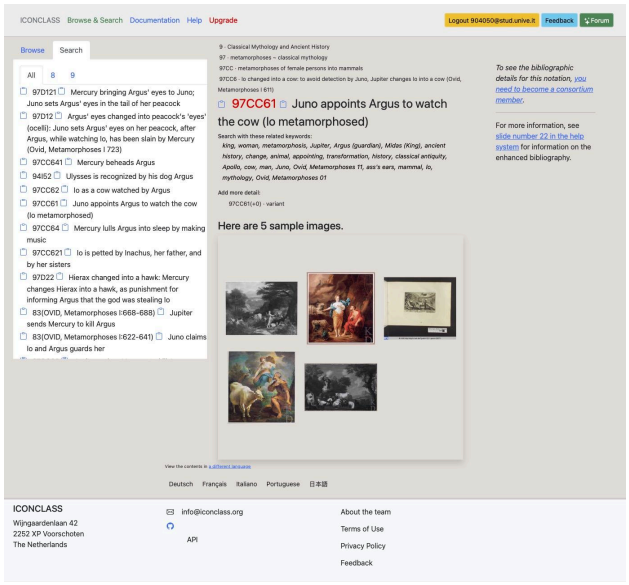


Image 4. Demonstration of the call number 97CC61 which is an important parental node in Iconclass for the story of Panoptes , https://iconclass.org/97CC61, Accessed April 21, 2026

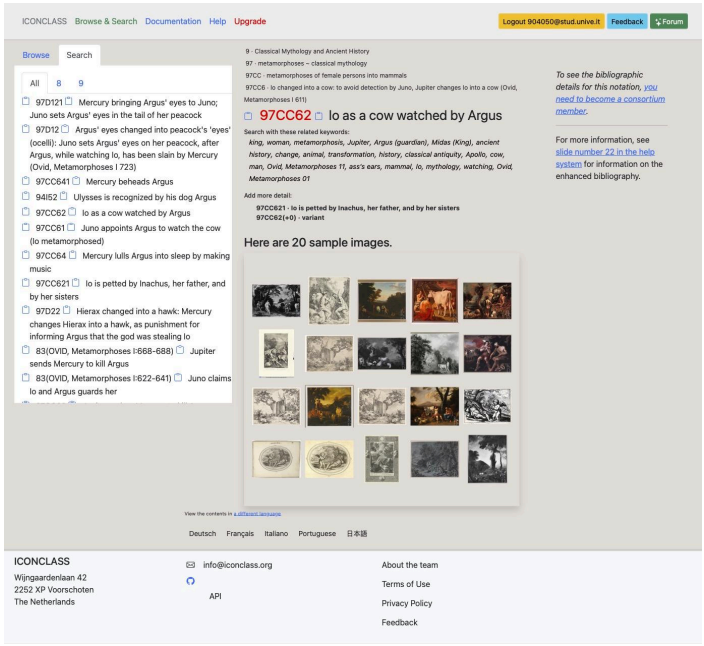


Image 5. Demonstration of the call number 97CC62 which is an important parental node in Iconclass for the story of Panoptes, https://iconclass.org/97CC62, Accessed April 21, 2026

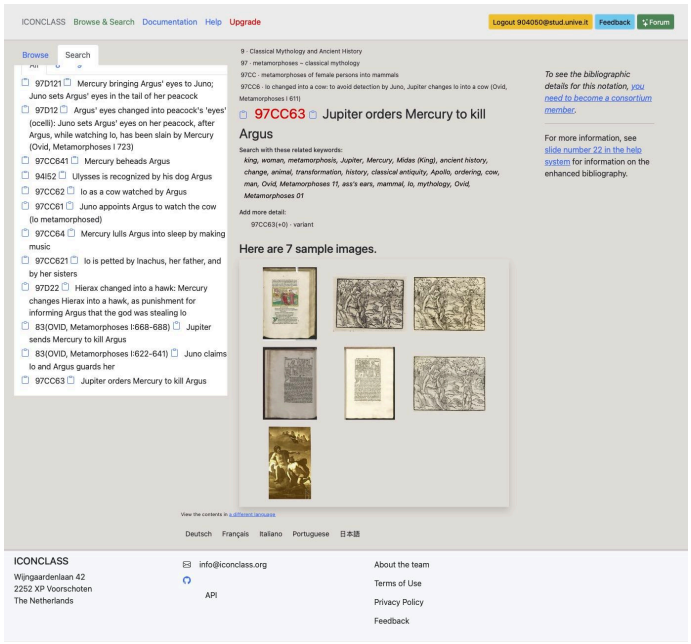


Image 6. Demonstration of the call number 97CC63 which is an important parental node in Iconclass for the story of Panoptes,https://iconclass.org/97CC63, Accessed April 21, 2026

Specifically in this group is also the episode of Argus's death with Iconclass has been separated within the parent of, 97CC6 (Io changed into a cow: to avoid detection by Juno, Jupiter changes lo into a cow (Ovid, Metamorphoses | 611)), but they are separated into two separate categories with 97CC64 (Mercury lulls Argus into sleep by making music) and 97CC41 (Mercury beheads Argus), (see Image 7 and 8) showing either a proliferation in this particular part of the story or an important iconographic branching in this area.

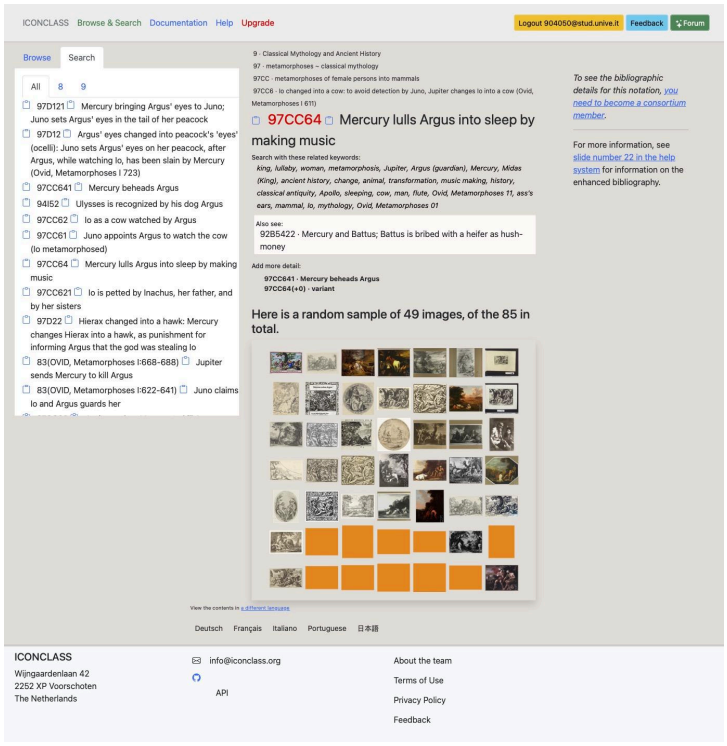


Image 7. Demonstration of the call number 97CC64 which is an important parental node in Iconclass for the story of Panoptes,https://iconclass.org/97CC64, Accessed April 21, 2026

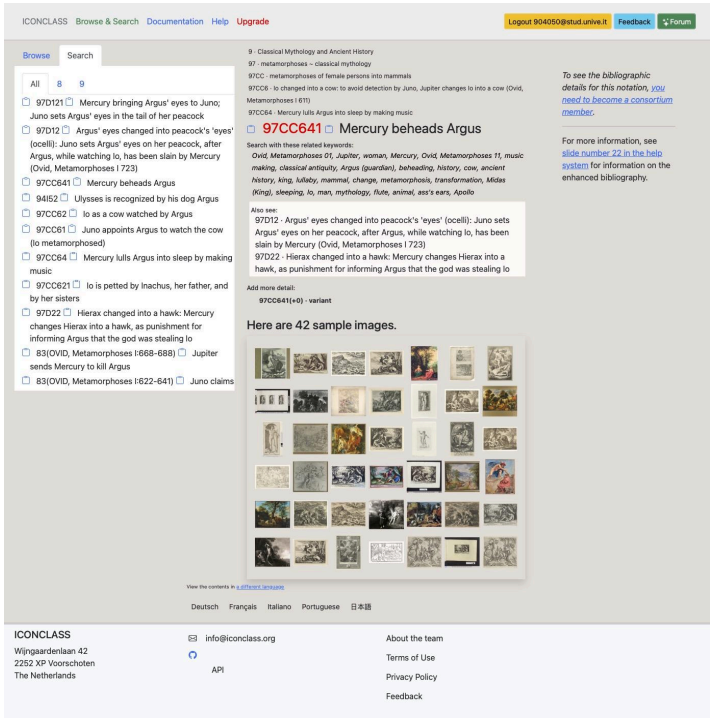


Image 8. Demonstration of the call number 97CC641 which is an important parental node in Iconclass for the story of Panoptes,https://iconclass.org/97CC641, Accessed April 21, 2026

Further, when searching for Argus an entirely different parent appeared under 8 (literature) and 83 (specific works from literature) to situate the scene of Jupiter Sends Mercury to Kill Argus specifically within Ovid's Metamorphosis. (see Image 9) This particular part of the story is heavily branched within Iconclass.

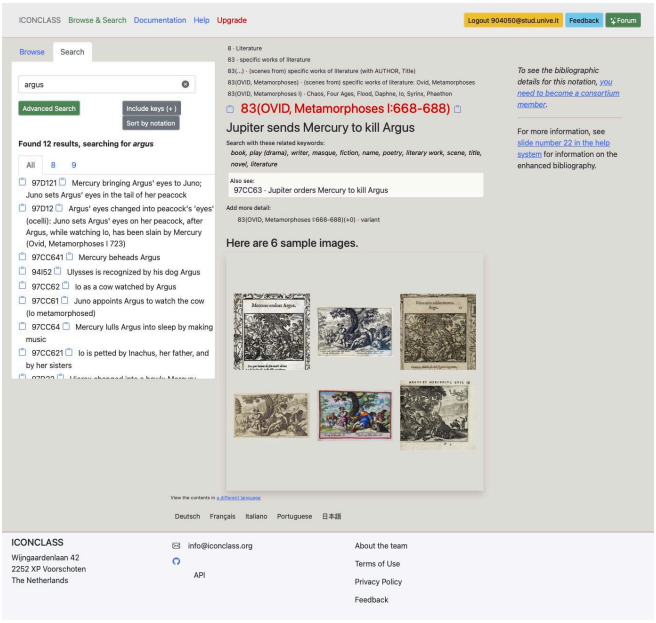


Image 9. Demonstration of the call number 83 which is an important parental node in Iconclass for the story of Panoptes according to the literature of Ovid, https://iconclass.org/83(OVID%2C%20Metamorphoses%20I%3A668-688), Accessed April 21, 2026

Finally using the search of "eyes" for Panoptes, while many codes appeared, the one most relevant for the myth of this creature was under 97D (metamorphosis of male persons into birds). Next is 97D1 (metamorphosis of male persons into birds first series), and finally 97D12 (Argus' eyes changed into peacock's 'eyes' (ocelli): Juno sets Argus' eyes on her peacock, after Argus, while watching Io, has been slain by Mercury (Ovid, Metamorphoses 1723)). (see Image 10) This part is very important to the metamorphosis of the multi-ocular symbol throughout history through Juno-related divinity and based on this is therefore housed in a different branch of Iconclass due to the properties of this part of the story.

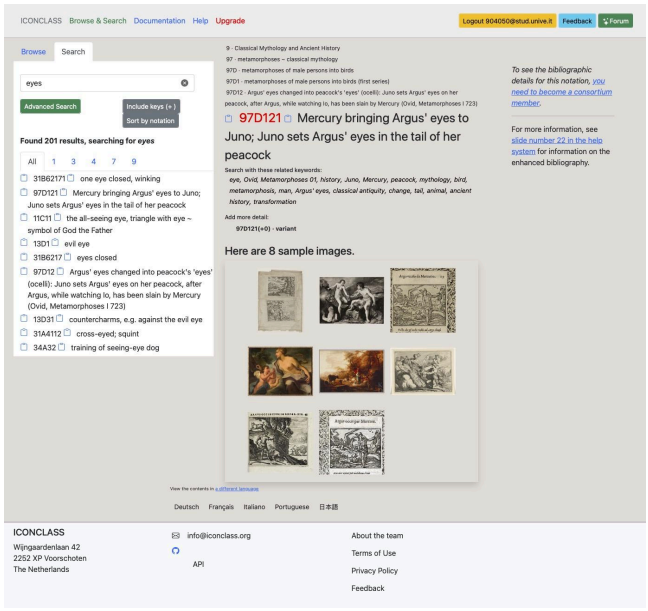


Image 10. Demonstration of the call number 97D1 which is an important parental node in Iconclass for the story of Panoptes which describes the important mythological transformation of Panoptes into the peacock symbol, https://iconclass.org/97D121, Accessed April 21, 2026

All these results together create a pair of interesting figures (see Image 11). On the left we have a star-like figure under the parents of 97CC6 and 97D as the resulting nodes: 97CC61, 97CC62, 97CC63, 97CC64, 97CC641, and 97D12 are very similar and are roughly under the same largest two codes 97 (metamorphoses ~ classical mythology) thus the Co-Occurance is shown as quite strong but branching. Not connected to this we have another figure showing multiple versions of 83 each of which seem to allude to different parts of Ovid's *Metamorphosis* that are so heavily interconnected they practically form a shape. All the nodes are of course connected to their parent node 8 (literature). It is to be expected of this right figure as the nodes are in fact subcategories of the parent code therefore very strong Co-Occurance is to be expected.

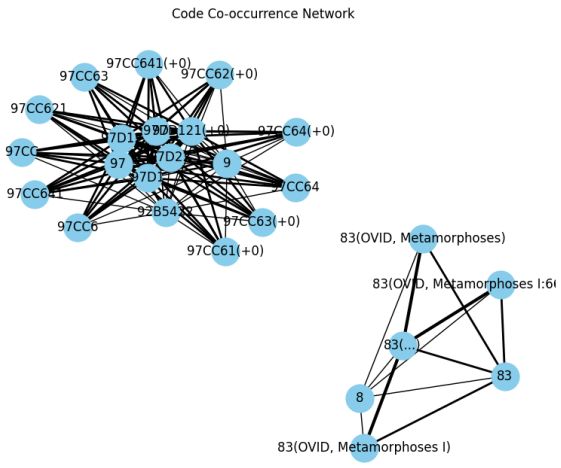


Image 12. Each search in Iconclass was turned from a screenshot to a PDF. Each PDF was preprocessed using the libraries PyMuPDF and os to turn into TXT files. The re library was then used to clean the processed text to isolate the node codes. Then the libraries networkx, pyplot, itertools collections, and files from google.colab were used to determine the common numbers in order of iteration to determine the relationships of parent nodes to more specified node codes. Then Pyplot was used to create the network charts. Each node shows a code which is shown as connected to all previous parent nodes, and all similar branching nodes under more or less the same parent with the bridges. Each node is light blue with black writing on top which was shown to be clear enough to make the point. Each node size was set to 700 to be large enough to be distinguishable for each node. We can see by these groupings, primarily through the edges how even the all the codes that were revealed to exist within Iconclass involved with the story of Panoptes actually had two distinct groups with no overlap.

The trial of Panoptes was tested against some of Christian Paul's keywords for Digital Art, as we have seen the medium is important, it comes with an impact on the art piece and further would be considered in the process of labelling and archiving. Grasso's artwork is highly intersectional this way. First within Iconclass the keyword "digital" was searched. There was a list of responses primarily under the code 48C614 (photograph) is the code 48C6144 (digital photograph), including at least seven variations (see Image 12). Within digital photograph as well is 48C6144(+36) (digital photograph (+photography, cinematography)). (see Image 13) These were the only relevant branches for this particular keyword. It should be noted they are housed in the parent 48 (art) which is important for the recognition of the case study within this system.

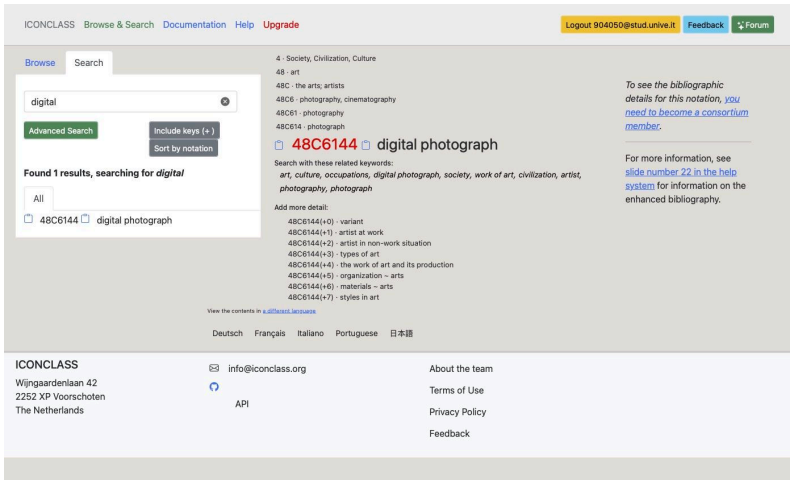


Image 12. Demonstration of the call number 48C6144 which is an important parental node in Iconclass photography which leads into such media as digital photography that also contributes to the digital medium according to the database, https://iconclass.org/48C6144, Accessed April 21, 2026

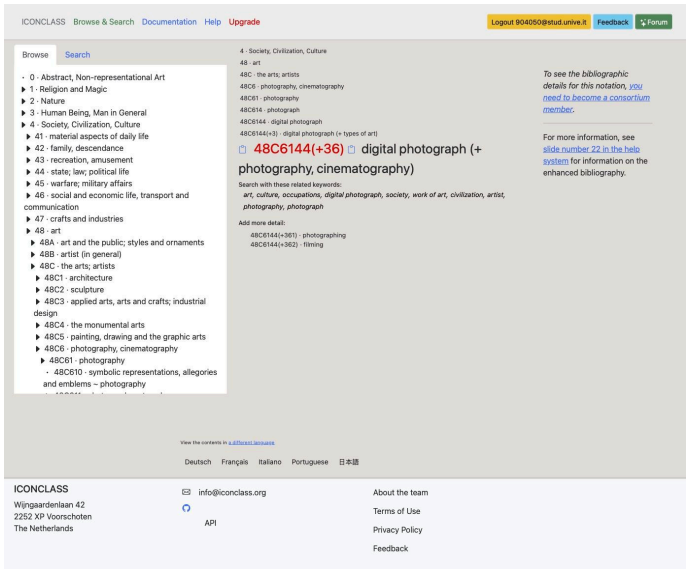


Image 13. Demonstration of the call number 48C6144(+36) which is an important parental node in Iconclass as digital photography that also contributes to the digital medium according to the database, https://iconclass.org/48C6144(%2B36), Accessed April 21, 2026

For the search on "computational", another important term provided by Paul within Iconclass found fairly disparate results and yet they were housed under the same parent with all the other results which is 4 (Society, Civilization, Culture). The first most relevant result code was 46E6711 (computer network). (see Image 14) It is generally housed under 46E6 (electrical and electronic means of (tele) communication) and therefore primarily has to do with communication, but then again, so does art. The other fairly different branch of this parent code that appeared relevant was 49D54 (computer, equation-solving). (see Image 15) This refers more directly to the computer as primarily a computing machine in itself. This is housed under the parent code 49D (mathematics) and therefore is housed in a very different branch speaking about the machine using a different focus.

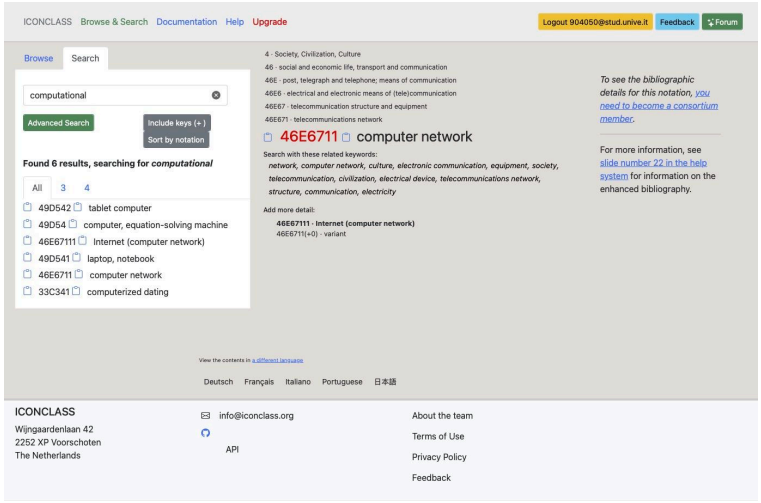


Image 14. Demonstration of the call number 46E6711 which is an important node in Iconclass as computer network that also contributes to the digital medium according to the database, https://iconclass.org/46E6711, Accessed April 21, 2026

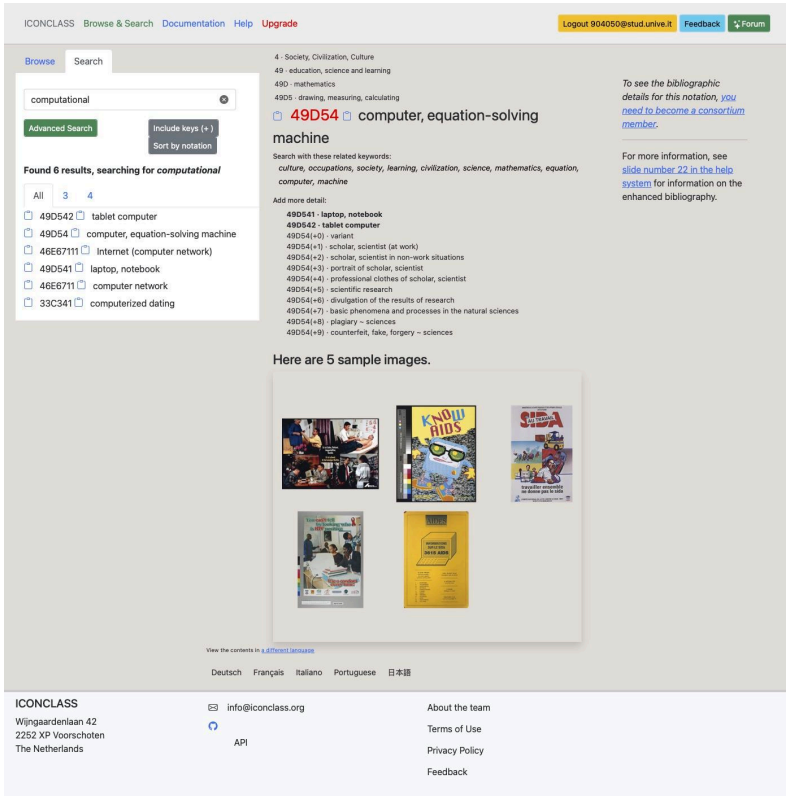


Image 15. Demonstration of the call number 49D54 which is an important node in Iconclass as computer equation-solving machine that reveals the relationship of Iconclass to the machine itself and how this relates to the digital medium according to the database, https://iconclass.org/49D54, Accessed April 21, 2026

Finally the term “multi-media” was tested with no result. (see Image 16)

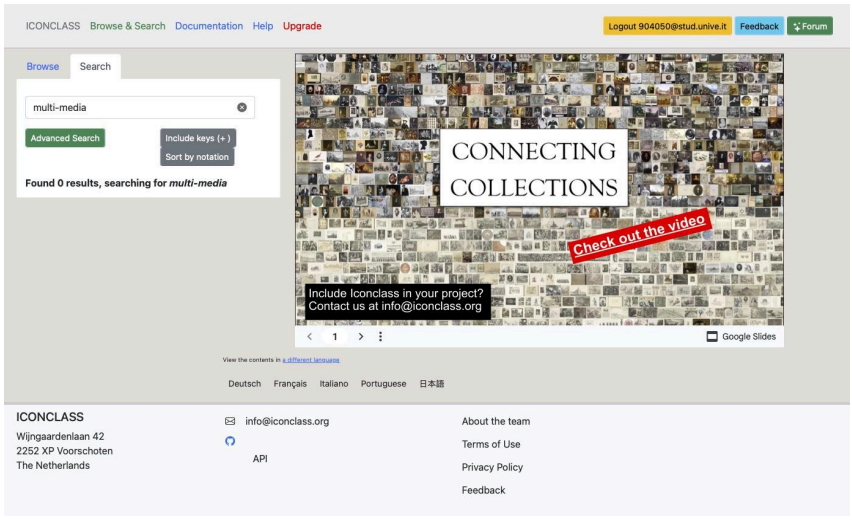


Image 16. Demonstration of the zero result in the Iconclass database when specifically multi-media was searched, https://iconclass.org/en/_#, Accessed April 21, 2026

Due to all the results in this case residing in very similar first and sometimes second parents the result when the codes were tested together is a heavily co-dependent cloud of nodes revealing that while an icon, such as Argus will have a more branching and interconnected existence within the database, the digital medium itself is general all kept in more or less one area of the database that is highly and heavily interconnected. (see Image 17) This is likely further since many codes exist regarding digital art but a great many of them are variants of already refined parent codes.

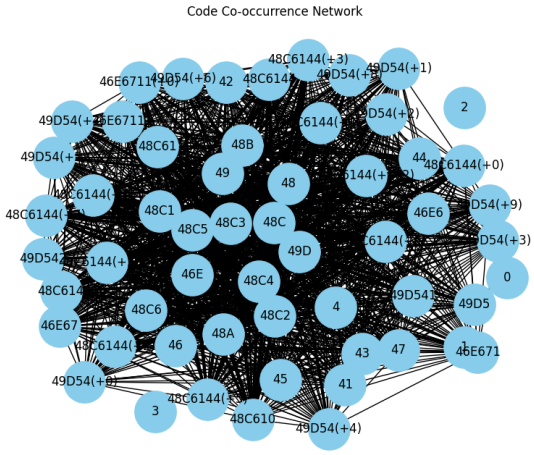


Image 17. Each search in Iconclass was turned from a screenshot to a PDF. Each PDF was preprocessed using the libraries PyMuPDF and os to turn into TXT files. The re library was then used to clean the processed text to isolate the node codes. Then the libraries networkx, pyplot, itertools collections, and files from google.colab were used to determine the common numbers in order of iteration to determine the relationships of parent nodes to more specified node codes. Then Pyplot was used to create the network charts. Each node shows a code which is shown as connected to all previous parent nodes, and all similar branching nodes under more or less the same parent with the bridges. Each node is light blue with black writing on top which was shown to be clear enough to make the point. Each node size was set to 700 to be large enough to be distinguishable for each node. We can see from this very heavily

overlapped cloud that in the case of medium all the nodes are very heavily overlapped for the most part. A certain level of error is also visible where inappropriate nodes were for some reason entered, however it is very clear the nodes discussed have the same parental node of 4 and therefore a very heavy overlap is present. This further shows us how the database is structured using labels also very based on medium even though it is a database of iconography.

What is ultimately revealed however, between the two types of searches regarding the medium and the motif have absolutely no overlap within the database, creating a rather paradox between this artwork's content and its form. (See Image 18 below) Thus the code Co-Occurance network shows no co-occurance whatsoever, and yet our artwork exists with the double meaning created by its motif and its medium.

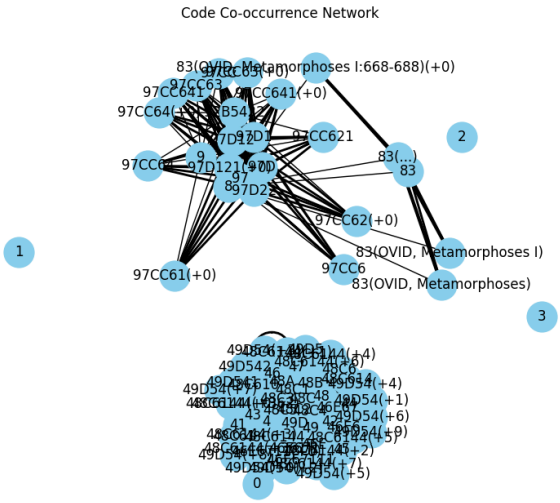


Image 18. Each search in Iconclass was turned from a screenshot to a PDF. Each PDF was preprocessed using the libraries PyMuPDF and os to turn into TXT files. The re library was then used to clean the processed text to isolate the node codes. Then the libraries networkx, pyplot, itertools collections, and files from google.colab were used to determine the common numbers in order of iteration to determine the relationships of parent nodes to more specified node codes. Then Pyplot was used to create the network charts. Each node shows a code which is shown as connected to all previous parent nodes, and all similar branching nodes under more or less the same parent with the bridges. Each node is light blue with black writing on top which was shown to be clear enough to make the point. Each node size was set to 700 to be large enough to be distinguishable for each node. In this case all the nodes are revealed together for both the results of the Argos motif and the digital medium. What this primarily reveals is a spread out lack of overlap to these nodes. In this scenario, our case study would only fit within some type of code that would simultaneously put it into several of these clouds without ever letting these clouds of nodes have edges.

Chapter 3

3.1 The Digital as a Medium of Artworks

Having witnessed the case study, and its relationship with the database of Iconclass, we can expound as to why specifically a digital work of art would have such difficulty fitting neatly into

categories. Medium is a consideration art history does not always immediately undertake since the “traditional” method of art historical research usually considers three media, thus the inclusion of an artwork in general usually means it follows either painting, sculpture, or architecture. In the case of digital art, the medium is taken even further since it often is just as central to the meaning of the artwork as the motifs themselves. Being that it exists in a time of many media possibilities, the digital medium carries specific properties, and it is these nuances the artist usually is underlining in one way or another.

The first point to consider when wondering about the digital as a medium is the sense of “space” in which it inhabits. As Nagel has already demonstrated through Modern installation art, this point of space was already made within artistic experience, practice, and interpretation that challenged approach and artistic consumption. (Nagel, 2012) With the digital this point is ever exasperated however as the questions of dimension, and further “space” within thought are broken since the media has the power to go far beyond all past frameworks. We saw in the networks of Iconclass inputs, a visual of what a “digitized” art historical framework does to a digital artwork, and therefore Drucker’s crisis is illustrated also for the issue it will increasingly become as new artworks are made using new media. (Drucker, 2013) The question, however, of medium, as we have had a taste from Nagel, is central to our understanding of how to proceed within the art historic institution in every way if we want to curate, and educate about these works of art we need first an art historical canon ready to host them. (Nagel, 2012)

One of the theorists Nagel does not agree with but is relevant to this point in our study, is Marshall McLuhan who was a theorist primarily of Media, but instead of using media to convey symbology within, McLuhan focuses on the implications of “medium” itself. (McLuhan, 1994) As we previously discussed, concepts of “space” are already at jeopardy and at play within specifically the technology mediums, but this is not the only difference that should be observed, the medium really does affect its contents. McLuhan describes firstly that the interaction between medium and people is at stake because there “are the psychic and social consequences of the designs or patterns as they amplify or accelerate existing processes. For the "message" of any medium or technology is the change of scale or pace or pattern that it introduces into human affairs.” (McLuhan, 1994, p. 7) In this way art has always been an interaction, it simply has changed what “kind” of interaction. We see this in Grasso’s *Panoptes* as well, the pretenses of the medium, forces it for example to even invoke the darker part of it including the mechanisms of "Panopticism" due to the artwork being digital, due to its very medium. Even though the artwork involves architecture just like the polyomatic angels of Byzantium by it being a work of art not in mosaic, but being digital does change the meaning of the artwork itself by its being mediated in this way alone. This creates a bridge that we saw in Iconclass is not yet there, but that is true to the artwork of being both of mechanical nature and speaking to that history, and invoking of a mythology that far predates the mechanisms within which those motifs are being

remediated. The artwork therefore reveals an interesting provocation on future models of art historical thinking by its virtue of its digital medium.

The issue is, especially in art it may seem that regardless of statue, painting, or manuscript, most of our interactions are basically the same, and that is because, “it is only too typical that the "content" of any medium blinds us to the character of the medium.” (McLuhan, 1994, p. 8) Since we are so busy trying to see “inside” an artwork to its contents sometimes we forget the effect of the medium itself, or as Art Historians we take it for granted since there is so much to synthesize when thinking about the content. Again, this brings us back to Drucker’s point however, that if we as academics remain blind to the collections of new media or unable to interact with said media we see again the lacking of information that effectively makes it impossible to tell a full “history” of a piece such as *Panoptes* even within the sphere of digital art history databases. (Drucker, 2013) Interestingly though from the institutional side this “overlook” is not only due to human tendency but that also, when it comes to the Digital, suddenly medium is questioned and feels more important than past media seemed to, “For it is not till the electric light is used to spell out some brand name that it is noticed as a medium.” (McLuhan, 1994, p. 8) This points rather to both a human reaction but a more intentional one than simply being overlooked, to placing the digital into a space that is simply “impossible” to deal with because the medium is “different enough”. The thing is, in reality, like the codex itself, the digital is simply another medium, a new medium, and a more powerful medium but still like any other. The issue from the human translation into the institution space is that it is a different enough medium it is noticeable. In regards to the noticing, and wishing to distance from the medium on the part of our current art historical institution, it may stem again from the use of “space” that Nagel had pointed out rapidly and meaningfully changed, from that of distance to that of interaction where the beholder is now included in a less-hierarchical way that the institution was built after. The museum can no longer put up a glass to divide the viewer from the artwork, even our understanding of “preservation” and “restoration” become markedly changed as the technology requires interaction over time, not merely observation, thus these terms would look more like “reenactment” and “updated compatibility” than frame and climate control. The institution would have to change and redefine its characteristics in order to accommodate the new medium, and therefore we notice it and treat it as “different”.

Grasso’s point by very intentionally harnessing the digital medium in his work was this change of observation and interaction on the part of the person to the artwork which the medium forces. Thus the mechanics of Panoptes we have encountered in the past with the Panopticon become also reversed in that we can now participate in the power dyad of “gazing” and by reversing the museum-style “watching,” the power is no longer solely offered to the eyes to the consumers of art but is semi-restored to the artwork itself. McLuhan further states that, “The serious artist is the only person able to encounter technology with impunity, just because he is an

expert aware of the changes in sense perception." (McLuhan, 1994, p. 16) We understand therefore along the lines of art history, which as a study is aware of the conventions, and effort taken into the consideration of artworks created, the medium is therefore as anything else, a conscious artistic choice made by the artist. We can also take this from Moholy-Nagy that artists will consider the use of technology alongside all their other options due simply to the medium's potential like anything else. (Nagel, 2012, p. 255) What, also changes as a matter of this medium is not a sense of "effort" or intentionality as we can see in Grasso, Nagel, McLuhan, and Moholy-Nagy but further what does change are also the boundaries of area of expertise where the artist also can become the "technician" from his work. (Nagel, 2012, p. 255) We are seeing here another problem for the art historical institution used to dealing with art in a certain way but also dealing with the artist in a certain way wherein these two fields generally do not intersect. We are seeing this in the overly "digitized" Iconclass database as well. The medium has crossed boundaries unlike what we have faced since the Renaissance when artists applied arithmetic and physics to their works making them mechanics/artists, architects/artists and so forth. Challenging the institutional space from the medium is therefore the point also from the side of the artist, the question is, will the institution rise to it?

Understanding that art is affected profoundly by its medium, when discussing the Digital sphere of art that looks like a disturbance of our previous expectations of appearance and approach to art making and the study of art. Like McLuhan pointed out, even though medium is always important, and ideally would always be considered when works of art are being made, Christiane Paul points out that specifically in the Digital medium, "The merger and hybridity of forms that has brought about the need for the current post‐digital culture raises profound questions about medium‐specificity and its usefulness in general." (McLuhan, 1994; Paul, 2016, p. 3) Now this a bit evokes what McLuhan also generally said about when technology gets involved, that fact that we notice it. It also touches on questions of "presence", because of how computer technology behaves as machines for knowledge dissemination and how that affects artworks created within its mechanisms. Further, many have put forward questions about how this same technology is being used to synthesize the very objects it is creating, and if it is truly innovative or simply repetitive but existing within a different space. We have already seen a repetitive nature in the crisis brought up by Drucker, and within the would-be classification of the case study within a digital database. (Drucker, 2013) These are all questions the digital medium has brought to us since as we are already starting to see, the digital medium on its own interferes enough with the "expected" regarding artistic presentation and interaction with said pieces, when we add the intersections of the contents of said work into these newer digital contexts we deal with works of art that carry many meanings. In fact, as we saw from our iconographical gander through Grasso's *Panoptes* multiple, completely different histories even have to be synthesized in order to fully unpack the piece as its medium creates significances inside it as well.

Largely we concern ourselves with the question of "presence" that Nagel brings up within the chapter "Instead of Cathedrals, Machines for Living", we have already seen the backlash of the installation artwork at large, which is also and even further true for Grass's artwork as well. For the digital though, this mixture of space that both Nagel and Grasso have described is heightened, which also plays into our "noticing" of the digital medium and philosophically we are brought to the philosophy by Jaques Derrida of "hauntology". (Derrida, 1994) This is a term that describes something that is in a state of semi-presence but without the ability to exist fully in the analog world to be experienced by all five human senses. Paul explains, "Derrida's notion of "hauntology," which describes it as a spectralizing force that is neither living nor dead, present nor absent." (Paul, 2016, p. 8) This particular medium of the digital, as McLuhan points out, is particularly noticeable due to its very different relationship with humans that is semi-alluding in this sense. The digital medium for the most part only appeals to human vision. Different from sculpture, architecture, or even painting, the art itself lacks smell or tactile presence, not to mention true three-dimensional presence. Its primary presence is in sight and, maybe, further in sound if sound is added. The art itself is made up of binary code that is formulated or projected in some way through a machine, what we as humans are experiencing is the machine interpretation of the artwork and therefore its presence seems to be incomplete by human sensory standards alone. This is another issue where the artwork not only interacts differently with space, as is the case of installation in general, but digital installation, like that of Grasso interacts with physical space differently. Due to its ability to be without an analog substance, the file also retains a different space within the digital space as well, forcing us not only as consumers of the art to treat it differently, but researchers as well due to its unusual flexibility. Grasso's artwork as a digital "installation" or "projection" does not interact with human space the way we expect, neither is it then possible to categorize the piece so clearly either. It then makes logical sense the artwork would not take up the "expected" spaces even within the archival framework.

Within the digital medium a certain flexibility of support and presentation occurs because the final product wherein the artwork is consumed or handled by humans is in fact a mediated version of the work dependent upon its mechanics. This sense of remediation through computational processes is entirely reflective of the digital medium and something we must realize has affected the reception, and even the ability of "uniqueness" within Grasso's art piece, including into the archive. As long as the artwork remains bound in the digital state, it will not take up the same spaces in an expected way, thus the unexpected within the uses of physical, mental, and classification spaces must become at least a familiar discourse within art history if not one that we are flexible enough to handle. As artists continue to use this medium of the digital, we must take into account the ways in which this medium interacts with us and our abilities to receive it from exhibition to cataloging and storing. Therefore, this point of "hauntedness" inherent in the digital medium might make us as researchers realize the

importance of medium in how we approach all works of art because there are certain inherent aspects, evidently we can no longer take for granted. This is a good thing, it means the bounds of art are expanding, and differentiating, thus when we look back to this era there will be a lot of important advancements to discuss.

As art historians, the idea of "hauntology" is neither new to our cultures nor unique to Derrida as a philosopher, but instead comes from a history of its own right both within the works of Derrida and within the history of art historical theory. (Gere, 2016) Technically, "Inasmuch as they are always a trace of something either potentially or actually absent, all representations are hauntological." (Gere, 2016, p. 204) This has been a great illusion of art since the beginning. It is the point of *Ce n'est pas un pipe* even though when seeing the image, within its encounter we again are enraptured with its contents and able to identify said image as an object with which we have had encounters within our lived experiences, technically its an image, it is not the object itself. Therefore, in a sense there is still a hauntedness in that the object is only represented, and its physical presence remains at large. We can say this also of religious Byzantine imagery, wherein the image is meant as a "stand in" for something else that is not physically manifested but haunts the image itself, it uses another medium for the sake of embodiment. Hauntology, therefore, has existed millennia before the digital.We as humans are forced to acknowledge "the absence of an expected presence" with the digital medium because in the case of this specific medium, "The digital image is not more hauntological than its analog predecessors, but it does reveal the degree to which representations of any sort are more complex and less immediate than one might think." (Gere, 2016, p. 204) In this way, it is not just a matter of space, analog presence and flexibility, but also a matter of immediacy to the human and the effect the medium has on the contents of the image. Specific to the digital as a medium, we are also haunted by the unexpected, the medium itself crosses boundaries to the point of being noticeable due to its continuously remediated state through the interpretation of a machine. This specificity of the medium forces us as academics to understand our own field in a greater and better way in order to ensure we are capable of preserving, showing, educating and archiving works of art such as *Panoptes* by Laurant Grasso. In general, greater awareness of the medium in general can only improve both the archive and art historical research processes.

On this remediation, what makes the digital so particular as a medium is its actual make up. The pixels are the output of a mechanical process wherein the machine has taken in a program, interpreted it, and put out this output as a result. The academic argument is that, how are we to determine this artform since it seems to fly in the face of our past traditions of art historical study that rely on the uniqueness of the artist, primarily found within their style of artwork. Without a particular hand to determine, how do we classify this art? It certainly does not fit within older forms of classification for this reason that it is actually a remediated medium. Our heightened awareness of it that forces the absence of a clear artistic origin as well means that, "As such,

technicity is hauntology, in that technical artifacts haunt their users with the possibility and actuality of absence, of both their creators and of other users." (Gere, 2016, p. 205) This is an important part of the mechanism, wherein the digital artwork not only cites its contents but also its medium in both a mechanical history and the same sense of potential anonymity (such as that found with the Panopticon and the surveillance that Grasso references). It is not just how the medium behaves, but our experience also of the medium at large. What is so interesting about it though is the original "brushstroke" of the artist in these cases is in fact, a written language for which a sense of anonymous but central cultural value that may seem "haunting" due to its lack of clear origin, "is also true of language itself, which is always inherited." (Gere, 2016, p. 205) Thus and therefore, the digital as a medium not only points out art's illusion as a material often used to convey other things or beings of primarily other materials, but it also reveals art as a Warburgian "value" of culture that changes within its interior with the movements of societies, just like the recounted story does. Grasso is therefore, simply retelling us a story already told and passing the language forward within a medium approved of and used by and therefore acting as a symptom of our culture of today. This is the digital. To the outward appearance, it is anonymous as an art-form, but inwardly there is still no art without artists. It takes a human to write this, or to retell this. In fact it is utterly human to attempt such a thing.

As a result, like we saw from Benjamin, who worried so much about the effects of mechanical on our human ability to continue artistic and humanistic endeavors, he is also right in that nothing is lost. (Benjamin, 1968) All that has happened as a result of the digital is a reckoning of the medium of art due to its impact within human expected spaces and interactions with it. We must reconsider how we look at art in general. However, at its core, nothing has changed. Art is still art and language is still language, and humans are the ones using and making both. The only difference is how much the medium forces us as humans to notice our own tendencies and our own boundaries of classification and in a way, knowledge. We are therefore also "haunted" by what we do not know, again this is an extremely human condition and really more a child of the conscious mind than anything else. When we encounter this particular ghost within the digital medium, "The image as such always engages temporality, either as the memory of a lost past to be recalled and re- presented as the perceived present of a "real- time" representation- such as a shadow, a reflection…" (Mitchel, 2015, p. 94) Thus again nothing is lost, but reflected with different points heightened than expected. In the realm of digital humanities this is an average day on the job as through quantitative research many unexpected things arise from previous assumptions within humanities studies. The same is true in this study, but what is found is a central incompatibility with the artwork and previous art historical methods. This revelation that reflects, or even maybe refracts since the reflection is not usually perfect of past knowledge, information, customs, and even motifs, that the act of great cultural values being reused changes their meaning, and this is even true in their remediation through the machine. The problem is the continuity of the motif and its meaning in existence is not

considered, yet they are still existing as we can see, and they likely will continue to exist and be repeatedly haunting us beyond even the era of the digital.

3.2 The Archive in the Digital Space

The further point however inherit in the medium and within its sense of repetition it really cannot help as a medium also made up by its own mechanisms, is the way in which the information machine draws from its own archive, which bizarrely as we have seen is not always possible to put again in the digital archival system Maybe it is due to the history of the archive, it should be noted that the philosophy behind archivism, whose author is also Jaques Derrida, he describes the general human need to archive as, “The archontic power, which also gathers the functions of unification, of identification, of classification, must be paired with what we will call the power of consignation. By consignation, we do not only mean, in the ordinary sense of the word, the act of assigning residence or of entrusting so as to put into reserve (to consign, to deposit), in a place and on a substrate, but here the act of consigning through gathering together signs.” (Derrida, 1996, p. 3) Derrida describes this way a certain generally human desire to classify into perfect places the destinations of everything. (Derrida, 1996) While this general desire may exist, in the study of art history this tendency is quite similar to what “traditional” art history and the museum institution have done which is to perfectly keep each detail and each art piece within a certain context and within a certain label in order to organize the information of art pieces into perfectly defined eras. Being the information machine, the computer cannot help but reproduce what its memory has stored within its archive, but it is also human, that when using the information machine art is made within the intersection of the art archive. These artforms as we saw come from their twentieth-century Modern parents, whose creations were simultaneous to the theories that surrounded them, including Derrida’s “Archive Fever”. (Derrida, 1996) Due to the digital art historical problem brought forward by Drucker, the mechanisms of those particular archives do not have the capability to correctly account for the inherent intersectionality of the digital medium. (Drucker, 2013) Even though the medium itself can act as a reflection of past historical images, language, and motifs, the actual archival sources contracted within the digital space does not accurately represent the creations of the medium itself through the overly “digitized” computational art history models.

We know the field has become so rigid, not only from Drucker but also as we consider the establishments and history of our predecessors from whom we construct our knowledge. (Drucker, 2013) When referring to the hierarchical system it is a reference to, “Art history since the 20th century has created a highly controlled system that divides our visual heritage into “art” and everything else, and organizes the former by artists (their national origin, time period, and medium and style).” (Manovich, 2017, p. 263) We know, again from museology, this has been a distillation, and massive categorization based only on these properties of how we organize art

historic knowledge, and the carrying out of research. It is this specific tradition that Benjamin refers to. (Benjamin, 1968) By Drucker's "digitization" what we mean is, "The digital collections of art museums today also look ordered and systematic. We are used to their ordered classifications." (Drucker, 2013; Manovich, 2017, p. 263) We also mean systems that are similarly organized, for Derrida's human desire of classification can also be seen in Iconclass, similarly organized in this way and further represents this mode of thinking, or type of art historical approach that runs on a definition of art and classifies as it always has done according to the development of the museum institution. (Derrida, 1996) There is something inherently different though also in the digital approach and that is, "In comparison, the meta-collections of digitized visual artifacts by Europeana, DPLA and others may remind us of the cabinets of curiosities." (Manovich, 2017, p. 263) This raises a lot of points, it brings out a sense of a "lack" from the previous organization techniques into something else, more a collection of things rather than a specific organization. It points also to the fact that the fluidity and properties of the digital space inherently not only affect the artworks made with the medium, but also affects the ability of said medium to inherit and replicate past archival pursuits and approaches regarding art historical research, education, and presentation. The digital medium not only is disruptive to said traditional approaches but it is also an important space that could hold greater creativity regarding approach due to this quality that semi-destroys previous very rigid classifications.

Having a place within the archive, due to its structure also has meaning. The fact that Grasso's work does not perfectly fit is as much a reflection of the archive itself as it is a limitation of the field of art history. The very alive and interdependent relationship therefore between the archive and art itself is that, "the technical structure of the archiving archive also determines the structure of the archivable content even in its very coming into existence and in its relationship to the future." (Enwezor, 2008, p. 17) This is very important as the archive further is not only born to classify and organize, but it as a result often determines what is and is not important in regards to art. In this way, "The archivization produces as much as it records the event." (Enwezor, 2008, p. 17) This relationship that can determine art that is presented, and deemed worthy of preservation, is actively impacting what is created or produced in that the art created must try and adhere to the dynamics of the archive itself. Understanding these limitations of current practices we can also understand that when Grasso's work has a disjuncted interaction with Iconclass, this is in fact a symptom of art historical approaches because it is a database designed using traditional art historical methods. This also includes previous art historical limitations such as less focus on the effects of medium on motif.

When we enter the digital space, we also enter a semi archivistic crisis in that Benjamin was a bit correct in some of the potential effects of mechanical reproduction in that a mass proliferation would occur. (Benjamin, 1968) Thus, even though what we are seeing is an overly

"digitized" copy of what already exists in the analog world, especially in the case of Iconclass, the migration into the digital world only really had the effect that, "The advent of mechanical reproduction initiated an archival formation that would overtake all relations to the photographic record: the systems of production and distribution and, more recently, the processes of permanent digital archivization and inscription." (Enwezor, 2008, p. 13) Thus we are seeing a mass migration of material to be stored in the memory systems of Turing's machine, but that thus far is all it is. It is a redistribution of what we already have. It offers the possibility of greater exploration as Drucker has pointed out, but not only is the archive proven to be hierarchical and exclusive on purpose, but also the digital archive with the advent of mechanical reproduction has primarily served to proliferate the same ideals. (Drucker, 2013) Now this is from the perspective of Drucker that the digitization is a jumping point for us as digital humanists to change the narrative using the digital space, and this is absolutely possible. (Drucker, 2013) The problem is the humanities field archive is repeated, and the past comes back to haunt us in the present in the sense of past hierarchies and knowledge boundaries when we need to become flexible to match the abilities and nuances of the digital medium. In order for this necessary change, as Drucker points out, (Drucker, 2013) the field itself would have to admit it needs this change, but the effect of this change is theory to the type of Nagel where we can create collocations that include all manner of untold lines of art historical research, such as that of the Medieval. (Nagel, 2012)

Within the discourse of mechanical reproduction, this was Walter Benjamin's point. (Benjamin, 1968) Again it really is no coincidence all the same theories that determined the Medieval within the mechanical turn of art in the twentieth century are also wrapped up in the tendencies of the Digital medium as both medium and content are heavily wrapped and born together. They exist in tensions of space and repetition that the medium makes the human very aware of due to the human inability to fully realize binary-based art to all five senses unlike older forms of art. While this disturbs the institute focused approach, ironically the machine is also designed to recreate the institution, just not in the same way as the analog in the sense of the natural quirks of the digital space itself. We know Benjamin famously described this "loss" of predictability in space and time for an artwork put into the mechanical archive and proliferated this way as a danger to, "the eliminated element in the term 'aura' and go on to say: that which withers in the age of mechanical reproduction is the aura of the work of art." (Benjamin, "Art in the Age…", 1968, p. 4) Therefore it was believed through the act of any type of reproduction this would cheapen somehow any sense of "original", but this was simply at the beginning and does not account for the contribution to art history the camera by itself would make. By making the reproduction, as is famously quoted, "This is a symptomatic process whose significance points beyond the realm of art. One might generalize by saying: the technique of reproduction detaches the reproduced object from the domain of tradition." (Benjamin, "Art in the Age…", 1968, p. 4) Now we have heard this a million times, the action even of reproducing, or re-mediating the archive and its contents into the digital is argued to be only a signature of presences in the analog

world. This further points to other problems within the digitization process, through over-reliance on older archiving materials and techniques, we are unwittingly not asking ourselves what even the digital format for the archive is even suited for. Beyond exclusion, this is another danger for the overly "digitized" nature of the current archive situation wherein the broad stroke digitization process also has not been fully optimized to suit the new medium into which it would go.

Further inherit in the medium that makes it difficult to seem "worthy" of being archived is within the point that, with Digital art specifically, it is partially due to its fluidity as a medium that is not perfectly solidly defined, but it is also due to the environment in which we must put it. Another very important aspect of the digital space is with its immense fluidity it is also a constantly updating system that makes older encoded items often obsolete very quickly. Therefore, "One of the biggest challenges of integrating digital art into the mainstream artworld and nurturing its collectability has been the preservation of this art form." (Paul, 2016, p. 17) This is where preservation and archiving will have to take on a very different meaning in the future if we want the digital art of this time, of our time, to in any way participate in the general arch of art history. This further creates issue in anyone seeing the reason for this artwork to participate also in something that is meant to last and preserve a sense of memory. Within the digital sphere, just like with some of the problems regarding the humanities at large, a certain economic stress is also to be expected with the constant creation of new technologies. As a result of this problem, "Digital art is engaged in a continuous struggle with an accelerating technological obsolescence that serves the profit‐generating strategies of the tech industry." (Paul, 2016, p. 17) Paul's point underlines why we need to continue our work into the digital realm and bring creativity into this area. The concern of obsolete-ness exists not only for the preservation of the Middle Ages and the humanities at large, but also in the preservation of the archival space as both an analog and digital entity. As described in any way this is always dangerous because a loss of information is always a loss even if that information was not deemed within the boundaries that should have been in the archive in the first place. Therefore, with the advent of technology, previously mentioned systems of preservation will also have to change in order to keep up as an inclusive field. The thing is, the study of art history within the museum and the university would have to actively be attempting to preserve works of art like Grasso's and what we have seen in Iconclass really does pose a problem if with future iterations compatibility within the code is lost and so could an entire generation of artworks.

The exclusivities of said tradition, though, extend beyond simply a hierarchical standpoint, since it truly is a slippery slope, they extend even into the knowledge input. When the pre-existing hierarchies are digitized what is also illuminated is what the museum and archival space also left out which includes information from, "Eastern Europe, South-East Asia, East Asia, West Asia, Oceania, Central America, South America, and Africa. Not a small area!"

(Manovich, 2017, p. 261) Unwittingly, through the process of retaining said traditions of "over digitization", the digital space being one of storing knowledge reveals the inherent biases of past practices. In the digital sphere where anything entered is heavily proliferated, the inequality and lack of equilibrium creates therefore an even larger imbalance as what is there is multiplied. So for example in the Artstor database as researched by Manovich for paintings from the 1930's, "while there were very large numbers of images of paintings of canonical artists from Europe and USA painted in the same year, there were only a few images for a whole continent like East Asia." (Manovich, 2017, p. 261) This is heavily problematic as it is in no way reflective of art historical production on even a global scale and in this way the hierarchy as transferred through the digitization of the archive collection into simply a digital version of the analog tradition, it proliferates and takes with it all the biases and inaccuracies that then effect in a bad way the researchers using the database because it presents heavily distorted results. This plays even into our case study since the exclusion of the absolute breadth of the peacock and the multi-ocular symbol as it spread across cultures and countries does not account therefore for the ability demonstrated that collocations are possible and heavily meaningful. Creating an inclusive art history has therefore never been more important as it would include these stories and offer the ability of global perspectives that tell fuller stories of motifs and their meanings according to their value across time and civilizations around the world.

The exclusivities that serve to fit the hierarchy are then even further considered while the digitization process at times is considered "precious" in its own right. This means by replicating biases into the digital, there are not only gaps of global knowledge but there are revealed gaps in what it considered "important enough" to digitize. Again with this comes a heavily distorted reflection because, "What remains outside of the digitized collections is all the rest: provincial nineteen century newspapers sitting in some library somewhere; millions of paintings in tens of thousands of small museums in small cities around the world; millions of thousands of specialized magazines in all kinds of fields and areas which no longer even exist; millions of home movies and photographs…" (Manovich, 2017, p. 261) What this has created as an effect therefore is a previously curated program of information pre-filtered and then overly proliferated effecting the production possible by the medium and the things moving art forward, but again any fruitful ability to research using said medium. As long as digitization is also paradoxically considered "difficult" or "too much" by also the smaller institution, the potentiality of the art historical researcher remains handicapped by the information available, as has always been the case. There is not only no longer a need for this, but it also heavily influences the output of art historical research capabilities. With proper use of the digital, this should no longer be true. Using the digital machine for the archive should mean that, "for Cultural Analytics, which has a potential to map everything that remains outside the canon – and to begin writing a more inclusive cultural history without "great names." (Manovich, 2017, p. 261) Meaning that we could also be filling in holes of understanding from so many perspectives from the old academic

hierarchies perspective forcing only certain objects to be of importance, to the global perspective. Really, could we even imagine how much data could be collected and synthesized in ways never done before if we truly tried to digitize even the things outside the expected pieces? It would be such a mass of information with which we could as art historians really rebuild the entire field in a very detailed way. The field, again, must admit it needs rebuilding though in order to make room for this.

The point that the act of digitization of literature is an over-replication of previously published, filtered knowledge and even within that what is digitized is an even smaller amount of information, means that even in the mass-digitization there exist great gaping holes of information which could create distortions and offer unrealistic sets of data. As long as the proliferation of what is there is occurring, it could make a very small percentage of art history seem like the whole, when the reality of the art historical canon is much greater and filled with so much more nuance. The question then also moving forward is, "The 'islands' of digitized historical contents are constantly growing. But will they ever be big enough to let us understand the 'ocean' – i.e., construct a sufficiently detailed map of the human visual history of the last few centuries?" (Manovich, 2017, p. 264) Basically to answer this question based on the state of the art of now, the simple answer is "not yet". The data that currently exists digitally is filled with such gaping holes that also seem much worse due to the proliferation of the small percentage of art that is entered into the system, it makes the holes much deeper for what is missing. It further means that any current attempt at sampling using the data currently presented would still reveal limitations of the art historical research in the results. This lack of creativity that could be present within the digital space has given us the overly "traditional" regurgitation of information and approach and is yet to reveal on larger scales the re-imagining of the art historical perspective. This lack of fluidity in the fluid digital space only creates bizarre incompatibilities making it very difficult if not practically impossible, ironically, for the inherently intersectional and fluid artworks being created using the same medium. Not only were heavy ties able to be demonstrated to a long line of past representations of the motif, but a multitude of significances were revealed regarding Grasso's work but was that possible using digital tools alone? No, it still was not easy to access research, making the topic not accessible and therefore not even often referenced as a possibility. This is why it must start from art historians. This is why it is also so important if we want to ensure the inclusion of artworks being made right now in the general arch of art historical contemplation.

All this being said, the digital still offers the possibility to take away from the hierarchy of the older art institution because, "And in permitting the reproduction to meet the beholder or listener in his own particular situation, it reactivates the object reproduced. These two processes lead to a tremendous shattering of tradition which is the obverse of the contemporary crisis and renewal of mankind. Both processes are intimately connected with the contemporary mass

movements." (Benjamin, "Art in the Age…", 1968, p. 4) It is true, the medium is different enough it deconstructs older structures of experiencing art in the process of its mass reproduction, it is simultaneously true it tries to retain all older versions within itself under the same computation. What happens is essentially a Warburg-board type effect where the greatest movements of art of all kinds are equivocated in order to be shown together, and in this way present a never ending opportunity of viewing, experiencing, and studying art. Again this is also Drucker's point. (Drucker, 2013) As much as overly digitized materials miss the opportunities of the digital medium, on the part of the archive in order to embrace becoming digital some creative license is badly needed. The current archival structure in general within the art historical framework can retain the old exclusivities and limitations which run against the best interests of the digital medium regarding information representation. For the future, the archive in the reverse presents us with the option for a digital art history. This is where we as art historians could apply our techniques or study and a newer form of flexibility in order to resolve the gaps we see in current methodology and bring about a new era of art history that moves with digital art in its nuanced ways of making us reconsider what we know and how we are studying or representing it.

Therefore, with this potential "shattering of the tradition" that is possible within the digital space, also as Drucker described the digital space also is a potential jumping off point for a newer, better, more accurate, and creative potential, if we have the data. (Drucker, 2013) The thing is, "we have learned from computer science studies of massive social media samples that we can look at any culture as a statistical population asking about distributions, averages, variance, clusters, and so on, we want similar historical samples. But they do not exist." (Manovich, 2017, p. 266) The capability of similar levels of historical data would provide some of the abilities similar to the social sciences, but instead of studying people we would study cultures over spans of centuries from a global perspective. The lack or the missing aspects of the historical data prevents the possible statistical or quantitative information to appear that could be possible if we had said information already in the digitized format. This again, points to Drucker's point which is that after the holes and gaps have been filled with the advent of full digitization, great creativity is possible in research, creativity that brings us to the like of Nagel's theories. (Drucker, 2013; Nagel, 2012) The ability to describe true interconnectivity, to build that network using the tools within the digital space would take the work of Warburg and mix it with the flexibility of the digital space to create something new, a new perspective. This point of view, however, would need to be open to a much larger art history practice. As long as the archive retains exclusivity and strict categorization, big and potentially more accurate data is not possible.

Ironically the same man who writes about the dangers of mechanical reproduction points out Derrida's further description of archiving and why perhaps proliferation becomes such a

reaction in the case of the archive, and this is the idea that the archive comes in times of imminent destruction. (Derrida, 1996) Now, the difficulty is, we know that technically perfect preservation of historical memory is nearly impossible, but it is noted that these forms of, "Historical materialism wishes to retain that image of the past which unexpectedly appears to man singled out by history at a moment of danger." (Benjamin, "Art in the Age…", 1968, p. 3) Thus, akin to the making of art within the digital sphere, the digitization and mechanical reproduction of the archive also derive from a very human feeling at its core and is therefore not lost for its sense of "humanities". The difficulty that we must consider is the danger of what? One might cite of tradition, in which case attempting to "see beyond" may appear as destruction, but if tradition were to be recorded instead and the act of the art historical tradition to try and discover all we can using our abilities of our time as synthesizers of culture, we enter into the creative uses of the digital Drucker was suggesting, and what better way to start than with an angel? (Drucker, 2013) Even for Benjamin the Angelus Novus has, "His face is turned toward the past…The storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress." (Benjamin, "Art in the Age…", 1968, p. 5) Thus what better symbol could we have picked to unite the timeline than one that calls for progress on the past, which is by the way a Modern artwork, and we are thus brought also back to Nagel's "Medieval Modern". (Nagel, 2012) The amazing amounts of reverberation are to be found to the study of art history, the digital medium and the effects of the mechanism and the bridging of eras in order to tell a more "unified timeline" using the angel as our metaphor, who through the eyes of Panoptes might just help us at least realize the limitations of our only two eyes.

3.3 How Freudian Theory Shaped Art History and Technology

Now we enter something interesting that seems to be a unifying factor from both the digital theory and the art historical theory involved in this theory, and that interestingly regards twentieth century psychology movements that heavily also moved the Modern artistic movements. This is not the only cultural phenomenon from the twentieth century that influenced and impacted the developments of that century and this played itself interestingly both into the developments of mechanic art, Medieval art historic research, and even the developments regarding the archive itself. The Byzantine era had the developments of its own liturgy to drive its products, its motifs, its images. The literature produced, the art produced, even the moralities behind the mechanics produced, were also products, or results of the mass theories coming out at the time that changed the perspectives of society.

At the very beginning of his first thesis, in the book *Archive Fever* by Derrida, he cites Freud's "Mystic Pad" directly and through the debate of materiality or lack thereof. (Derrida,

1996, p. 85) It is exactly from both the crises of any lack of materiality and worry of the cycles of perishing of human histories and the actual story. Therefore is created an “archive fever” that “concerning its lightest symptoms or the great holocaustic tragedies of our modern history and historiography: concerning all the detestable revisionisms…” (Derrida, 1996, p. 90) The fear, the emphatic fever from which comes the very same philosophy that backs up why we as humans so badly want to retain and organize and categorize history including cultural history. Thus the archive polemically also exists because of, “ the death, aggression, and destruction drive…” (Derrida, 1996, p. 94) The threat of the spectre, of the same “hauntedness” we experience also within the digital is bizarrely also a symptom of the fever with which we try and retain our past, our memory. Derrida has many reasons why this is a reaction, but the similarity to it all is that it comes from Freud. (Derrida, 1996) Again, the reason this philosophy exists is because of a tendency in fact with the human consciousness, the same one that has difficulty with the “hauntedness” of self awareness to lack of knowledge, or even lack of memory. This is rather a symptom of human psychology that comes into philosophy of our actions to even make an archive to begin with.

For Derrida therefore this comes from Freud’s work on memory and amnesia-like states and this is where the "Mystic Pad” appears as a medium that neither perfectly keeps information forever nor creates information meant to be erased like the chalkboard and the etching. (Derrida, 1996; Freud et al., 2001, p. 229-230) Thus, with a medium that keeps some and erases others, it mimics the mind in this way therefore, “Measured by this standard, devices to aid our memory seem particularly imperfect, since our mental apparatus accomplishes precisely what they cannot:” (Freud et al., 2001, p. 228) It takes into context a bit some of things we do as humans in order to aid the memory, to keep something beyond what the human brain is capable of on its own. If those tools become only semi-permanent not only are their functions altered but it takes into consideration their functions to begin with. Therefore art history is not just an archive of human accomplishment but it is also a testament to a human attempt to retain a cultural memory by forcing the inscriptions to last in a semi-permanent way. The human brain though, unlike a device like the Mystic Pad, “it has an unlimited receptive capacity for new perceptions and nevertheless lays down permanent-even though not unalterable memory-traces of them.” (Freud et al, 2001, p. 228) Therefore while the attempt to archive may seem to come from a material concern, it is in fact the same materials that remain constantly in an either permanent or impermanent state, which the brain can be more fluid, just like the digital space. Again as humans we are used to dealing with materials that can work in concert with but unlike the brain. The fact the digital reveals a similar fluidity to the human mind is unexpected when interacted with a medium to be so close to it. Therefore we notice it, but we also notice it and potentially mark it as dangerous since we unwittingly use a fluid, immaterial medium to recreate the archive. As already discussed, not only does that portray a lack of imagination, it is dangerous to both the medium and the objects being archived, since older archival practices do not have the

ability to adapt to the nuances of the digital medium and the digital archive as a result reveals distorted information. Thus Freud points out paradoxically the historical place for devices to aid human memory and the difference found in the more flexible capacities of the human mind itself. (Freud et al., 2001)

In the case of the archive, it being so closely tied to the psychological apparatus of memory the effects of the uses of memory aid tools bring out the general human tendencies around memory-aiding practices including the archive. Again, the Mystic Pad is singled out as a medium for Freud because this particular tool unlike others (like etching or writing with chalk and slate), "The Pad provides not only a receptive surface that can be used over and over again, like a slate, but also permanent traces of what has been written, like an ordinary paper pad: it solves the problem of combining the two functions by dividing them between two separate but interrelated component parts or systems." (Freud et al., 2001, p. 230) Thus this particular material itself is also to a certain degree haunting in that it neither performs the functions of memory aid as permanent writing, nor does it perform said function in a strictly temporary sense. Again this is still an extension of the human memory since at times memory retains or loses depending on a combination of psychological circumstances. What we retain and lose within singular and collective human memory is known in many sectors to be notoriously spotty, this is why in general criminal matters witness testimony is considered secondary, not primary evidence and not always usable.

Also the Mystic Pad is perfect as a medium to mimic the human mind because, "this is precisely the way in which, according to the hypothesis which I mentioned just now, our mental apparatus performs its perceptual function." (Freud et al., 2001, p. 203) This is revealing something even more, something discussed really in culture studies but something we must be aware of in the field of art history too. While the human memory being an unreliable thing for the testimony of everything, regarding cultural memory that means it is unlikely we ever retain everything, therefore even the archival drive is not perfect, it is created to suit a certain narrative just like the retention and lack thereof of a single person's memory abilities. In reverse, what Freud is describing is that the memories we do and do not retain within the archive and how they are retained and presented and how they are described also affect how we think of ourselves in terms of identity. (Freud et al., 2001) This is true as both individuals and as societies. Thus the reason Derrida hangs his point on the psychology of Freud is that the archive is not only a reflection of a human tendency as an attempt to retain memory, it is further an important agent that describes who we think we are and who we would like to tell ourselves we are. (Derrida, 1996; Freud et al., 2001) It is not only an incredibly human behavior and action to archive, it is further an active part of identity. Understanding the archive therefore as an apparatus of the human mind the decisions and the setup of said system become even less "random".

From the perspective of art history Nagel, when describing more reasons why we need a "different history" and in bridging the Medieval and the Modern, finishes introducing his concept with some key points of which: "*Installation*" and "*Indexicality*" are key to understanding our case study. (Nagel, 2012, p. 18) As we saw with the concept of "hauntology", it is important to consider the digital space in the way in which it interacts with the human space, and the human mind. Similarly, as mentioned more broadly with Nagel in the beginning, both Medieval and Modern art were experimenting with the uses of artistic space, and in reverse the space art takes as a piece. (Nagel, 2012) The digital medium that truly helped pioneer this breakdown of the traditional, hierarchical space in which art was codified to exist in was installation. Nagel brings forth the question very briefly that since art inhabited or rather has inhabited on and off very useful or practical spaces rather than solely contemplative or hierarchical ones, is in fact installation truly new or just an older form that is shown triumphing over the exclusivity found in, for example, museum practice? (Nagel, 2012, p. 18) Since this is true, it is therefore less surprising digital installation art would be less capable of being perfectly codified and categorized within a system that requires said hierarchies to be always present within artworks as well, but again this also extrapolates Drucker's point that we really need to start thinking outside of these older confines in order to move forward in the study of art history. (Drucker, 2013)

Our case study is in fact, an installation, and as mentioned it very clearly and easily disturbs the expectations surrounding art and interaction with art, while, in its digital format, Grasso's work also alludes human expectations of physical artistic presence. This artwork, in its installation state has both a physical and not physical existence, as a projected image onto a building. The building has physical presence engaging all five human senses, but the projection does not, and the projection hides the actual "material" of the artwork as actually binary. Regarding "*Indexicality,"* we do actually know from Grasso's work that a certain level of evocation is employed, but he is in no way alone as an artist. In fact,"The resurgence of interest in indexicality notable in the work of Marcel Duchamp and the Surrealists, and in a good deal of the art of recent decades, encourages a renewed investigation of Medieval indexical modes and of Medieval theories of vision." (Nagel, 2012, pg. 19) This is not a coincidence therefore "indexicality" appears as very relevant to digital art, because Dadaist art and Freud's principles of the unconscious were both predecessors of contemporary digital artistic practices. It was in fact because of said Freudian principles that we have even an interest in the Modern era that seems to. Therefore, Contemporary digital artistic practices are in no way made in a vacuum as their vision is able to evoke Medieval ways of seeing wherein artwork is meant to embody much greater, not easily explainable concepts. These examples point to a need very much for a "different history" since, "if references are regularly thrown across historical periods, this does not happen in a frictionless way. History is effective and real even as chronology is bent and folded. (Nagel, 2012, pg. 14) The need for a chronological boxing of every era must in this case

be dissolved in order to be able to take these points into consideration because these are artworks that move far beyond said boxes and said categories.

It is no coincidence that the theories and the art both share a common psychological force of the impact of Freudian theory. From one of the theorists Nagel describes as important, Meyer Schapiro, this twentieth century psychological analysis was used because, “Schapiro's linking of the marginal aspects of Medieval image-making with the Freudian unconscious. While there had been scholars who had previously tried to link certain aspects of Romanesque and Gothic sculpture to specific manic illnesses in a kind of pseudo-scientific iconography, Schapiro was among the first…” (Camille, 1994, p. 70; Nagel, 2012) Therefore it also took a certain psychoanalysis to create the theorists point of view that Nagel is coming from as well. Freud not only had a massive impact on the psychological field, but as previously mentioned he was also an important influence in general on the twentieth century, and as such like Pseudo-Dionysius was in the iconoclastic Byzantine eras. Therefore, the work of Freud went into understanding mystical/psychological phenomena even from the Middle Ages such as, “Collective/composite figures (found in the Middle Ages): (Such animal-human combinations are also commonplace in religious and mythological paintings, angels and cupids, for example.)” (Walker, 1983, p. 6) To explain the bringing about of these characters, not very unlike some of the angels in our case study, it employed the psychological impact that at times, “Such caricatures are disturbing because the creatures produced by the work of condensation are grotesque hybrids in which the head is that of a human being while the body is that of an animal.” (Walker, 1983, p. 6) These among other phenomena in the Middle Ages meant to come from deep cultural symbologies and imaginations at times often appeal, like the tendency of the archive, to a psychological component of human realization that again reacts as a manifestation often of a very human need. It was Schapiro among others though, who was able to apply this, to go beyond the even hierarchical academic art historic tradition of study by incorporating important theories also of his time such as that of psychology, which we see to be absolutely relevant to the study of art history as well.

Even moving past Nagel and the theories he mentions into the art theory behind all these contemporary studies of art history and what this thesis attempts to reveal as well which is iconology and what happens at its true employment within the field, even Panofsky himself reveals massive echoes coming from some of the literature Freud was writing regarding artwork as well. (Walker, 1983) As is most known is the three levels of meaning by Panofsky who considers the work of iconology through levels of human understanding and of course this is heavily interconnected with psychology as well, but reversely instead of from Panofsky's view, coming from the view of Freud’s, “view that dreams have double meanings (latent and manifest) and the way images function (signifiers and signifieds) and symbols work (literal and metaphorical levels of meaning).” (Walker, 1983, p. 3) Thus dreams have the same function as

the image as writes Panofsky in that it is always referable in the human mind according to our experience of it, reversely the images also that we have even within an involuntary state of the human mind are filled with similar levels of symbolic meaning.

It truly is a chicken-egg situation and pulls at the impossible question, “why art?”. We are not here to answer that, but the point is this link of human behavior and the theories existing with clear links between art and psychological theory as well are by no means accidental. From the point of view of Freud, “The correlation between art-work and dream-work is made quite explicit in Freud's frequent references to the means of representation in works of art as examples of how dreams are formed.” (Walker, 1983, p. 4) While Panofsky describes that, “apprehended, not by simple identification, but by ‘empathy.’ To understand it, I need a certain sensitivity, but this sensitivity is still part of my practical experience, that is, of my everyday familiarity with objects and events.” (Panofsky, 1970, p. 27) Thus while art is affecting our mentality, our experience and mentality affect how we understand and interpret art. Both these theorists are around the same era but in different fields; we see an almost uniformity in their approaches and their theories, both of which heavily influence how we approach the study of art history and psychology today. We see there is a very big similarity in the theories of Freud and Panofsky and therefore both are actively working in the crisis demonstrated in this thesis of the consequences of not considering the intersectionality of images. (Panofsky, 1970; Walker, 1983) Both theories contributed at the time to a new kind of art history, the kind that according to Drucker made us “care about the future of the field.” (Drucker, 2013, p. 5) We know these theories among others revolutionized the previous approaches within the study of art history by creating a thread between the overall human experience and the artistic manifestations that occurred. The thing is, this is also true for how we deal with and categorize and consider art, thus it is both applicable on the micro-level analyzing art, and the macro-level considering how art contributes to society.

In connection with the Mystic Pad are not only the general theories of Freud but also his considerations of memory of dreamwork that also go into the movements and instruments of artistic creation. (Walker, 1983) It is established by Freud, the same relationship of the Mystic Pad happens within displacement wherein, “is the result of the influence of the mental agencies of censorship and repression.” (Walker, 1983, p. 16) Again, the human mind reveals its imperfection, but even further some of its distortion. While we have seen how these distortions come from the psychological into the digital archive, it is also pertinent to the development of artistic movements which is both outlined by Freud and by Panofsky as well. (Panofsky, 1970; Walker, 1983) From the psychological perspective, akin to distorted details within artworks, “minor and trivial details of a dream thus become important to the analyst because significant dream thoughts may have been displaced onto them.” (Walker. 1983, p. 16) Thus the balance between amnesia and memory re-occurs in the cases of dreams, by a more conscious

displacement. This is made akin to the skull in Holbein's *The Ambassadors.* Conversely though, we know the reasons behind and the important element of iconology is not only layers of detailed meaning, but further correct understanding and synthesis based on an attempt to correct our own distortions of perception. From the perspective of art therefore we have, "Thus, as our practical experience had to be corrected…so, must our synthetic intuition be corrected by an insight into the manner in which, under varying historical conditions, the general and essential tendencies of the human mind were expressed by specific themes and concepts." (Panofsky, 1970, p. 38-39) What Panofsky is referring to is the important work of correcting ourselves as art historians to not fall into the mistakes of displacement and repression when it comes to the synthesizing of cultural objects. By shedding light on everything, we realize the repressed cultural memory. When correctly done Warburg's point is revealed, "This means what may be called a history of cultural symptoms or 'symbols'." (Panofsky, 1970, p. 39) We see therefore the human tendency is really very much revealed in both ways, on the micro and macro levels from the correct synthesizing of one object, an entire group is revealed for its actual original meaning according to cultural memory. Freud therefore does not have to be correct in that once lost is completely gone, we do have the ability to change, to correct our work as workers under the umbrella of cultural history. (Freud et al., 2001)

We see therefore how the theories of Freud are so interlinked from philosophies of "hauntology" and the archive which inscribe also how it interacts within the digital sphere, to Freud's works that directly address the making of artworks, and of course the theory behind understanding artworks as well as a result. (Derrida, 1994; Walker, 1983) All of these tendencies, from the making of the work of art, to its preservation, to its interpretation are all human psychological tendencies, outlined and under the concern of Sigmund Freud at some point in his career. Also though, like Pseudo-Dionyius, it was not just the original literature, but rather the impact of said literature on the Byzantine politics of iconoclasm and therefore all future forms of art making under said empire. Systems of art making, art processing, and art consumption during the Modern era, this is the same Modern era Nagel is referring to. (Nagel, 2012) It is the same Modern era within which Turing's machine is being developed and used alongside the more recent developments of the beginnings of machine art. It is not just the writings of Freud, but the impact of the writings of Freud that are pushing these points forward that would come down to today. Digital art, as a successor of machine artworks resides within all these contexts.

Grasso's *Panoptes* does not fit within an archive only built for a specific cultural identity and accepts and represses just as more modern memory tools can do. Similarly, in order to truly synthesize the artwork, ties to the past that are both artistic, cultural, and mechanical must occur (as was demonstrated) but this requires knowledge of the past that moves beyond only an art historical understanding into understanding of several eras and many fields. To bring us all the way back, one could definitely say this is why we so desperately need the Middle Ages.

Exclusion of an era as we see provides us with a negative and positive print (like a photograph). What is lost is rather refilled with other narratives that describe our identity as humans, as societies and while all this comes from a human nature, it acts as a distortion of cultural memory, one that will make us potentially lose it for good. We now encounter the slate and chalk, and not the Mystic Pad since nothing is left behind and what is left is brought out as a detail to be repressed. In doing so we carve a new identity by actively destroying past cultural memory meaning, we would never get it back and the immense works in the early twentieth century art history, the same ones that made us question the field's past practices would become obsolete, and then moving forward is not possible. Grasso's work is a testament that art, especially in the digital sphere would rather use its fluidity to remind and regain the imprints of the past, if we as art historians want the field to reflect the art of our time, and in this way become inclusive later on of art of this era, we must then employ these memory tactics in order to cement our goal to link the past with the present to have a greater knowledge of ourselves.

3.4 Some Resolution in Database Systems

To bring forward again the crisis Drucker points out, this worry, concern almost about the over-digitization of previous archival practices that do not always come from a place of logic or deep research, but have a history of their own, their presence within the digital space that has caused distortions, that has made digital humanists consider what the future of this field may be needs to look like has caused a certain level of tries to go in the right direction. (Drucker, 2013) Since technology has this capability as a medium to be distortive of our usual interaction with art, and to reproduce phantoms even of historical organized pieces, does this point to new ways of Digital artistic investigation? The short answer is, maybe, someday, and we know this because attempts have been made within the field of digital art history within the digital humanities to revolutionize the archive so as to be possible to include pieces such as Grasso's *Panoptes* within the larger arch of art historical research. The issue still remains though of massive underdevelopment which is partially due to a lack of general acknowledgement from the field of art historical study to the actual need of these tools. Either way, these developments are important even though they do bring out Drucker's point that we are not yet there, but they are on the road to our destination. (Drucker, 2013)

What we are seeing with Iconclass database by itself, is a combination of more of the traditional approach and the beginning of something new. Due to the immense categorization inside the model it is widely considered a controlled iconographic vocabulary primarily for the sake of complex classification of motifs and it is faced with many challenges as a system because of the very specific part of art historical research it serves that ties the motif to the literature. Art history in general can be limited to the iconographic level and stop there because of the, "traditional 'dual comparison' of images that seeks to demonstrate stylistic continuities and

neatly slots artworks into a chronology." (Becker, 2013, p. 2) Iconography says "this symbol meant this based on its style at this time and its literary counterpart of importance". (Panofsky, 1970, p. 40) It neatly puts motifs into categories. This is primarily where Iconclass, even though it was originally designed to mimic the *Mnemosyn Atlas,* went in a different direction because, "Although, both the library and the Mnemosyne Atlas reflect the cultural-historical approach of Warburg and his followers, the atlas has no classification." (van den Heuvel, 2026, p. 9) It is therefore of little surprise to us that there are no edges present between the ideas of technology and a symbol that far predates it within the categories even though syntax and support have a very central relationship in the study of artworks. This reveals however, also some of the limitations inherent within the archival approach and how we might need to consider new approaches moving forward.

Within a hierarchical frame of thinking the two should not exist together because the technology belongs to one style of doing and so should the expression of the eyes of Panoptes, it does not seem "logical" on this level the two would intersect, thus they remain two parts of something, but not a whole that has multiple bridges together. The obvious challenge to the classification system by itself is it does not in any way account for the possibility of digitally-born artworks that would be able to unite both the meaning of ancient motifs and remediate them through the digital medium to create something new, something Contemporary but well within the canon of art history. The good news is, very recent work has revealed some ways Iconclass could aid in the future incorporations of iconology-based research, but as a database alone, it is still a beginning of flexible knowledge. (van den Heuvel, 2026, p. 18) This type of database as art historians cannot be our end goal. Echoing Drucker and others who have shown concern, it is imperative that art historical research processes, "should not be set up as one linear process starting with association and ending in classification," which is even more a danger in the digital space considering the inherent linearity of writing. (Drucker, 2013; van den Heuvel, 2026, p. 18) The problem is also that amongst all the possibilities of information to digitize, we choose a very specified option that further reveals the limitations in our ongoing methodology as art historians to move beyond classification, or maybe to agree to use this but move forward with it to greater depths of understanding. If further exploration is not taken all the biases are simply put into encoded archives and ironically manage to exclude anything built with the same binary. It is the work of Digital Humanists, to do the opposite. We are to build inclusive and accessible digital programs and models, and this includes those for the study of art history.

Moving beyond Iconclass, we know as an example from the experiments of Leonardo Impett, and Franco Moretti that Warburg's "Pathosformeln", the very same ones Warburg painstakingly used photographic mechanical reproduction to create, could be successfully mapped using technology. The importance of this is that, this is the same theory that could be used to fundamentally change art historic approach, and if properly and intentionally applied

within the digital sphere, would have the ability to undo the Freudian concern of a loss of cultural memory. In order to pursue this within the digital sphere though, Impett and Moretti created for themselves a series of reduced figures with gestures turned into stick-figures that are computable. They used these to extract as Warburg was profoundly working on which was to find, “a common conceptual ground: “form”, with its mastery of empirical chaos, emerges as the fundamental concept of aesthetic morphology, while “formula”, with its permanence across time, functions as the cornerstone of an aesthetic history.” (Impett and Moretti, 2017, p. 5) Warburg, was after a history of art as a phenomenal subject, pivoting the older “gazes” of the field that limited history based on critique to a new macro outlook that reveals massive patterns of motif uses within a culture at large to reveal how that motif could impact a culture. To “operationalize” this using the tools of Digital Humanities research, Impett and Moretti at first correctly identified the gesture patterns of Ninfa. Their dataset revealed that the system “perfectly separated nymphs from non-nymphs. Were sticks and angles a good proxy for Pathosformeln? In the case of the Nymph, yes: skeletons worked like fingerprints, singling out Jolles’ young lady from all the other figures.” (Impett and Moretti, 2017, p. 5) Therefore it worked on a small scale to identify anomalies in the broader pattern of the use of said motif, and the technology revealed it does have great capabilities to separate based on the "fingerprint" of the form of the gestures themselves. This has been proven in many other research cases as well in the work of Iconography and Iconology studies.

The big point of the research of Impett and Moretti was to see if the machine through vectors would be able to provide an even wider view of the Mnemosyne Atlas by isolating a specific feature, the form Warburg was after. If successful, it would prove that computer technology was much better suited to prove Warburg’s theory than the tools Warburg had at the time, giving us not only the medium that challenges the older versions of hierarchical artistic space, but it could also be the research tool that allows us to investigate these pieces in a dynamic way, moving beyond the rigidity of the hierarchy. Unfortunately their findings, while extraordinary, were that when the figures were extracted and clustered, “we were also hoping the algorithm would separate Pathosformeln from each other – and that, clearly, had not happened at all.” (Impett and Moretti, p. 8) The even greater work of Warburg to use his equivocancies of images to bring out the exact usages of motifs within the history of art is still not possible due to the amount of nuances that would have to be computed which as of now are too many. It was later confirmed due to the number of vectors, these particular figures belonged to a group showing Contrapposto, something that is considered a clear delineation of Renaissance work inspired by the Antiquity past, however, due to various manipulations of the figures the clustering exercise was not as conclusive as hoped.

Within this particular experiment the ability to truly interpret a “Pathos” part of the “formeln” was not correctly synthesized, though it can be more easily interpreted by a human

being. Impett and Moretti explain, “Now, we are quite confident about the morphological aspects of our findings. When it comes to interpreting their anthropological or aesthetic meaning, however, we feel much more in the dark.” (Impett and Moretti, 2017, p. 10) This can be explained by the grand overall vision the technology was able to give, but the ability to correctly intersect the types according to their forms was not possible, and further the point of cultural value had to be filled in by the researchers. Warburg’s format still has great potential within technology and they almost did it, but this potential has not yet been fulfilled. Perhaps we need more in the world of research first, this still points to a possibility and the fact it was attempted at all is certainly the digital in the right direction. This is part of the creativity that Drucker is asking for within the digital even though it was not fully realizable in this case. (Drucker, 2013)

Specifically for Impett this crisis that Drucker announced has been the jumping off point for further examination within the uses of multimodal neural networks. (Drucker, 2013) Firstly it should be noted that this time Impett very directly addresses Drucker, and specifically the crisis brought up by her article and what it very distinctly delineates. (Drucker, 2013; Impett and Offert, 2022, p. 186-187) Thing is again, we are still dealing with an issue of categorization of the medium. As Impett points out an intrinsic part of the problem, which is something fairly well known in the realm of digital art historic practices, is that pixels are not capable of being “read” in many other forms than as a pattern of organization to a computer. (Impett and Offert, 2022, p. 187) Therefore Impett offers that multimodal neural networks may instead offer finally a capability on the end of the computer to construct a more flexible reading of the image material in order for it to move in the digital space the way words do, the problem is, “multimodal models can only contribute to art historical scholarship if this necessary entanglement of analysis and critique is taken seriously.” (Impett and Offert, 2022, p. 187-188) What this means is that even if the technology was possible, again we still need the technicians, or rather digital art historians to do it from the human side, and of course they need funding and institutional support, this is where this entire point comes into play. If the institution is not ready for the tools, it not only hinders their development, it becomes a mute point even if they are developed if they cannot be used.

With this point Impett and Offert bring out also a very clear state of the art type understanding from the technological side and they demonstrate it. From the points of technology as of two years ago, using multimodal neural networks Impett believed, "that it is possible to operationalize notions of similarity that go beyond what would be achievable on the pixel level even with object recognition models points to the significant potential of image embeddings in particular.” (Impett and Offert, 2022, p. 191) This technology stems directly however, “not from sets of images with discrete categories, but from pairs of images and texts– digital images with descriptive captions.” (Impett and Offert, 2022, p. 191) There are several difficulties here. First, while this might be the beginnings of the creativity Drucker was pointing

to, it further reveals that the abilities again within the technology are still highly limited and we are still not able with digitization alone to do very much. (Drucker, 2013) Most of the flexibility becomes only really possible when something that has already proven to be iterable through computational methods is attached to the pixels. Again, this is a problem that really lies at the heart of this issue where digital art history, if not properly considered could become a serious problem for both those working on it and for the institution that does not consider it. We have the beginnings of the creativity Drucker is discussing but this runs both ways and can either be mutually beneficial if used properly but can become mutually destructive if ignored or badly integrated. (Drucker, 2013) Within the digital are opportunities and evidence here of trying, but we have yet to quite reach it, this pulls then at the question of "the digital humanities in general– what is the "surplus value"[4] of the digital?" (Impett and Offert, 2022, p. 186) As long as this relationship remains unconsidered, Drucker remains true and theories like Nagel's and Warburg's who could benefit greatly from digital explorations remain untouched and we do not move forward as a profession, at least not very far. (Drucker, 2013; Nagel, 2012; Warburg, 2020)

For the OpenAI model they discuss named CLIP, another issue that is conceded by Impett and Offert is twofold. One is with the model itself that is still relying on old art historic models just like Iconclass where while, "CLIP takes us far beyond the object recognition paradigm; though perhaps not beyond the logocentric tradition of art history…" (Impett and Offert, 2022, p. 194) The other issue is also within the state of the art of the technology itself because of the model's, "deeply uneven capacity for visual description which the vector logics of neural networks had– for a while– promised to supersede." (Impett and Offert, 2022, p. 194) In this way, the model fails to move beyond previous art historical literature. In a way we already saw this coming knowing this model's heavy reliance on language like all previous art historic practice, but as we saw in Iconclass and as has already been described, this will not continue to work for born digital artworks. It may be semi-understandable why the digital as a medium is disturbing to the "expected" process and approach of art historic material, however, there is further the problem that the technology needs to reveal creativity at the rate that is actually possible. We see however that the rate could increase if the proper applications are given and put forward but this would mean cooperation and a realization on the institutional level of the digital not even just as an "added" point of research but really more of an integrated one. Proper application is really very important and we see again the beginnings but even for CLIP it, "is not 'better' than object detection models, and not closer to any meaningful human-like capabilities." (Impett and Offert, 2022, p. 197) This being said, within a corpora, "CLIP manages, exactly without any ability to conceptualize or abstract, to produce results that suggest an ability to conceptualize or abstract." (Impett and Offert, 2022, p. 197) In this way we are getting there, but not yet arrived from the perspective of the digital, and just like we still have no art without artists, we still have no digital art history without art historic researchers, we still need the human and institutional power behind this to keep it growing in the correct direction. Even Impett

concludes directly explaining how this model still falls a little short of answering Drucker's question but it is a start. (Drucker, 2013; Impett and Offert, 2022, p. 203) In this way, these starts are important but like a photograph reaching resolution within the proper detailed organization of pixellation, we only have partial resolution as of this point, we still have changes to make within the human approach to the digital research realm.

The final example I want to bring forward, which is probably the closest to my idea in that it reveals that the lack of bridges within hierarchical art history have in fact been explored before, is the ICON Ontology created by a group of Digital Humanists with art historical specializations. The thing is, it reveals the exact points of Impett that this research and these tools, when used by specialists, can produce really amazing new perspectives. The approach this time uses Panofsky's theories of iconography and iconology because, "it not only defines the mechanisms of interpretation and its components but also gives precise indications on (i) the types of subjects, and (ii) how the subjects, their components, and meanings are related." (Sartini et al, 2023, p. 59:3) We are now dealing with the exact issues of Grasso's artwork in that its intense and extremely interrelated components inherent in both the history of the digital space and mechanical art but also in the long history of the content of the artwork itself make it highly interdisciplinary. This is a practice that we see from Nagel is slowly becoming normalized on the part of art historical research but for the storage of this information and the digitization of this information we still have Drucker's crisis to consider. (Drucker, 2013; Nagel, 2013) By applying a relational method on top of solely that of identification, documentation and so forth of artworks now we reveal the realistic characteristics of the art historical practice and it builds bridges even into multiple disciplines as we already have seen which gives a history of so very much more than only art but of the movements of entire cultures using art as a symptom. Grasso's work both as an artist and as an artwork is perfect for this because by practicing even simple iconography, the immense intersectionality that is revealed describes why everything is important, not just the Middle Ages but including the Middle Ages.

The Ontology further reveals that first of all iconology in general has not yet migrated to the digital, but further the reason behind this is also due to the nature of art historical practice. (Sartini et al, 2023, p. 59:6) Here, yet again the flexibility and the possible creativity of the digital space, if left under the guise that it cannot be applied to the humanities studies, can end up representing absolutes (which we have already seen is far from what a computer does). The result is that the abilities for growing information are changing, findings are not even explored, and therefore iconology is considered too difficult to digitize. In the ontology, "Since each assertion reflects the agent's opinion, multiple, contradictory assertions may be represented. The concept of interpretation is applied broadly, including measurements and other types of scientific observations." (Sartini et al, 2023, p. 59:6) This proves that it is in fact a possible and, even more, a huge advantage of the digital space to reveal the change of assertions over time and from

even different parts of the world to reveal again a more complete art history. As we have seen, a database that mimics the printed word can have difficulty with this kind of fluidity since past limitations of art historical practice can end up encoded as well. This is pointed out in testing since, "To the best of our knowledge, existing linked open data hubs do not include detailed descriptions of iconological aspects…" (Sartini et al, 2023, pg. 59:24) This is not the creativity Drucker referenced, but again in order to have said creativity we first need art historians who agree there is a problem with over reliance on only specific opinions and perspectives and unable to be adaptive. (Drucker, 2013) Even down to things such as measurements as for example, it was realized that the Arnofini double portrait was part of a diptych, even these things change with continued research. While, yes it reveals a certain subjectivity within the humanistic study that is a bit diverse from scientific study, it is also a perfect revelation of how the digital space can act as the perfect type of "Mystic Pad" for us to use when trying to apply our imperfect ability to remember and study our history wholly and completely. By using the digital space as a flexible space wherein the innovators and discoveries of our field can be recorded and grow, this is the type of creativity that will bring us into the future of digital art historic research, but this alone is not enough, we can go further.

The difficulty in this case has also been within finding agreement and the issue I would say is primarily within accessibility, all this information is difficult to map clearly or simply since the information is neither simple nor always clear, this is the nature of art historical research at its core. Therefore parameters had to be created and this becomes tricky with the studies of iconology since the lineages of motifs tend to reveal meanings beyond the original expected forms of art historic practice is used to revealing. Therefore in order to create a repository, even in this case, and attempt at definitions needed to be made wherein, "it is important to define also what the concept of meaning is." (Sartini et al., 2023, p. 59:7) From this we take from Panofsky, the man who put forward the art historical theory behind this wherein, "meaning is defined according to the semiotic theory…in which a signifier (i.e., an icon) signifies the carried signification (i.e., a meaning)… Therefore, following Panofsky's modeling, all the subjects identified at each level of interpretation are considered meanings." (Sartini et al., 2023, p. 59:7) This may be the part where we as art historians start to miss the chronology system for its comparative simplicity, but it is this form in fact that not only revolutionized our field, but also provides a more complete picture of art history, because when this is applied to the artwork and the contents found therein a reverse Warburgian effect happens wherein the work itself is imbued with, "meaning as a social object…" (Sartini et al., 2023, p. 59:7) Thus when we give the work more meaning, the work also plays greater meaning in the grand schema which according to Impett in the digital humanities that, "epitomized in the notion of 'distant reading'/'distant viewing'" (Impett and Offert, 2022, p. 187) Thus something that seems minute becomes part of a movement, part of something including so very many works of art, so very many objects and symptoms of the movements of cultures. In this light nothing is irrelevant, no era, no art

movement, nothing, all is contributing to the understanding of the past and present and we arrive at the same theory Nagel provided us that reframes relevance as something with a much longer linearity than is possible in our simplified past versions of art historical research methods. (Nagel, 2012) This is much more possible using digital research tools than in the analog world alone and is a perfect example of the innovation Drucker was looking for. (Drucker, 2013)

Another important aspect is that this is an ontology, meaning it is structured from the beginning to build these bridges between icons and motifs which is only possible through meaning in this case. Previous ontologies are mentioned and again these are definitely the starting points we need to consider that are actively using the capacity to reconsider symbologies and motifs by using them as a history of meaning. In this case the ontology is, "designed to conceptualize cultural symbols, uses the n-ary sim:Simulation class to link together a symbol…" (Sartini et al., 2023, p. 59:21) The Simulation Ontology is basically used in order to assign numerics and statistics to Panofsky's layers of meaning in order to build the model digitally. The artwork itself is also subject to many different levels of cross-examination in several different databases to be considered in this way. What is extraordinary, is the fact that due to the previously mentioned rigidity of many of these databases, the intersectionality of an artwork can accidentally put it within several different categories depending on the algorithm of the database involved. While this might be expected since each repository is designed a bit differently for a different purpose, it reveals the subjectivity further of such labels since the true and full picture here is intersectional, that is the point. "Traditional" art history is not built this way, but Warburgian art history is. According to him, "that orbiting between pictorial and symbolic cosmo-logic whose sufficiency or failure as an orienting intellectual tool is in fact a reflection of the fate of human culture." (Warburg, 2020, p. 20) Panofsky was a continuance of this but it is a complex and semi-messy approach because it far outreaches the neatness of hierarchical labelling so central to the databases the ontology is pulling from.

Therefore in order to actually reach iconological levels of meaning according to the digital space in this case, "Concerning level 3, we present a query retrieving all the artworks linked to the same cultural phenomenon," (Sartini et al., 2023, p. 29:27) Thus a group is made (potentially) of "all the artworks that are involved in the same cultural phenomenon as a starting point of further analysis, considered fundamental for the researcher." (Sartini et al., 2023, p. 59:27) This is important as it reveals very directly how this tool was designed and for whom and that this was in fact a consideration within the process. We revert back to the innovations by Impett who warned us that one of the ways of real creativity, the type that would address Drucker's crisis, would have to be a very intentional application of said materials which includes this sort of thinking.(Drucker, 2013; Impett and Moretti, 2017; Impett and Offert, 2022) Again this is why really an important component of all this is the institutional understanding and the people getting involved because without the researchers the tools are either not designed

correctly, not used correctly, or not used at all and the innovation aspect is not helpful when this thesis has already demonstrated within the case study that this type of innovation is crucial, really central to the future of art historical practices. If we expect to be able to incorporate digital art within art history, not only does this mess with previous practice in the sense of the medium and presentation, but for the sake of research we would have to acknowledge that multi-intersectionality is really central to understanding digitally created works. Without the tools or capacity to be able to explore all the aspects of these works of art in this way, we end up with an incomplete art history, and really the type of art research where important aspects are not able to be entered and are at risk of being lost forever, just like the Middle Ages. In this way all of this, even if we are told or have been told is not interlinked, should not be considered relevant, it absolutely is relevant and needs tools such as those that could be found in the digital in order to be explored at the scale that they go, since said scale is really a very distant view but truly phenomenalogical point of view as well.

Again though, having inspected this web, even as an Art historian with some years of training myself I can say, it is not legible (see Image 19 below). A good colleague once asked, even if these tools are made to be "universal" in some aspects, without a knowledge of art history of what use are they to somebody? Truth is in a way this is a lie of the tool, "because of its claim to universality," which "is still a ridiculous thing to say." (Impett and Offert, 2022, p. 203) Thus the tools are not universal, they cannot be by nature. This is an important point that we as art historians often run up against, already having the knowledge it is difficult to imagine what life without it would be exactly and therefore how to approach a public in order to share our knowledge and findings. So in this way I would say the, "ontology presented here is still a work in progress." (Sartini et al., 2023, p. 59:35) The hazy-ness of the "meaning" problem makes the model reveal a very messy clump with even messier sub-clumps and necessitates, "more thorough conceptualization of cultural phenomena, personifications, and allegories…" (Sartini et al., 2023, p. 59:35) Thus it is a good start still but the point of accessibility is not fully perfectly considered since the task of digitizing iconology is such a complex task that is by nature organic and relies on complex numeric systems such as those similar to neural networks as well. An artwork cannot simply be read, it is in fact "too humanistic" to enter perfectly into statistics, there must be more room for error. On the other hand this is a great start, and it shows we are getting there. If our art piece were somehow entered into this system, the necessary bridges would probably be already in existence and the ability of multi-significance would be completely feasible under this networked model.

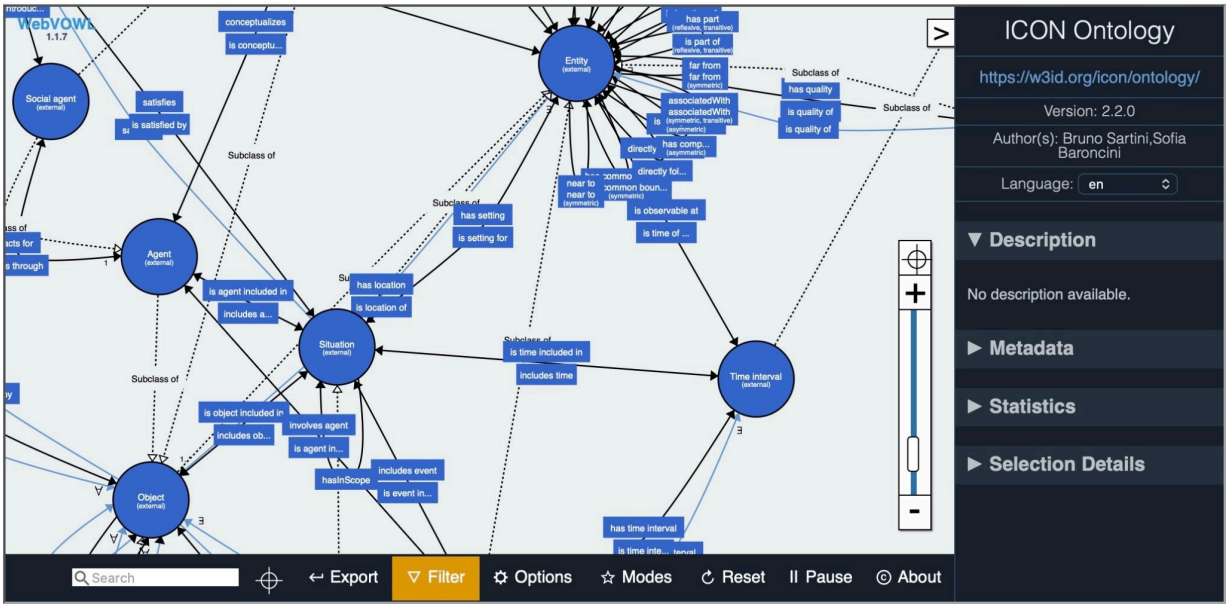


Image 19. Detail of the ICON ontology network to reveal its elaborate nature of the network and the vagueness of the labels within the network, https://br0ast.github.io/ICON/ICONOntologyDocumentationcurrent/webvowl/index.html, Accessed May 30, 2026

All these points are true, Impett and Moretti bring forward the problematic issue of reducing motifs, Impett and Offert describe that in order for a digital art history much more technological development needs to occur on the basis of recognition capabilities and with the ontology we see both the beginnings of capability along with some of the future difficulties we will face trying to create a digital art history. The reason I say "some resolution" is again these are starts but my worry is "how far can they go without mainstream backup?" Within Digital Humanities, the research is occurring and the models are slowly coming into being but we need cooperation that incorporates digital humanities more readily into humanities fields in order to better organize this chaos. If we are to develop tools for the future of art historical practice, then some changes must be made on the level of universities and museums, really any institution teaching and presenting cultural heritage. It is time we "cared again" about the field to be worried about its future in order to put forward innovations that will determine a future of the field. It is not just a matter of funding but rather also a matter of recognition, cooperation, and integration of tools for the sake of preservation and research which really should be the focus rather than solely a consideration of how "it was always done before". With the possibility of recreating the field in a way that is inclusive of all the information we are finding, that is therefore more accurate, and that is accessible, that is made for an audience as a tool. This most likely is the start of the development of several tools and will take several lifetimes to complete, but the first step is here, recognition of the problem and the looking for resolution.

Chapter 4

4.1 From the Art History Perspective: the theory before Nagel

Having seen everything, the case study, the results within the digital database, and having brought that information into the context of the digital as a medium, we have really witnessed the problems involved and how exactly they have been framed between the histories of the medium, memory and the archive and how all this interacts with art. Then we saw the start of the work that has also within it some of the revelations of exactly how much work lies ahead of us in the true and good use of the digital medium in order to reconcile the immense amount of history to be considered that has been left out. I merely point out a problem in a genre that has the risk of being left out of the canon and potentially why. Like the Middle Ages, we also know digital art history is at great risk if precautions are not taken, this particular area of art history is fragile in ways no other era or medium has faced and great adjustments need to be made, including inclusion. Now, returning to the realm of art history, which really is my core answer to the crisis as an art historian myself, as has been laid out this thesis hangs upon the idea of a "different history" not simply because it seems like a neat idea, but further because it is not the first time we have heard of such things and because there is a crisis that few are talking about, we are looking at the potential dismissal of several eras and I am here to demonstrate to you why this is dangerous. If we stop building the network of art historical knowledge, we lose our own memory and the Mystic Pad will not have retained, at least not proportionally, anything that resembles the reality of our history and therefore this is my concern as an art historian.

One way to address Joanna Drucker's concern, and my concern as well and to bridge needed gaps in the current study of art history. (Drucker, 2013) I use the theory of Alexander Nagel as the main theory behind this work. (Nagel, 2012) Nagel proposes that one of the ways we must as art historians move forward with the study is through a certain change of perspective which he demonstrates linking the practices and themes of art from the Middle Ages to Modern art at large. (Nagel, 2012) This concerns digital art because some of the Modern art movements discussed are considered direct predecessors to Contemporary digital art. Now, Nagel is an art historian and he himself is coming from the art historical perspective written during the early twentieth century which is the point when, as mentioned, the entire field of art history was being questioned (which Drucker pointed out) as a direct result of the findings at that time. (Drucker, 2013; Nagel, 2012) Nagel and myself, we are simply restating what was already stated by our many predecessors of art history. Nagel describes that while most of the contemporary Medievalists have had at least some involvement with this track there are others whom he wants to underline, "the relevance the work of precursors who were engaged in both periods throughout the twentieth century,… figures such as Wilhelm Pinder, Lionello Venturi, Henri Focillon, Eugenio Battisti, and Eco." (Nagel, 2012, p. 13) For the sake of space and clarity, as has been

explained in the limitations, the theorists I include from this list more directly speak to this thesis and their contributions are noted.

I do echo Nagel however in feeling that regarding art history this thesis, “is an encouragement to listen to them carefully again.” (Nagel, 2012, p. 13) The theories of Focillon have already been revealed for their ability to open up beyond the older hierarchy of the art historical methodology, and many others also contributed to a knowledge and a very central attempt to redefine art history by understanding its core, and what it is as a study, the ramifications of which have given us the wider study it is today. (Emerling, 2022) However, if an entire era can disappear, it is not enough. We must look again and think again.We are art historians who are lucky to come from a great tree of knowledge, but because of this we already know these points, it is simply as Nagel and Drucker have pointed out, we seem to have settled on these points as a field not to take them up again or pursue them any further. (Drucker, 2013; Nagel, 2012) I am here to push these points forward because they offer the different perspective Nagel and myself are inspired by that does the work of revealing art history for the interconnected web it more accurately is. (Nagel, 2012) I will use this later to reveal how Contemporary digital art and Contemporary digital art history would deeply benefit from this perspective and Drucker’s actual concerns could start to be remedied in the digital sphere. (Drucker, 2013) To this end the theories selected are ones that together build a focused enough web to develop my point. A full web will take my life’s work.

Now following the authors Nagel describes, Lionello Venturi says quite a bit in *Il gusto dei primitivi* amongst his other works I am sure, but the main thing really Venturi discusses is the artists leading up to what is considered the “Renaissance” in the fourteenth and fifteenth centuries. (Venturi, 1972) His point is how art is measured, and this comes from a critic rather than a historian and he points out the power possible when artistic knowledge of any sort including criticism opens up beyond solely the “classical” and “realism”, since Venturi points out these two labels being some of the main labels used to determine even the “validity” of the procession of art within this historical moment. (Venturi, 1972, p. 5) We can remember that because of Giorgio Vasari as the grandfather not only of art history but also of art criticism, that this is why the world of art criticism can also benefit our breaking away from previous forms in order to realize our own patterns as researchers in the art historical field. If applied correctly, it is revealed that, “possono aprirci nuovi orizzonti a traverso i secoli e i continenti, affinché la nostra esperienza tragga da ogni tempo e da ogni luogo una conoscenza totalitaria d’arte.” [they can open up new horizons for us across centuries and continents, so that our experience may draw from every time and every place a comprehensive knowledge of art.] When we free ourselves from the extreme boundaries of any labelling and hierarchical system from the art historic perspective, this makes our work truly boundless, which prior to the computer was not

computational, but now, it potentially is. This could be among the stars we should reach for as researchers.

In this way even art critics help achieve the goal of a fuller memory from art history by simply being “conscious” critics who realize also like the art historian, we are enmeshed all together in the world of making art. In order to properly free ourselves from the scales and labels that both determine a semi-forceful coherence on the part of the artwork, when critically, few artworks truly fall into said categories so perfectly. Venturi, when considering all art and artists sought to, “cerca ciò che li accomuna, non la loro arte, ma il loro gusto.” [looks for what unites them, not their art, but their taste.] (Venturi, 1972, p. 13) This is where he sets his argument truly predicated on the word “gusto” as few other words exist that could perfectly encompass Venturi’s point. (Venturi, 1972) Therefore it moves beyond even the time period that is considered the “primitive” such as the, “la scoperta preraffaellita dei cosiddetti primitivi, cui si deve l’ancora attuale” [the pre-Raphaelite discovery of the so-called primitives, which are still unknown] (Battisti, 1989, p. 28) This seems to bring us to the Middle Ages again since the reference, regarding the Pre-Raphaelites is a likely bridge to said era. For Venturi instead the idea of “gusto”, “l'insieme delle preferenze nel mondo dell’arte da parte di un artista o di un gruppo di artisti. Michelangelo preferisce la forma plastica e il corpo ignudo, disprezza il ritratto e il paesaggio e cosí via: questo è il gusto di Michelangelo. Tiziano preferisce gli effetti cromatici e i vestiti ss cintillanti, ama il ritratto e il paesaggio e simili: questo è il gusto di Tiziano.” [the set of preferences in the art world by an artist or group of artists. Michelangelo prefers the plastic form and the naked body, he despises the portrait and the landscape and so on: this is Michelangelo's taste. Titian prefers chromatic effects. and the sparkling clothes, loves portraiture and landscape and the like: This is Titian's taste.] (Venturi, 1972, p. 13) In this very encompassing way, by referencing the details of each artist it is defined under detailed terms, rather than a “right” or “wrong,” a “good” or “bad” or any other polemic situation used to define any era, it is described instead the nuances of the artist, and in this form they are critiqued for themselves rather than for their ability to fit a pre-determined pattern that either lies in the “classical” or the “realist” realms. Venturi, in his introduction quotes Da Vinci on this point, describing that artists are not meant to copy other artists and therefore must be considered in a more detailed way. (Venturi, 1972) The “gusto” in this sense becomes more important even than the idea of “primitives” since the taste simply delineates the group’s perspective by the boundaries of its own movement regarding artistic form.

We can see why Nagel would return to this critic, who like others of his perspective, saw art criticism as a literature that needs to weigh important nuances that with their lack of clear judgement offer the ability to open horizons beyond very perfect labels. This, as we know is Nagel’s point in that neither Middle Ages nor the Modern eras according to Nagel’s writing are contained within their eras. (Nagel, 2012) We have already seen, based on all the elements of the

case study and the immense intersectionality both inherent in the medium of the artwork and future artworks created and archived within the digital that this will be of contemporary concern. Nagel points out how this critic has dismantled several strict eras and it makes sense he would consider the Renaissance, since it is considered such a clear period by most society, similar to other periods such as the Middle Ages and the Modern for that matter. (Nagel, 2012) Nagel reveals that when this type of criticism happens that dismantles prior more rigid definitions, we see increases of understanding that even lead to collaboration across disciplines in order to enrich each other. (Nagel, 2012, p. 12) Venturi plays very much a role in this with the very detailed and nuanced idea of taste that goes beyond even stylistic labels defining artworks and movements of various periods to go into the preferences of perspectives of groups and artists. It effectively changes the polemic elements inherent also in the "traditional" perspective where only certain movements are the "correct" to attain. (Venturi, 1972) The results in Venturi's ideas of taste allow for said crossings of boundaries by adding nuances to the work of art history. This is what also enables art historians to create a fuller memory, by dismantling the parts of art history that have been overly lost in the attempts to clearly label when an artwork and an artist could not realistically fit into such small bounds. (Venturi, 1972) A great story can be told therefore within the art historical narrative that encompasses so many more elements.

Eugenio Battisti practically spelled out mine and Nagel's point in *L'antirinascimento* almost a century ago. (Battisti, 1989; Nagel, 2012) He was part of the generation of art historians Drucker also referenced who started the change wherein, "Every aspect of art historical knowledge was shaken at its foundations." (Drucker, 2013, p. 5) and it was important "because it seemed that the future of the field was at stake" (Drucker, 2013, p. 5) What we have seen is that Drucker is not wrong and Nagel calls for this too. (Nagel, 2012) With the understanding that, "l'idea di una continuità evolutiva, per subentrare invece la coscienza di una opposizione o lotta di generazione contro generazione e di ambiente contro ambiente." [the idea of evolutionary continuity has disappeared, replaced instead by an awareness of an opposition or struggle between generation and generation, between environment and environment.] (Battisti, 1989, p. 28) This separation refers to the practices of simplistically separating artworks by era labels wherein each generation is to stand out for itself and is not seen as a continuity. This prevents any broader vision as described also from the critic Venutri's perspective as well. The concept is very similar, from Venuri it is to see each artist's canon for their nuances rather than labelling as only one strain and from Battisti to see each era of art for the connections with others rather than as divided blocks. (Battisti, 1989; Venturi, 1972) Again this leads precisely to the point of Drucker wherein within the digital space we are offered an exceptionally clean slate as art historians where we could move beyond the past academic limitations we are starting to notice in many existing digital databases into something greater using the digital sphere. (Drucker, 2013)

Battisti wrote this line precisely because he did not agree with it. The whole point of an "anti-Renaissance" is to counter this segmented approach because art, as Battisti puts it, "essa risulta da componenti diverse, che a volta a volta predominano. Ne è conseguita una sempre maggior difficoltà di periodizzare, adeguatamente, i vari episodi di stile; ed ancor peggio, il loro artificioso isolamento da un contesto più vasto e comune." [was the product of diverse components, which at times predominated. This has led to an ever-increasing difficulty in adequately periodizing the various stylistic episodes; and even worse, their artificial isolation from a broader, more common context.] (Battisti, 1989, p. 29) What this fundamentally reveals is that even before contemporary digital art and contemporary digital archiving methods, it had to be recognized that multi-faceted aspects and many influences play into the creation of artworks and this has for a long time been true. Therefore the proper understanding of any artworks requires a knowledge of said possible nuances that may not easily place an artwork entirely into only one or two labels, or even to say perfectly that it works as art "of its time" precisely, as an artwork may be of a certain era without perfectly fitting a specific label or expectation of said era.

The immense intersectionality of an artwork has already been demonstrated within the case study and while this is heightened by the digital medium, evidently this was a problem long predating said medium specifically. Battisti points us instead, "rinunziare o delimitare al massimo l'uso di quei termini, inadeguati su una scala così vasta, saggiandone caso mai la validità in ambiti topografici e cronologici più ristretti (e corrispondenti, del resto, alla più limitata sfera di conoscenze del periodo in cui sono stati formulati)" [to either abandon or strictly limit the use of those terms which are inadequate on such a vast scaletesting their validity, if at all, within more restricted topographical and chronological contexts (which, moreover, correspond to the more limited sphere of knowledge of the period in which they were formulated)] (Battisti, 1989, p. 39) We see therefore we cannot feasibly as a field of study only rely on the labels that have previously been set, be they under historical markers or specific stylistic trends. Artworks, being recognized as composed of a great many influences rely therefore on the understanding of a great many things. Again this is where Nagel comes into play where collaboration and across-field study are therefore increasingly employed, precisely because over-reliance on non-intersective or non-multifaceted study delivers precisely a "limited sphere of knowledge" that Battisti points out, again due to the various influences that go into the making of a work of art, even before digital technology was involved. (Battisti, 1989; Nagel, 2012)

What is beautiful about this is that it generally means that, "La storia delle arti, dunque, viene assorbita dalla storia della cultura," [The history of the arts, therefore, is absorbed by the history of culture] (Battisti, 1989, p. 30) Meaning that, as much as artworks are deeply affected by many cultural influences, they are also reversely great reflections of culture as well. This adds

yet another motive not only from the side of how art history could benefit from collaborations with other fields, but how those fields could benefit from art historians. Especially if we were the field to show that flexibility, in many ways this puts us very far ahead of the curve of research by incorporating fields and revealing expansion of knowledge. This is a beautiful opportunity for our field to expand greatly, that with digital tools we can start to see the horizons of this possibility like in the work of Barroncini and Impett. We need, however to acknowledge first that the field of art history really needs to become more flexible, detailed, nuanced and expansive in order to both aid the study of art history and to create the proper digital tools that could aid the study, research and visualization of art historical research progress, like we saw in the ICON project. This is important we know because forcing categorization approaches in the archive, in the art historical institution heavily limits our knowledge capacities for these artworks as researchers and does both a disservice to the field by not allowing the expansion of research or knowledge and it does a disservice to the artwork by not allowing a full understanding of its meaning and cultural significance.

Umberto Eco, while truly being known for his work as an author of his time, was also heavily invested in the artistic theory of his time and Nagel seems to have an interesting relationship with this where at once he does not fully agree with Eco's feelings of twentieth century as, "living through a new Middle Ages." (Nagel, 2012, p. 9) On the other hand Nagel still admits to the importance of Eco's work on the subject, because like Nagel, it is important in pointing out the parallels that existed. (Nagel, 2012, p. 13)

Eco was preoccupied with the danger and effect of romanticizing the Middle Ages, another difficulty surrounding the attempt to study an era that has been put into the exterior box in which it has been held for so long. (Eco, 1995) The result of the Middle Ages being placed in a special category that is semi-estranged from "modern sensibility" it is often overlooked the reality that, "il Medioevo rappresenta il crogiolo dell'Europa e della civiltà moderna." [the Middle Ages represent the crucible of Europe and modern civilization.] (Eco, 1995, p. 1) This is to in essence make the point that Nagel also makes which, it is wrong to believe, teach, or continue any ideas that somehow the Middle Ages remain utterly alien to modern schools of thought and do not have an important influence on them. (Nagel, 2012) The reality is that while the Middle Ages even can be channeled in any way is also because of its vicinity to our current models of society, even in very concrete ways such as, "le banche e la cambiale, l'organizzazione del latifondo, la struttura dell'amministrazione e della politica comunale, le lotte di classe e il pauperismo, la diatriba tra Stato e Chiesa, l'università, il terrorismo mistico, il processo indiziario, l'ospedale e il vescovado, persino l'organizzazione turistica…" [banks and bills of exchange, the organization of the large estate, the structure of the municipal administration and politics, the struggles of class and pauperism, the dispute between Church and State, the university, mystical terrorism, the trial by circumstantial evidence, the hospital and the bishopric, even the tourist

organization…] (Eco, 1995, p.1) just to name a few. Thus ironically it is in fact a period that is much more relatable to present realities rather than present fantasies than it is given credit.

Ironically enough, Eco goes on from this point of societal structure based on the Middle Ages to say that, we actually need a distance from Antiquity in order to give it the special place in artistic imagination it has been relegated to. (Eco, 1995, p. 1) This is in contrast with the Middle Ages which in Europe is "patched together" in restoration and re-inhabited. (Eco, 1995, p. 1) In the case of the United States it is simply re-created from scratch to be inhabited. In this sense the Middle Ages is in fact not pedestalized the same way as Antiquity in that it participates in our every day society. However, Eco points out the irony that our tradition of philosophical interpretation of Ancient Greek and Roman texts came in fact from the Middle Ages, not from Antiquity or the Renaissance, meaning that our current relationship with Antiquity also partially came from the Middle Ages. (Eco, 1995) This is all, again to point at the very real and more accurate niche in which the Medieval still does participate in our Contemporary lives.

Now all this past is to demonstrate the Medieval reality that surrounds our Modern thought and how it is in fact very intimately entwined with our Modern society, ways of thinking and even symbologies, more so than anyone would care to recognize. The second point though Eco departs from this is that, if this is the reality what then is the dream? (Eco, 1995) What was the fantasy the Pre-Raphaelites were after? At this rate regardless of the area of the world, with the proliferation of online gaming and television imagination, grand familiarity with Medieval-flavored dreaming is more a part of our daily lives than we likely care to admit. As a result we have various ways of referring to, thinking about or "dreaming of" the Middle Ages since in fact the time of cultural removal from that period as Eco describes this "dreaming" is so apart from reality it has many versions and he goes on to name nine "typologies". (Eco, 1995, p.1) Thus while we do encounter the Medieval in a sense and therefore its continuity exists, it is not strictly the exact Middle Ages in any way shape or form. We cannot help but in a certain way "create" the Medieval. The two things go hand in hand though, if the Medieval were not there, there would not be any Middle Ages to recreate.

Eco finishes this section explaining that depending on what we take of our Medieval, depends on who we are and what we need from it, usually in profession, but also as a culture what we want to "dream" of this era. (Eco, 1995) As a result we see why it might be difficult to take the Middle Ages seriously, even though it is so crucial to our current societies and identities, this is not the Middle Ages we are presented with at the forefront, we are more used to the "dream" than the reality. Now, in art the problem is the heavy emblematic nature of Medieval art that in many ways took on a very "dreamlike" quality in comparison to its Humanistic, Baroque, or even Expressionistic cousins. This plays a bit into the devaluation and alienation of the era, already codified into this place since the beginning of art history. Eco's point rings so clearly

therefore in Nagel's point of the institutional separation within the artistic field, so clearly entering Modern art in one box and Medieval art in another when their relationships are missed and as a result an incomplete or incorrect history is told on both ends. (Eco, 1995; Nagel, 2012) As long as the Middle Ages can inhabit a dreamlike "strangeness", we really have no reason as scholars to incorporate it into the great web of art historical meaning, and again, the whole field of art historical knowledge suffers as a result.

Eco continues this piece with advice since he was also known as a philosopher of this type, who not only considered the material but also the study of that material. (Eco, 1995) Now, as already established while Nagel disagrees with Eco on the idea of a "New Middle Ages", (Nagel, 2012, p. 9) I find Eco's point to really be the fascination of more Modern societies to keep up these various "dreams" since as Eco points out, since these fantasies of various typologies that label themselves "'a' Middles Ages" have proliferated into Modern Society we have to be careful when approaching these due to their often mostly historically inaccurate portrayals of the past. (Eco, 1995, p. 3) Thus since the Middle Ages, depending on the use can really be anything we are left asking, "quale Medioevo? Da quando a quando, e dove, e secondo quale lettura del "pensiero'" [Which Middle Ages? From when, and where, and according to which interpretation of "thought"] (Eco, 1995, p. 5) Again this is really the trap, due to the unique position of the Middle Ages, being both overly familiar to Modern Societies but also put at a different distanced place than Antiquity, when dealing with the subject of the Middle Ages there is the added work of separating fact from fiction and trying to in a respectable manner describe and synthesize Medieval schools of thought, careful to try and free one's work from the stigma of fantasy writing. Again this is where the "which Middle Ages" becomes quite difficult to constantly delineate and try and retain relevance in the field of study, when not only are there the many "dreams" of the Middle Ages but there are also the omitted understandings of Medieval approaches to images, rituals, and even styles that constantly have to be corrected. All this takes extra time, effort, professionals and weighs down the study, making it seem too much, again the more realistic collocations and relationship-oriented approach that Nagel and others suggest to the study of art history would streamline the fiction from reality a bit in order to describe actual connections with further eras of artistic practice, even today. (Nagel, 2012)

The most art history revamping oriented statements Eco makes however regards the work of historians at large and in fact one of the important threads to creating a relationship-oriented history is to be factual at all costs. (Eco, 1995) The result of this special place the Medieval has within historical discourse and within the imagination of modern societies also comes with a judgement. As has already been demonstrated, any judgement has the ability to place the subject within a specific discourse. Antiquity is judged as virtuous but only if kept within even its "dream" which is also nestled within later interpretations of Antiquity. Vasari, who is accredited as one of the grandfathers of art history and art criticism at once, wrote a treatise among many

others on both the history and the "best" forms of art together, but that means judgement has entered the historic discourse which has placed eras in their designated hierarchies. This, contrary to Focillon and Nagel's points, instead of revealing relationships is horribly divisive and can even be erasing facts and aspects judged as "lower" in the hierarchy of importance or relevance. (Emerling, 2022; Nagel, 2012) Eco finishes this particular work reminding historians that, " l'importante è CAPIRE cosa è successo, e perché è successo. Dire che era giusto, o sbagliato, fare così piuttosto che cosà, è un esercizio sterile." [the important thing is to UNDERSTAND what happened, and why it happened. Saying it was right or wrong, doing this rather than that, is a fruitless exercise.] (Eco, 1995, p. 4) This is the point that must be re-read and understood and wherein the culmination of what Eco says becomes so critical to our contemporary understanding of art historical information. (Eco, 1995)

Not only is the Middle Ages more within the base of our society than accredited, it is kept at a specific and special distance wherein it can inhabit instead of a factual place, a fantastical one wherein any later reference of the period beyond its moment has to be evaluated for a potential "dreamlike" quality that remains apart from reality, but all of these "dreams" are due less to reality than they are to the needs of the present society for the past to inhabit. This goes against the work of the contemporary historian whose job, our job, is based in facts and a critical, scientific understanding of the past and how it affects the present. In art history this is no different and the true historic past would reveal relationships if allowed to be connective and beyond judgement-based hierarchies that erase and distort historical realities that are still present. The judgement of art is the job of the art critic, not the historian, when we let criticism cloud our judgement as historians it forces us into delineating categories that miss the interconnection of art that Nagel shows us in his theories. (Nagel, 2012) This is why Eco's are among the theories that brought forth a new era of art historical understanding. (Eco, 1995) This is also why we must re-read him now, as I will demonstrate the dangers of sticking to judgmental hierarchies developed in these "dreams" of the past and how we as historians could build real bridges that would be more entirely descriptive of the field rather than performing exclusivity that keeps us in the dark.

We can see then from a bit of all these theorists in their various fields how they contribute to the work of Nagel and his point, again it is not to make history "longer" but to make it "different" by employing a different approach that goes beyond the era or label-based approach that is overly separated and limiting. (Nagel, 2012) It further demonstrates the fact that Nagel's theory is not the first, in fact his theory directly contributes to a line of theory that happened during the time that also Drucker refers to as a time that causes a crisis in the study of art history where the identity and the future of the field were potentially going to change. (Drucker, 2013; Nagel, 2012) Nagel refers to an "unlikely" relationship like Focillon, in fact a type of bridge that is contrary to the "battling of generations" from Battisti. (Battisti, 1989; Emerling, 2022; Nagel,

2012) It is asking for a more nuanced understanding that moves beyond taking the older ideas of what to strive for between very codified ideas of "classicism" and "realism" from Venturi, Nagel draws a critical eye that discerns something else. (Nagel, 2012; Venturi 1972) The idea is to open up the horizons through a very detailed understanding that moves beyond older structures that "limit" us and contain our knowledge a little too neatly, to a "problematic" state of understanding the art historical understanding. The understanding further that, even within these stylistic strains, they really are "tastes," they are Eco's "dreams," and there really is a point that our understanding, the ramification after the historical moment, is no longer the pure moment. We also though understand from re-reading these theories firstly that Nagel's point is about a century old and therefore moves beyond the crisis of the Contemporary era, but also this point of inclusive, label breaking and relationship creating an art history that has been discussed from authors, critics, and art historians reveals just how big the wave Drucker was referring to. (Drucker, 2013; Eco, 1995; Nagel, 2012) Nagel's description of a different theory is not the first time it is coming across that we should have a different approach to art history than the "traditional" one, it is simply another way it is coming across just like this thesis. (Nagel, 2012) I am adding my voice to the fray, I am adding another perspective, I am connecting the dots into the digital. It is because within the digital space we have capacity to be more creative and this is showing us the way, by building more nuanced networked systems like ICON, by developing the tools to further image understanding and recognition, we could uncover just how interwoven so many grand cultural phenomena are and it would give a space in the digital archive for our case study that is reflective of the reality of said artwork.

4.2 The Theory of Art History Against Classification

Having seen the theory behind Nagel, we can realize the theory behind this thesis too, but here is the theory behind my thinking as well. (Nagel, 2012) We have seen there exist inaccuracies within the digital archive, there exist differences between the reality of art historic research and the presentation and therefore limitations of said research, the problem has been laid out. The theory behind Nagel's solution of a different approach to history is also laid out, this is a theory that moves beyond the labels and systems put in the archive, primarily a system itself based on memory, used as a tool to understand our own cultural objects in every way, from the school trip to the museum, to the lecture in the university classroom. (Nagel, 2012) The point is, as we saw, this old method of organizing our knowledge is not reflective of truly having knowledge of the things themselves, so what is the solution? I propose an idea, a solution very inspired by iconology and Warburgian perspectives that offer us, like we saw with Nagel, a different history possibility. (Nagel, 2012) This is the theory behind my idea of what moving forward could look like in a digital art history space.

We know Aby Warburg's *Mnemosyne Atlas* was a grand series of panels, and his life's work starting in 1927 until the end of his life. According to Warburg himself, the reason for this project, it was done under the belief that, "weil die kunstwerkliche Gestalt, das Eine auswählend, umrissklar herausstellt, und der augenmässig vom Beschauer erforderten, kultlich erheischten Hingabe an das geschaffene Idolon schaffen jene Verlegenheiten des geistigen Menschen, die das eigentliche Objekt ciner Kulturwissenschatt bilden mussten, die sich illustrierto psychologische Geschichte des Zwischenraums zwischen Antrieb und Handlung zum Gegenstand erwähle hätte." [because the form of the artwork selects a single configuration, emphasizing this with a clear outline) and abandon to the idol created (as required by the eye of the beholder and demanded by religion), and it is these quandaries that would necessarily constitute the actual object of a science of culture that had selected as its subject an illustrated psychological history of the interspace between urge and action.] (Warburg, 2020, p. 20) The point is while the static form may seem to lie in the artwork freeing the form from said static and allowing it into the human mind, we arrive at the permeation and flexibility of the form as it has existed in the mind of cultures. Thus the "interspace between org and action" is described as the birth of the image in the mind "the urge" and then the static recreation of said image on an artwork "the action". Primarily, Warburg was looking to reveal the symbols within their much broader uses as cultural phenomena like Panofsky but in reverse. Instead of using culture to describe the motifs, Warburg uses the motifs to describe the cultural tendency. This is due exactly to this ability to "free" the form from the static of only one image to consider instead the psychological tendency to have the "urge" to recreate it in the first place, this is something cultural and therefore concerns the patterns and mental images of entire societies and their pasts regardless of medium or era.

As a result, within the field itself of history, as has already been described, we are starting to see this "stop" at the iconographic interpretation, "or the close description and the identification of the textual sources of signs within artworks—which scholars from other disciplines most frequently associate with art history, and which is most problematic for them when approaching art and artists from their own methodological perspectives." (Becker, 2013, p. 4) This outrightly states the problem in art history of resting at the "middle state" of interpretation, this way art historical methodologies can remain within the "traditional" framework and never move beyond because everything remains at the level of classification and does not move beyond into the Warburgian network-based approach. Because of this, "This issue has proven particularly thorny for art historians reliant on a traditional 'dual comparison' of images that seeks to demonstrate stylistic continuities and neatly slots artworks into a chronology." (Becker, 2013, p. 2) Vasari was one of the first to create an art history of this type by delineating through a "genius of antiquity." (Vasari, 2008, p. 5) and then a successive "rebirth and the state of perfection" (Vasari, 2008, p. 6) which is found just at the end of the High Renaissance. As we know, this frames precisely our problem in that it did two things. One, it established very clear lines of era that are not really possible to easily "cross" or move beyond

which is the Antiquity, Renaissance, and the Middle portion between these two. Second, it established a very clear line of judgement mixed into the eras of history through the ideas of ingenuity and then an idea of "perfection" all of which is pointed towards classicism. All these categories, while attempting to be "helpful" have led to being incredibly limiting, and we have seen the result. It would permeate and be codified over the centuries by various theorists like Charles Le Brun who saw in the High Renaissance the, "Justiness, Nobleness, and Gracefulness of their Expressions;" (Le Brun, 1701, p. 3) These are from treatises that shaped the artistic academy in the eighteenth century and further codified these ideas of rigidity in period and taste for the arts. This also explains Nagel's point of the art historical discourse surrounding the Modern as the era that "broke away" but it was exactly this discourse that it broke away from. (Nagel, 2012) As we see from Warburg, so did the discourse of art history. (Warburg, 2020)

If we were instead to take our case study away from the old academy vision: the "relevance of periodicity", and the prioritizing of "self-contained masterpieces of Western Civilization", in art historic research. (Becker, 2013, p. 3) We would instead describe the gesture of the many eyes, how it is interesting throughout ages while the symbol appears in Ancient Egyptian culture, than Panoptes in Ancient Greece, we bring in the peacock symbol from India and the movements of the many eyes surpasses mediums, empires and cultures to reveal always a very human sense that, "in most major religions man, having realized the limitations of his own sight, projected his wish for periscopic vision" (Diamandopouiou-Drummond et al, 1993, p. 425) Further that, "The visual hyper-efficiency implied by these extra eyes, symbolized ultimate power and allowed man to feel secure in the belief that a multiple-eyed god would be invincible," (Diamandopouiou-Drummond et al, 1993, p. 425) It is therefore not surprising that often multi-ocular characters take on protective roles, even in the ideas of Panoptic vision and surveillance can be entered from these ideas. Now, of course the changes in "who is protecting from what?" does change the feelings around the mechanics, it does not however change the base point, that of the idea of "all-seeing" being used under the idea of protection. This tendency within our case study, that even offers it the ability to connect to single-eyed representations that also deal in similar themes, "in the original German, the term 'Ausdruckswerte' connotes not expressive 'significance' or 'meaning' per se, but, rather, expressive 'value." (Becker, 2013, p. 4) This is therefore the main value of the symbol, or its gesture, which remains true in the eyes of cultures and human imagination regardless of the artwork within which we are finding it, is that or invincibility through multi-ocular vision that makes it "superhuman" that is doing a job beyond human capability be that through either deitic or mechanic powers. We use this to further predict that this symbol will appear in the future and that when it does, it takes part in this great web of artworks using this gesture of multi-ocular creatures and objects that signify protection of human beings.

Taking on then, Erwin Panofsky's most famous work in "Iconography and Iconology: An Introduction to the Study of Renaissance Art",we would focus on our case study directly from the point of view of the theory of recognition and art historic study from the most basic and microcosm level to the largest levels of cultural imagination. We would start by recognizing the eyes and what eyes do, they "see", "witness", "compute", "gather information" for the mind to interpret into knowledge. We go a step further, this has already been done in this thesis, by referring to the literature that says these multi-ocular creatures have a meaning in their various incarnations based upon the literature driving the artworks. This is their iconography. To continue into the third layer of meaning, iconology, which may be defined as a unifying principle which underlies and explains both the visible event and its intelligible significance, and which determines even the form in which the visible event takes shape. This intrinsic meaning or content is, normally, as much above the sphere of conscious volition as the expressional meaning is beneath this sphere. (Panofsky, 1970, p. 28) Another way in which this is described concerns the suffix "logos" meaning "thought" and "reason" or "logic" which combined with the study of motifs creates "iconology". (Panofsky, 1970, p. 32) Therefore we would look directly at the motif in question in order to place the artwork perfectly within its discourse in order to "arises from synthesis rather than analysis And as the correct identification of motifs is the prerequisite of their correct iconographical analysis, so is the correct analysis of images, stories and allegories the prerequisite of their correct iconological interpretation." (Panofsky, 1970, p. 32) Oftentimes images exist within cultures that do not strictly follow a literate tradition but at times follow a culture's attitude around such a tradition, just like we saw here.

We know the symbol of the multi-ocular Panoptes is the symbol of many eyes. The eye is the organ that is strongest to human beings. The ability to have many means said to be transferable from the senses to the mind is much greater. Thus an all knowingness is perceived by the human viewer we cannot help ourselves. Many human cultures as a result show some kind of divine vision that is protective since the eye can perceive and apprehend beyond the human knowledge capability. These creatures, even the surveillance camera are never human but are put upon humans in both good and bad ways seen as protection. Now for Panoptes there was a time when his knowing was shown as multiple heads than eyes. Over time this has changed to the simpler symbol of the eyes and merged with other creatures. Since the eye sees therefore it believes and knows it has become this symbol. Multi-ocularity describes a surrounding sight, the type used for a fortress. This is Panofsky's point, that the simple classification and identification is not enough to move beyond analysis to interpretation of symbols and their meanings, which are also often flexible over time. This is to situate the symbol properly within the complex network of its own meaning, rather inversely from Warburg but along similar lines of the interconnectivity of the artwork that far surpasses the "traditional" perspective.

On the theories of Mitchel that combine the fields that are, “outside the boundaries of art history, constituting its horizon or frontier, while at the same time providing a necessary and sometimes dangerous supplement to its work.” (Mitchel, 2015, p. 6) This comes from a combination of iconology, visual culture, and media studies. (Mitchel, 2015, p. 6) All these studies as described for the reason of the hierarchy are excluded from what is considered the canon of “art historical study” and therefore when they are explored are not really considered for what they are, which are components of the prism of the art historical understanding. That has been the whole point. We do not fully understand artwork without seeing the whole it is part of even though that whole is much larger than only one researcher is capable of doing on their own. Mitchel remains at the crossroads of, “Iconology opens the border to the image, the fundamental unit of affect and meaning in art history.” While from the places again of psychology and sociology, “Visual culture opens the border to the specific sensory channel through which the “visual arts” necessarily operate.” (Mitchel, 2015, p. 6-7) By incorporating these two things, we have several strains of surrounding fields of observation that go very far beyond traditional ideas of art history and remain very inclusive. Mitchel similar to Nagel, Drucker, it stems primarily from a concern, “on art history’s relation to adjacent disciplines that have influenced, supplemented, and to some extent transformed its identity.” (Mitchel, 2015, p. 6)(Drucker, 2013; Nagel, 2012) This comes in the context of other art historians who have also similarly demonstrated that having a cross-understanding beyond era or perfect labels and boxes is heavily problematic to having a full ability to explain. Mitchel goes on for a grande part to then describe the effects of Panofsky and McLuhan on the broadening of this field. (Mitchel, 2015, p. 8-10)

Coming from the Mitchel perspective wherein the art historical newer movements, “it has taken up such matters as “metapictures” or reflexive, self-critical forms of imagery; the relations of images to language; the status of mental imagery, fantasy, and memory; the theological and political status of images in the phenomena of iconoclasm and iconophobia.” (Mitchel, 2015, p. 8) It refers to our relation to the picture. In our case study, we have already considered this, the human inter-relation either from a memory, or from a relational perspective of vision, this refers to every place this motif is found, is thought of. This refers to the relations of the eye to knowledge, sight, based on the human experience of using the eye to “know”. Combining this with, “a general field of media studies that would go beyond representation to include the entire range of technical ‘extensions of man.’” (Mitchel, 2015, p. 10) This brings us to extend as we have done to also describe the extension of the “eye” as a machine. This is where we come to Oliver Laric and the extension of surveillance to include in this image, wherein the camera as an action that technically carries out the similar movements as the Mystic Pad to memory and the eye to the mind (to “perceive” and to “capture”) the information. The motif must not only go beyond era and the movements of what is considered “art” or “appropriate critically for art” into media, into what we are exposed to every day regardless of its ability to become part of our current artistic expectations. It is similar to the work of both Warburg and Panofsky, but opening

the field even further, which is something that, as art historians, we have to consider. As new media art, such as Grasso's work, is increasingly practiced and intermixed with various forms of media, be they considered "art" or not, we have to open the field and consider how technology has been also replicating the motifs we are studying in more ways than we are currently including in the art historical canon. This is how, "Art history under the pressure of visual culture now includes a wide variety of research agendas, ranging from Lacan's scopic drive to the phenomenon of racial profiling and the power of the gaze, to the dialectics of spectacle (Guy Debord) and surveillance (Michel Foucault)." (Mitchel, 2015, p. 10) Thus, art history as a subject, is, practically by nature within the state of new media art among other artforms, an interdisciplinary subject that requires expansion and collaboration beyond the confines of the previously-codified subject area. This is highly beneficial though, since it shows flexibility, creativity, greater understanding, and offers a more detailed possibility for the field at large.

As we have seen through about a century's progression of art historic theory with examples from our case study, this is the theory that provides us the ability, or even the backbone if you will, to the expansion or a new approach in the process of doing art history. It is using these tools in the deepest sense that I have seen and I propose could help us approach the future of digital art history. Part of this is spurred because this is some of the theory that was making art historians re-evaluate the older academic models of art historical practice, but as we know, it was never fully developed or pursued since we would not have Drucker claiming such a point if the field had not re-settled to a certain degree. (Drucker, 2013) Now here we are, we have arrived at a critical moment in art making where, yet again artworks are proving themselves to be a composite of eras, of styles, of media that the art world is having to consider. What we must further consider is how much we want our current era to exist within the canon and what we as researchers are willing to do to make that possible. The good news is that inclusion means everything. By including this era, everything comes and thus the idea of a "fuller memory". Instead of the Mystic Pad type of a model where some is conserved and some is lost we could change that ratio to be less lost and more conserved because, by describing interconnectivity, we can in much greater detail describe what it is we have and how it is we refer to it in the current human imagination. It is not the job of everybody to be experts in everything, but it is the job of experts to work together and to create these networks not only in life but in our fields. Critical understanding means challenging what we know, challenging what was put ahead of us and recognizing when a system no longer serves the purpose it claims it should. Neither the museum nor the university is wrong for existing. It is simply that, as we have seen, over-reliance on specific models of thinking that do not show networked knowledge, overuse of digitized art history rather than digital art history, and only utilizing old, label oriented systems, results in not having the capacity to tell the entire story of history or of the history of art. All the aforementioned practices keep things in boxes rather than building bridges that do, in the wild, exist.

4.3 Why we use the Middle Ages for Digital Art?

So considering the work of Nagel, Eco, and several others, there seems to be further a collocation between the work of the Middle Ages at times and that of more nuanced, network building art history, the kind I am championing. Like the interests as well in psychology this is a symptom simply of the work and is not fully an indicative rule necessarily. I would posit however, that due to the crisis in the studies of the Middle Ages as referenced in the beginning of this thesis, and the motive for asking why we even need to be inclusive, ironically the answer to the necessary shifts in the study of art history lies also in the same studies that are starting to be systematically left out or defunded. This is likely true probably because of the unique position of the Medievalist being generally left out of the canon. What has happened though, is the creativity born out of said necessity has caused many a revisit to question truly what we know as art historians, it has brought therefore with it flexibility that is not so easily found in the studies of the Renaissance or Enlightenment eras wherein art is set within a heavily codified rule system that dictates how art was made and considered all at once. To apply these rules in a broad brush-stroke fashion is not feasible for many eras, and as we have seen it is as much an issue in the study of Medieval art as it is in the Modern and Post-digital spheres. This is not just about the Middle Ages, but the Middle Ages plays an important role.

Theorists like Panofsky use the Middle Ages to remind us that we must take into account the cultural context at any era in order to create a more accurate picture in the field of art historical study. (Panofsky, 1970) While this is a founding principle of the correct synthesizing of iconology, it also reveals the preferences and tendencies within art historical study that put us into the hierarchical system, that, for this purpose, and even for its own, does not fully explain much beyond societal preferences. Here it is clearly spelled out the problem, “In thinking as they did the early writers were both right and wrong. They were wrong in so far as there had not been a complete break of tradition during the Middle Ages. Classical conceptions, literary, philosophical, scientific and artistic, had survived throughout the centuries, particularly after they had been deliberately revived under Charlemagne and his followers.” (Panofsky , 1970, p. 40-41) Thus it is more accurate to describe a “shift” in Medieval thinking that still included ideas and images of Antiquity but they shifted to better fit the cultural ideals of the era and the newer religion that was Christianity. (Panofsky, 1970) We saw this in our case study as well. This being said, another side of this is that we know the birth of humanism as a point of view, based on Paleography which is also highly indebted to the Carolingian Renaissance during the “Middle Ages”. As mentioned though, there were as a result of many previous writings little to no recognition of this and therefore an inaccurate classification has and continues to occur in the study and presentation of art history. This is also to say translation of motifs from Antiquity only occurred in the naturalistic way specifically during the Renaissance and not during the Middle Ages “not only for want of a representational tradition, but even in spite of a representational

tradition." (Panofsky, 1970, p. 50) This describes that while art historical tradition had established this very harsh separation with the claim the Ancient knowledge was "lost", we know based on iconology this is not so simple and not true of the Middle Ages. It is also reversely that because these principles are so easily found and the erroneous nature of previous divides is so clearly seen in the Middle Ages that makes the need for these corrections created through iconology so relevant. We must understand the context because without it, we could make a lot of mistakes, but this is always true, not just in the Middle Ages.

When Panofsky explains the correct iconology of a continued naturalism, we know the birth of humanism as a point of view, based on Paleography which is also highly indebted to the Carolingian Renaissance during the "Middle Ages" and in turn art historical studies after Panofsky had to take this example as proof of a network approach. As mentioned there were as a result of translation of the symbol into the Middle Ages that was changed according to the ideals of the culture at the time, but the point that the symbol itself remained, made it possible for the cultural idea to resurface and transition again into the Middle Ages. After having an in-depth analysis of various symbols throughout their morphology during the Middle Ages, Panofsky finishes by saying, "It could not simply renew the art of the Greeks and Romans. They had to strive for a new form of expression, stylistically and iconographically different from the classical, as well as from the mediaeval, yet related and indebted to both." (Panofsky, 1970, p. 54) Thus we understand the Renaissance is as much indebted to the Middle Ages as it is to Antiquity, which by and large has to move beyond what Vasari and others had defined on the topic of eras. Again, we are even dealing with not only the Middle Ages as an overly defined label, but that creating said boundaries does the work therefore of making them mutually exclusive, which is neither true as well since it ignores the movements of the Renaissance actually indebted to the Middle Ages. All this contributes to the work of Panofsky the fallout of which in turn is described by Mitchel as a type of "critical iconology" that inspires most forms of more recent art historical analysis and research techniques (Mitchel, 2015, p. 8) This is also outlined by Mitchel further as the studies that help new media and many forms of Contemporary art. (Mitchel, 2015, p. 9) Therefore the very studies Panofsky uses to understand the nuanced truth of the Renaissance and the effect of the separation, are also when critically applied, the same studies that are used to understand art that is born out of intersectional practices.

Another interesting observation to consider is how the forays into considering the iconologic and Warburgian vision, both of which consider the impact of the form onto society and vice versa, truly bring up Platonic philosophy, which was also being used during the Byzantine period. For us much of the thing that creates iconology is the distinction between "physical objects" and their underlying "forms" that is the patterns that humans continually seem to do and the way in which we refer to the motifs around us. (Plato, online) Finding the undercurrents or the overarching pattern seems to refer to the "world of abstract concepts and

ideas." (Plato, online) These tend to be, "unchanging, and eternal," because of the human consistent or rather persistent tendencies to replicate into the physical world. It is these unifying principles and ideas however that create our bridges for our networks and the great underlying movements that defined entire eras of art making. Again we find these same principles being described within Pseudo-Dyonisius as well where, "According to the authors of the Areopagitites, the entire world of networks in its diversity is a reflection of the invisible world, the world of ideas." (Зарoв, 2003, p. 158) While we knew the fathers who practiced under Pseudo-Dyonisius combined Christian teachings with Ancient Greek philosophy, it is beautifully symmetrical that they were both repeating the motifs and purposefully so under the same philosophy we use then again in the twentieth century. Again this is where Nagel's point becomes ever more reinforced, but it also philosophically outlines some of the framework as to why Medieval studies aid in the interpretation of Contemporary new media art and why we should care. (Nagel, 2012)

As a result many Medievalists are also mentioned by Nagel as being ahead of this curve and this should not surprise us so much. (Nagel, 2012) However, one name that seems important that has come up at least three times is that of Michael Camille. He was a professor at the University of Chicago in the 1980's and my Medievalist professor's professor. (Mitchel, 2015, p. 2) He is known for his work in the Laocoön group, a group composed of many professors from various humanities disciplines, and Camille is really known for combining disciplines and eras in order to truly study an artwork and was not only a Medievalist as a result. (Mitchel, 2015, p. 5) He is also generally known for utilizing the theories of Foucault wherein, "grounding this topic in the materiality of texts and graphic arts, and in the technological revolutions that change the ratios of what Foucault called the 'seeable and the sayable.'" (Mitchel, 2015, p. 5) The result of all these things is that Camille is also generally known because he, "dazzled us all with his audacious efforts to revolutionize the study of Medieval art, a field that many of us in literature and the visual arts had regarded for some time as hopelessly orthodox." (Manovich, 2017, p. 261) But again, as we know the reason why this had to happen, why Medievalist art historians specifically were saddled with the job of breaking the field out of the constraints originally placed upon it by past academic art historic methods was because of the great amounts of inaccuracies that are very clear to see. As we also see however, the newer methods created as a result tend towards the same technology being used at that time, the very same that is making art. Suddenly, Medievalists also become Modern art historians, and that is why this Medievalist (me) can also become a Contemporary art historian since we are faced with similar difficulties of era, placement, and existing outside the considered canon. The thing is, these newer methods help everybody, including those who study within the accepted hierarchy of what is considered art.

Besides being known for these things, again the reason behind Camille "grounding this topic in the materiality of texts and graphic arts, and in the technological revolutions"

(Manovich, 2017, p. 261) is because also of his specificity which was marginalia. This is probably one of the most misunderstood and considered “bizarre” parts of the canon of Medieval art since it lies very far beyond the limitations of what is considered art not only because of its position as the framework of literature, but also because it lies inside of the Medieval technology of books. Therefore it lies at this interesting crossroads that neither belongs to literature nor to the conventional idea of what is art. Further, the imagery is very free, but also very audaciously reflective of many factors, the artist, the patron, and the book itself (sometimes). Few things more bizarrely epitomise the perspective and feelings of the Middle Ages as marginalia does. He therefore admits that in this case it, “is an attempt to make my method as monstrous (which means deviating from the natural order) as its subject.” (Camille, 1992, p. 9) which means the necessary cross referencing and considering of a variety of disciplines in order to arrive at an observation that goes beyond the traditional art historical boundaries. This is also because like I said marginalia takes up a space unusual to the academic expectations of what is art. It literally exists “in the margins” and so, yet again we are confronted with the way in which this artwork is taking up space in the Medieval world wherein, “their function as part of the whole page, text, object or space in which they are anchored.” (Camille, 1992, p. 9) This tendency very much reclaimed Nagel’s point and my own about how we react as well to the spaces that art inhabits. (Nagel, 2012) As our perspective is so colored by the previously codified world of art and cultural heritage, we cannot dismiss how this relates in both the Medieval and digital spheres of art.

We know therefore this is why the studies of the Middle Ages act as studies also of the contemporary and this is how all this connects. There is a direct correlation between the end of the practice of marginalia and the beginning of other artistic expressions of space in the Renaissance, revealing further a shift in presentation and thinking. (Camille, 1992, p. 10) Camille further explains however that this shift (as we know) was reflective of more than only illusion of space but also of the spaces in which art was therefore allowed to inhabit , “considering current critical debates over centre and periphery, 'high' versus 'low' culture and the position of the 'other' or minority discourse in elitist disciplines such as art history.” (Camille, 1992, p. 10) Here there is brought up ever so explicitly the exclusivity of the field of art history and the discourses Drucker was referring to. (Drucker, 2013) Again we see though Nagel’s point being enacted rather directly wherein the Medievalist is able to be the one to point this out because of the unique position in the Middle Ages, being forced to reconsider the canon and what that Renaissance shift in perspective may have left out about the Middle Ages as well. (Nagel, 2012) This is why the Middle Ages, and this is simply a way this thesis seeks to back up the discipline and the era. It may not seem to concern us but it should. It should be art historians, it should be digital humanists and it should be digital humanists in the arts because it is these approaches that could bring about the creativity Drucker refers to. (Drucker, 2013) In many ways

this part of the art historical discipline already has contributed to the theory of expansion and interconnective study. This is Nagel's point and mine as well. (Nagel, 2012)

Another Medievalist was Meyer Schapiro, who was of interest to both Camille and Nagel as well because, "Schapiro was responding to what he perceived to be a double misperception that placed modern and Medieval image-making outside the norms of 'art'…" (Camille, 1994, p. 65; Nagel, 2012) In this way, and in many others, Schapiro compliments our entire point as well by outlining the very specific place the Middle Ages inhabits within the context of the art historical canon and how, under those hierarchical "schematic approaches" the Middle Ages is constantly and consistently forced into its exterior state, which is the place Modern art also chooses to inhabit. This again also affirms the points of Nagel by linking this placement of the Middle Ages as outside of the hierarchy with the artworks actually meaning to fit outside that hierarchy in the Modern time, whose predecessors are within Digital art, and again this is how the issue involves Digital humanities. (Nagel, 2012) This means that the direct predecessors of Digital art (as found in Modern art) exist in a similar space academically, that the Middle Ages was placed in after the fact by older art historical traditions that defined the "norms" of what art is. This brings us then again to why the Middle Ages, because this idea of space taking in "unexpected ways" by our current society is so familiar with the codified forms of artistic consumption and interaction with art as were published in the Renaissance and Enlightenment eras. This is why a similar approach that is both found in the study of the Middle Ages and the Modern era, that is more fluid and seen as a network of relationships, is not only applicable to digital art, but greatly aids in the study and classification of this era.

These aforementioned Medievalists, who are just a few in the list, were part of the wave of "newer" approaches that Drucker and Mitchel describe as well. (Drucker, 2013; Mitchel, 2015) When art history was being revamped this "rethinking" became the job of Medievalists precisely because of the problems Camille, Schapiro, and Eco describe where the Middle Ages, specifically, enjoys a unique "outside of the reality, and pedestalization" as opposed to the "formalization, and consideration" that other eras of history get to enjoy. (Camille, 1992 and 1994; Eco, 1995) The codifiying of this point of view was also a response to a change in vision and movements of thinking that had already been happening during the Renaissance and would progress over time. When art seeks again to expand itself beyond the previously aforementioned rigid hierarchy really made for other eras and schools of thought, the Modern artists also part of this "breaking out of the box" movement actually take example from the interest in the Middle Ages since as Schapiro and Nagel both point out it really is the last time art existed outside of the codified framework later established for it. (Camille, 1992; Nagel, 2012) As Nagel does, we must understand how important the contributions for Medievalists who happened to be situated in the time period that was, as mentioned, forced into a unique situation being outside of a fixed timeframe of created eras with ideologies that seem to neatly fit into a period as defined. (Nagel,

2012) Many used the theories of their time from explorations of the Freudian unconscious to Marxist theory, to explorations of Platonic philosophy just like the artists of their time whose art questions the neatness of any kind of framework within the study of art history or artistic practice for that matter. This is why Nagel and Mitchel mention this generation of Medievalists as a wave beyond the previously established "norms" of art historical study, because they made so many see again in their methods of teaching, just like we need to see again now if we are to become inclusive and creative researchers. We must admit to being researchers of our time as well. (Mitchel, 2015; Nagel, 2012)

4.4 The Referential Movement

All of this is to say I have framed and presented the issue and in the case study we saw what happens logistically when intersectional art is put within a hierarchical framework. We can use therefore from the studies of the Middle Ages specifically, "a renewed investigation of Medieval indexical modes and of Medieval theories of vision." (Nagel, 2012, p. 19) in order to expand our view of art history to reveal the networks inside. To tell more of the full complexity of the story which would in turn include many more artworks and movements of art. In a state of connections, nothing is left out and nothing is left behind. Nagel describes this method of thinking that Medievalists often employ through the story of Veronica because so much of Medieval art takes after that story wherein a semi-miraculous but also, "mechanical" imprint leads to the, "resemblance-function of the image is a function of the indexical imprint." (Nagel, 2012, p. 231) We have already seen this in the morphology of the Panoptes symbol into the digital image it is now. Further, the back end versus front end was of the installation truly mimics this point of the "mechanical imprint that is almost miraculously appearing" within the human spaces and therefore benefits perfectly to demonstrate how a networked-based approach would aid in the proper archiving of such works by taking into account their history and various meanings due to the long history they make reference to.

The study of the Middle Ages and the ideas of multiple morphologies within similar core motifs lies in the key of this Medievalist indexical understanding that primarily resurfaced within the twentieth century within the advent of Freudian psychology that brought about interest in the subconscious and the greater unifying principles of human thought tendencies. (Camille, 1996) Within the arch of art history we know we can model, "a continuum whereby even vision, and therefore painting, are understood in indexical terms, thus displacing the battle lines drawn by the modernists (and post- modernists)." (Nagel, 2012, p. 277) Meaning, again as we have seen, the lines that formulate the boundaries of the hierarchical system become increasingly blurry upon closer inspection. This is however another way that Medievalists use as an approach because of the "multiple nature of so much Medieval art." (Nagel, 2012, p. 277) We see the indexical nature not as an added line, but rather an organizing principle through which it is easier to understand the approach of said eras of art in many ways. Because of the complexities and

sometimes composite nature of Medieval art (not unlike digital art in this nature) the key to study often requires an, “indexical or quasi-indexical grounding of images.” (Nagel, 2012, p. 277) In order to approach the Middle Ages the understanding of their morphologies is central in order to keep up with all the motif types simultaneously occurring at any given era of the very large and complex Middle Ages.

Within these recreations though we see in fact lines, or lineages of thought that are better delineated by style than content. This is also the point Battisti makes of La Bella maniera that when considered as it is instead of terms such as the Renaissance which, “l'uso di quei termini, inadeguati su una scala così vasta, saggiandone caso mai la validità in ambiti topografici e cronologici più ristretti” [the use of those terms, inadequate on such a vast scale, testing their validity, if anything, in more restricted topographical and chronological contexts] (Battisti, 1989, p. 39) The idea being that the restrictiveness of aligning stylistic forms very strictly to specific periods is not accurate considering the truly vast scale of art existing at any given period not all of which will adhere to such a strict criteria. Instead we should, “ad individuare eventuali principi unitari non esterni, ma interni” [to identify possible unitary principles that are not external, but internal.] (Battisti, 1989, p. 39) This is because when Battisti describes an “anti-rinascimento” it is to describe how the idea of the Bella Maniera is distinct through its lack of exact era parameters. (Battisti, 1989) It is a style, a movement based on a thought, a perspective rather than through distinct characteristics that are only true of one area at one distinct time. Literature has already created a certain level of distortion wherein certain characteristics are associated with certain periods and so forth. We already know this mutual exclusivity of era and style is incredibly inaccurate to explaining or describing the entirety of art history because it does not allow for the true network of relationships that exists between all artworks when we examine “internally” instead.

This is to say that in order to build the networks found within Medievalist thinking we have to also adopt added methods of approach that are capable of moving beyond the hierarchical system, like the Bella Maniera. If we were instead to consider iconology, and Warburgian theory does, the unifying principles that trace histories of thought and perspectives, while applying an at least semi-indexical understanding, we are given an image of lines that rise and fall in popularity but never truly disappear. Using the example of Humanism for instance, we know as a method of thought it fluctuated a lot over centuries long before the Renaissance. (See Image 20 and 21 below). The difference describes how a motif can continue existing, it further describes how similar approaches can be traced through the rise and fall of theories and perspectives. This gives us precisely that view both Nagel and Battisti are describing that goes far beyond the era by era approach and is therefore inclusive of many things. (Battisti, 1989; Nagel, 2012) This model is very small but also built with a world of knowledge. We could contribute to a grand tree of art historical knowledge that even surpasses geographical boundaries and explains how lineages of styles, even motifs have crossed over the world multiple times revealing thousands of styles and perspectives over the ages. Using the humanist

movement, I have demonstrated here just as Panofsky did when debunking some myths of the Middle Ages a bit of this rise and fall. It reveals in this way the arts as cultural symptoms but further opens up the possibility for the mutual exclusivities revealed inside the archival database to become linked and therein acts as an iconological line of thought associations building the exact bridges discussed in previous chapters. This should be an added point along with the definition of eras as those markers remain important, the point is to free style from era dependency and to be able to map out lineages of expressions of motifs through continuous lines of history rather than expecting mutually exclusive blocks.

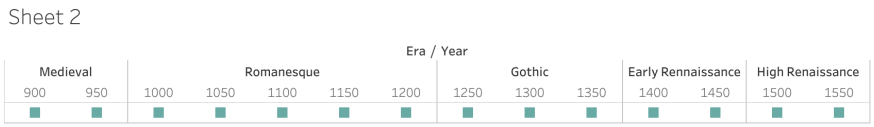


Image 20. A CSV was compiled by hand with a Year column in fifty year increments and an Era (label) column. This was processed in Tableau by putting both categories into the "Columns" area. Together they reveal the era and label system that was referenced in this paper. We see every clear divides as referenced in history which is primarily based on centuries as we can see here.

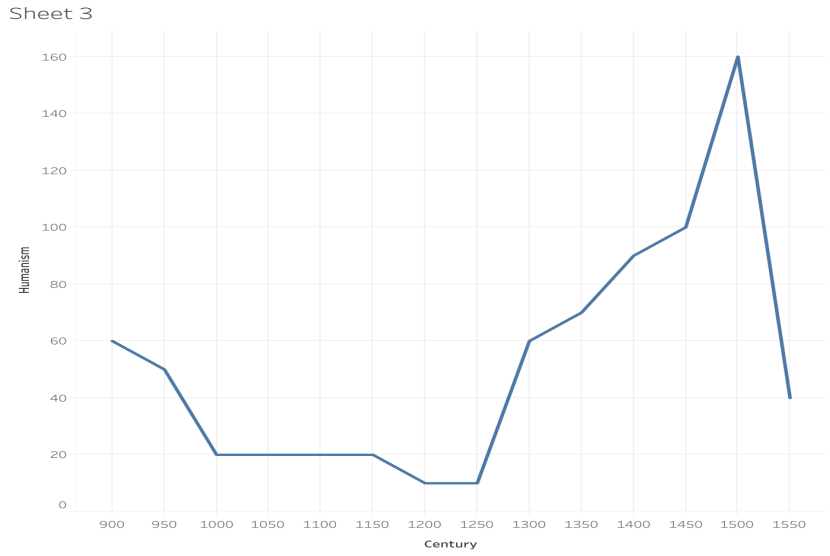


Image 21. A CSV was compiled by hand with a Year column in fifty year increments and an Humanism column with numbers corresponding to popularity of the thought movement ranging from 0-160. This was processed in Tableau and made into a line chart. This is made to demonstrate the difference from the era-based approach that is incredibly divisive just like the database was. Here the line shows continuity of the thought movement over these six centuries while the waves show the vague upticks and valleys of the popularity of said thought movement during this time. What the line does reveal however, is that even in the Romanesque era, its lowest point, it is never fully gone and therefore explains its rising in a later century just at the end of the Gothic era. We can easily see the increase of popularity simply by following the line, this does however change how we understand art history.

Now when entering this new method what remains is that not every movement of thought in art history has been named. We have had the Humanists, the Mannerists, the Impressionists, the Expressionists and so forth but what about other eras. This is further where this thesis is incapable of creating every single name of delineating entire lines of thought. That took Warburg a lifetime and it is still true it would take myself one as well. We can go back to our case study however. We said that iconographically speaking there lies a tie between the digital artwork and the Byzantine angelic representations due to the use of the multi eyes with the same meaning of

knowledge leading to protective qualities that further display a gateway between the living world and that of deities. Humans, or rather any group of human-like characters, be they humans or deities or deity adjacent, it takes much knowledge of the scattered movements of the group in order to provide an impact, thus the many eyes bringing us to a greater knowledge base, one that could, feasibly protect and impact the dynamics of the group with the will to erratically move and change.

Now regarding this particular Byzantine style, it adheres to a Medieval understanding of the relationship with images, or motifs, and their artistic representations. It is precisely this relationship that Warburg refers to wherein the sticky ground of the icon where it can either become blasphemy or holy. The way Nagel describes this relationship, "Iconophiles argued that sacred images were strongly connected to their referents through processes of quasi-mechanical replication. They attempted in various ways to minimize the role of the "author" in sacred images." (Nagel, 2012, p. 228) Now this refers to the story of the transfer of Christ's image and how this affected the thought movements of the Middle Ages, especially concurring the making of religious art because of the space it needed to inhabit within Medieval society and within thought. This has been described in many cases of Medieval art but we can also recognize very easily how it relates to our case study in multiple intimate ways. The idea of mechanisms that deny an author, the feeling of the "miraculous image" wherein the content is spotlighted at times over all else and the contents itself being eerily similar and creating ties to many other parts of our arts and our societies. Specifically I liked the way Nagel described it as a connection with the "referents" meaning the content itself is supposed to be claimed by the artwork.(Nagel, 2012)[5] Again, this is not so different from either some Modern Art forms and specifically many of those contributing to our artwork too that purposefully invokes its mythological background.

Like Panofsky I will take from literature to resolve this issue and propose we bring amongst many of the lines of thought the line called "referentialism". In literature this means that, "During the production of any discourse, one must use language to refer to people, places, objects or ideas under discussion." (Crosthwaite and Ryan, 2020, p. 1) Really speaking in the case of words, "used in the ordinary way, one intends to speak of their referents." (Frege, 1948, p. 211) Basically it is the idea that a word embodies a referring to something and it is the ability of all languages to use said words to describe something in the greatest detail possible. (Crosthwaite and Ryan, 2020, p. 1) The difficulty is, the word is not the thing, it is a linguistic manifestation of the idea of said thing. At its core is similar to Panofsky's idea of levels of meaning which come to us by various mental associations and then are re-applied to the image in question. With words, "If the referent of a sign is an object per by the senses, my conception of it is an internal image, arising from memories of sense impressions which I have had and activities both internal and external, which I have performed." (Frege, 1948, p. 212) This is to say in a

[5] A small pivot but considering the artwork not only as a referent but as an active "agent" as well within the context of seeing and being seen, this anthropological perspective can be found in *Art and Agency: An Anthropological Theory.* (Gell, 1998)

deeper sense that also the relationship between the actual object or being of whom is being invoked and the human made sign that exists either as an image or word meant specifically to invoke the referent (this is important) is filtered through the human memory and personal experience of the referent. According to Panofsky in essence the opposite occurs upon encounter with the sign by the consumer of art and literature, thus those making the art often accidentally embed the perspectives of their culture and then later cultures accidentally read said signs in a different way. Thus we have a relationship that "varies and oscillates" according to our relationship with said sign and referent. (Frege, 1948, p. 212) This describes an important point of art historical understanding and much of the flexibility that needs to be adopted in general in order to move forward matching the creativity of our artistic peers.

Moving then from this definition, it could be easy to say, well then all art could fall under this. We must take from the abstract idea the key points in order to describe a movement, a lineage of perspective based upon its principles. Referentialism as a movement has to do with how the art was made to specifically embody its referent with the referent as the focus rather than any other exterior influence. Art that is considered under this context is only made to stand for its referent and history of meaning that actively refers to the past and the present. The action of referring is central to the artwork as the image has the sole purpose of embodying the referred symbol/character being wherein the role of the author is minimized by explicit replication of the content attempting to be as close to the referent as possible. This is what I would determine is the movement, that is the perspective of making art that is meant to embody its symbol at the cost of either stylistic expectations or authorial ones. By applying a combination of methods, that of the lineage theory of the line of perspective and that of this new name, we can trace a line of this perspective from the Early Byzantine period to another crescendo happening in the digital era (but a small one). The mechanical exactness of the reproduction that sets the art into similar marginal spaces we are used to in the Middle Ages, forces specifically in this case a redirection to the invocations for the motif itself (which is what the artist wanted). This further explains how the network of this artwork can simultaneously reach into Ancient Greece and the history of technological art since it is describing both. This approach that goes beyond era could guide the archive to think of models outside of the hierarchical categorical only system that forces everything to fit when the reality is more of a complex web that could be characterized by the rise and fall but persistent existence of perspectives. This makes more sense in the historical perspective as well since it requires us to simply state that once something is described or discovered it cannot become "unknown". This is the whole premise with which iconoclasm does not truly work, which is something increasingly studied by art historians, the impact of the icon on memory.

Conclusion

While considering how I was going to reveal the importance of Medieval iconology in my field, I stumbled upon Alexander Nagel's work which is where the idea stemmed from. (Nagel, 2012) I have been lucky enough in my education to already be exposed to and become familiar with the *Mnemosyn Atlas* and with Panofsky's work on iconology which deeply influenced my work as well. I was lucky also to have been presented before with the conundrum brought forward by Joanna Drucker and was able to fully consider it this time. Nagel's point though is so large I needed the case study to help demonstrate my point and during that process I found several artists and researchers who came to me with new material. (Drucker, 2013; Nagel, 2012) An example is the Biennale of Ravenna that showed another mosaic with a multi-ocular creature, that made me realize how important medium is to the case study. (see Image 22 below) I had worked with Iconclass before and wanted to again. I had hoped to test several databases and create my own pixplot but these are the limitations of this work. In many ways this thesis encapsulates not only my masters studies but my undergraduate studies to fully reflect also my state of the art, rather where I have arrived as well as a researcher in the field of art history.



Image 22: Jae Hee Kim, *Mountain of Desire,* 2023, glass and marble on wood, 30x50 cm, https://www.jaeheekim.com/mountain-of-desire

The main conclusion is that art historical study under the constraints of its present state, the study is not supportable for the future of the field. This is not only true because of its potential harm to the Middle Ages but also to the Modern and Contemporary eras, or really all art that does not fit the ever-so popular paradigm. This is not to say that it has no merit, this is to say it is not the only method. I offer instead another possibility which is really truly at the heart of this thesis and my conclusion. This is that the network model is a promising direction and by considering the fluidity and flexibility of a model that approaches also through movements of thought, we are therefore able to explain how many lines of thought are interconnected and why

the network exists in the first place. It comes very simply to the conclusion that once a society develops something it is not easily forgotten. Especially if that thing has been expressed in any material form such as in art and literature. Ideas may fall out of popularity but their existence does not simply disappear, once realized and become a discourse this idea can never become "unknown" by humanity again. In this way lines of thought are born and differentiated, and like Mannerism, we enter a non-era specific area but a more flexible one defining instead movements of thought, even counter movements that rise and fall, that even change shape over time but never fully cease to exist. As we are discovering new pieces in the back of vaults all the time, I am sure a method at least similar to this will become important in order to create variation within exhibitions and art historical education being presented through museums as well as in university.

The methodology takes on the four pronged method using the question Drucker poses as a point of crisis and Nagel's "different history" as the model for the answer. (Drucker, 2013; Nagel, 2012) This came from a place of concern for the study of the Middle Ages in art historical canon and historical canon at large, but reading Nagel meant realizing the problem is not only inherent to the Middle Ages but is a continuing issue within Modern and now Contemporary artistic creations. (Nagel, 2012) From this perspective first we take an example, Laurant Grasso's *Panoptes,* and reveal its current relationship with a digital iconography database to reveal the incongruity of the current state of the art. The process of digitally testing this is described and what we see are mutually exclusive networks. Then I wanted to give another type of example from myself, as an art historian I know better than to apply mutual exclusivity to this case and instead revealed how a Contemporary artwork speaks to the Middle Ages using iconographic methods. It also described its relationship with the mechanical side, since as humans we would make both the association with the symbol and the digital expression of said symbol. This is followed then with an explanation of the origins of the archive and how these practices when moved into the digital sphere create inherent discontinuities. The archive cannot help but have an awkward relationship in its current state with digital artworks. The psychological aspect is important therefore to understand how art and the archive are both growing in similar but separate ways. It is further important then to understand what has happened within the field of digital humanities to try and resolve the discrepancy between the movements of art and our methods of considering them.

Using all the previously mentioned background information and all these theories I bring forward therefore the art historic theory that has inspired me to look again under the understanding that the previously used "traditional" methods behind many present digital database models which can be very limiting and potentially perilous to the future of art historic study due to their lack of inclusion in every sense to any artwork that does not participate in the traditional hierarchy. This is why we next take a gander into some art historic theory that I use then to back my point which is the idea of creating new art historical approaches that pivot from

the use of eras to define styles to schools of thought as continuous rising and falling lines. This is the macro approach that aids in resolving the lack of networked bridges that should exist for example in our case study between the machinery behind multi-ocularity and the deistic history of said symbol. In this way everything truly has to be considered and synthesized while practicing art history. What started as an attempt to save one thing, became a very grande model to include everything and as mentioned this is also why we should care about the Middle Ages because it is precisely Medievalist in the past century and in present time who are bringing forward theories that as Nagel very clearly points out and so do I, are very central also to being able to show and archive Contemporary and digital artwork properly. (Nagel, 2012) While artworks are increasingly going against the hierarchical norms set down by the museum and academia institutions, we see increasing fluidity and intersectionality that due to recent trends are not disappearing. If we want to properly include digital art from the archive to the museum to even the restoration table, many central concepts of the museum and academia spaces are about to be challenged and the fear of en mass destruction of past methods is very real. This is not to say that the past methods should go away, this is simply to add and pivot the structural focus of how we study art history using methods that have been around for almost a century but are not still adopted in the mainstream of art historical research.

The themes to understand are primarily within the ideas of full memory and the true intersectionality of artworks that make them such important cultural objects. The ability to be highly reflective of culture makes them also symptoms of said ways of thinking and seeing but very few things of societal and cultural reference are easily quantifiable and so is art history. A network-based approach could become gigantic or incredibly detailed. As we saw from the glimpse at Sartini et al, legibility is important since the theory is good but it was not taken all the way. It is further not my point that everyone should be an expert in everything all the time. The point instead is the value of expert collaboration and the immense possibility of flexibility across fields and knowledge bases. The result would be the concept of “full memory” taken from Freud and intentionality to see further and understand rather than a reactive stance to protect against potential destruction. (Freud et al., 2001) The central theme is the relationship between artwork and archive due to the archive’s functions and the artwork’s aesthetic capabilities to even exist with any importance within the archival setup. The issue is, it has been demonstrated that thinking about artworks within this hierarchical capacity is very simplistic to the point of leaving out information that does not fit. True synthesis and understanding of one thing requires understanding its relation to the others this is what has been said for a century.

What I find interesting is that Nagel claimed to rise above solely image based ties to see the movements underneath, but I found that this work requires not only recognition of the tendency, but also understanding of the iconography as well. (Nagel, 2012) At times these things often become heavily intertwined and this is where we enter the reality that Panofsky points out that while there could be considered “three levels of understanding”, as researchers we often oscillate

between them since understanding of non-linear things requires a non-linear approach thus oscillation and intertwining of levels of understanding is expected and often part of the approach. It is also a bit ironic, one might say there lies a deeper tendency without acknowledging the outer results we can see which again proves the point that a line of perspective once born never fully fades away or stops. Drucker brings forward an important point as well that creativity is seriously being missed and not put forward to the forefront nearly enough, but it is also our job to create an art history that withstands longer than even the computer itself. (Drucker, 2013) Thus our principles must be truly thoroughly thought through and never over reliant on anything more than the tools at our reach and the knowledge we have preserved. That being said, the knowledge preserved is still much larger than what is being written, this again is my point.

With this conclusion I suppose it acts as the ending also of my formation thus far as an art historian concluding then that I am very grateful of my studies thus far and that these theories are what I wish to bring into my future. Amongst all the professors and studies that formed most of my experience, for me it was always the iconological and cultural value based approach that left so much meaning. The Middle Ages represents a really interesting study because of its ability to be so multi-significant but truly more eras have this ability too, just not always the flexibility. I would say the pursuit of profound understanding and further the knowledge that is always possible in art history is what makes this subject so special. Within the digital realm, exploring how all this interconnects and being able to reveal a point of this massive scale was beyond what I have before truly realized. Exploring the digital aesthetics and their ties to previous technologies has brought me future thinking towards my own field, understanding how we could move forward within the art of our time which is as much important to the study of art as it is to the understanding of our current state of mind. Digital humanities has aided me in the quantitative aspects of research and broadened my horizons to consider digital art aesthetics. All of this has made me increasingly aware of how my work cataloguing in museums and researching digitally has a clear and important impact. Understanding how this feeds into the public, how much art historians have said and how much is utterly unknown or only known in little pieces is extraordinarily big as a corpus. The abilities and limitations of the computer are of great use to us as researchers to see beyond.

The future of the conclusion presented in this thesis from the point of view of the model means defining more and more strains of thought. Another issue explained at the end is there are quite many more thought movements that have progressed over history, not all of whom have been named. This presents a big issue of exclusion since artworks tend to not be shown if they cannot fit a model. In order to make this model truly inclusive it would have to be applied many many times, but this would take several lifetimes to complete unless computer image processing becomes much better very soon. The other end of this is the application and collaboration within the university and museum institutions. As explained, recognition of a need for change and collaboration is necessary for proper development of digital tools, but also for the general

education of the populace in new ways. The more we practice a new perspective as is possible and relevant to our time, the more it becomes possible to integrate Contemporary art into academic spaces and reveal contemporary attitudes towards art as well. This can only serve to give future generations of thinkers to critically approach the subject with more information than we were able to give before. This is the hope, to be able to expand the art historical field of study.

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