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## How to Be Iconophilic in Art, Science, and Religion?

*La Vérité est image, mais il n'y a pas d'image de la vérité.*

—MARIE-JOSÉ MONDZAIN

### PROLOGUE: TWO WAYS OF POINTING AT ABSENCE

In the first image, soil scientists in the Amazon are gathered around a table in the little restaurant where they house their equipment. They discuss a map, or rather several superimposed types of visual traces: an aerial photograph and a satellite map of this tiny portion of the Amazon to which their expedition is heading (Figure 1).<sup>1</sup> The botanist is pointing with her left index finger at a spot on the map, which is also visible on the photograph although it has a different shape—nuances of grays instead of colored and sharpened boundaries. While her first colleague is coordinating his action by zooming in on the same spot with his hands and eyes, the other one, on the left, makes sure that the documents neither fold nor lose their superposition.

Those scientists are inside a landscape, but they are also *dominating* this landscape through the mediation of the map. They are designating a spot, the site of the botanist's field study, where they hope to go the next morning, and that is supposed to correspond, through a set of more or less predictable transformations, to the blur on the map and the gray area on the photograph to which the botanist is pointing with



Figure 1. Soil scientists studying maps of the Amazon rain forest in a restaurant in Brazil (photograph by B. Latour).

her index finger. Although the reality of the place she wants to reach is absent, she points at “it” as firmly as if she wanted to refer to the table on which the documents are spread. “Here it is,” she says, and her colleagues nod approvingly: “I see.” Since there are so many intermediary steps to reach the destination, the student of visual culture could doubt that this scientist refers to anything, and yet she has collapsed those steps into one, to the point where a deictic gesture can be used unproblematically to refer to the site. So do these scientists see something? No, since what is designated is absent; yes, since they can relate to their field site through a long series of intermediary steps. If we were to take the inscription spread on the table literally either by denying that it really refers to something or by claiming that what is referred to is present here, we would miss what makes it interesting for the student of visual culture. More dramatically, we would have shifted from an “iconophilic” understanding of science to an “idolatry” of science.<sup>2</sup>

In cell number eight of the San Marco convent in Florence, Fra Angelico (or his collaborators) also painted deictic hands, those of the angel waiting for the holy women on Easter morning (Figure 2). The right angel’s hand points at the empty tomb, and the left hand to an apparition of the resurrected Christ, behind the back of

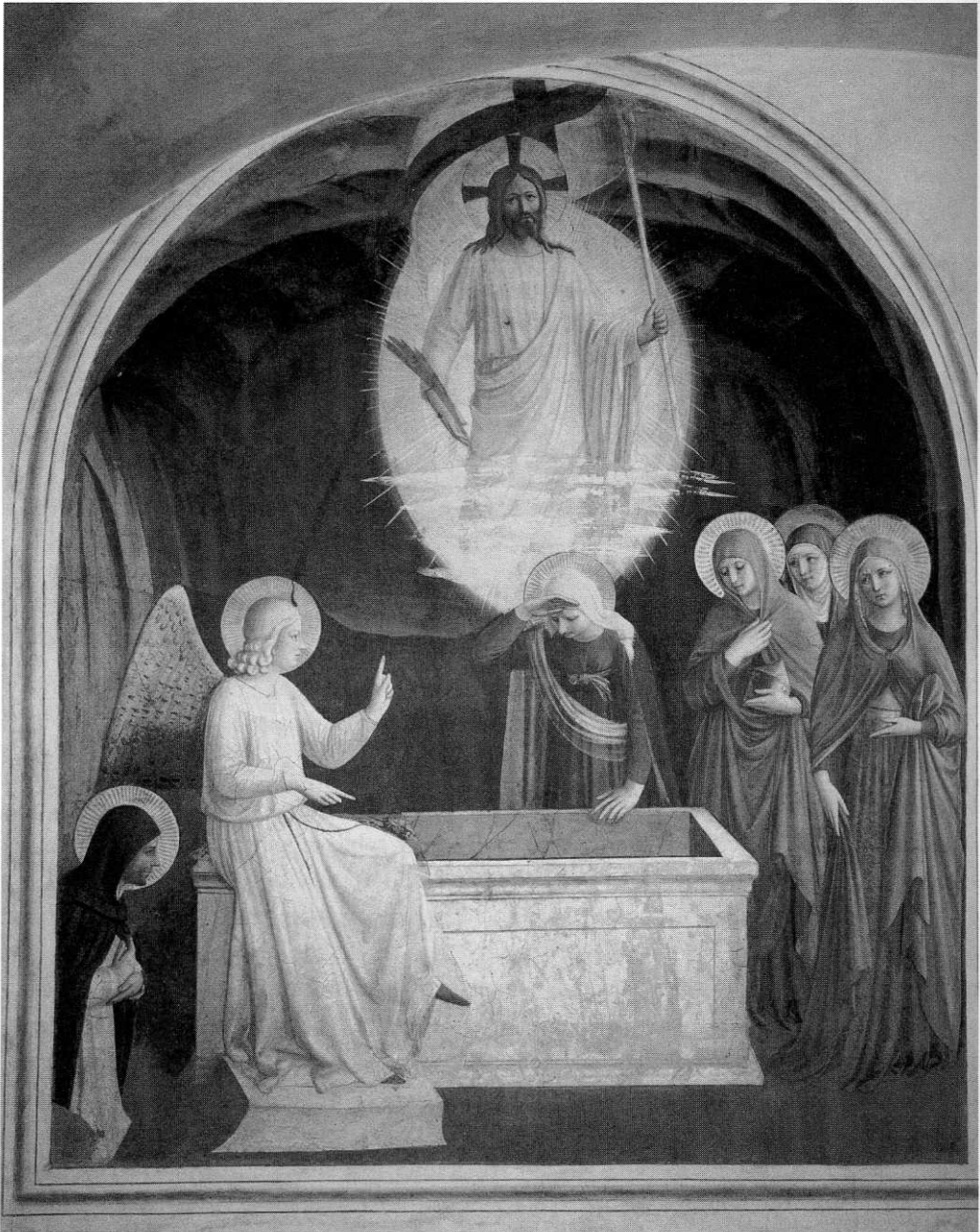


Figure 2. *Fra Angelico, Pious Women at the Tomb, ca. 1440.*  
*Museo di San Marco, Florence, Italy.*

the surprised women. A kneeling monk, Dominicus (on the left side), sees the angel, the empty tomb and the bewildered women, but he watches the scene laterally and his inferior position—almost merged with the frame and the wall—transforms his character into the figuration of a transition between the absent real monk whose cell has been illustrated and the fresco itself whose meaning the poor lonely soul has to recover. Like those of the scientist in the first picture, these hands point at absences—but a different type of absences. The tomb is empty and the whole message of the angel is to convince the holy women that this is *not* what they should look at: “Why do you look for the living among the dead? He is not here, He has risen!” (Luke 24:6.) The apparition of Christ, designated by the angel’s left hand, is not more visible and cannot be substituted for the empty tomb, since the women do not see the glorious body of Christ, only the monk in the flesh—and now the visitor—can see it. But what is there to see? More absence, since the same angel’s warning applies to the flat painted surface of the fresco: “do not look here, this is not what is in question, beware.” If we were expecting to see the apparition *instead* of the empty tomb, here too we would have shifted from faith to idolatry, from “*dulie*” to “*latrie*.” We would look for the living among the dead, for the presence among the absence, for what is really alive among the dust, pigment, and dried eggs of a fresco.

The two deictic gestures in the two images point at remote phenomena and absent features; both of them designate a reality; both of them force us to transcend the setting in which we are immersed (the Amazonian restaurant or the San Marco cell); both gestures help us see things that are invisible, and yet they are completely different in their definition of absence, presence, reality, phenomena, transcendence, visibility, invisibility, opacity, and transparency. In this little meditation on mediation, I would like to use art history in order to guide us along the paths of iconophilia. Iconophilia is respect not for the image itself but for the movement of the image. It is what teaches us that there is *nothing to see* when we do a freeze-frame of scientific and religious practices and focus on the visual itself instead of the movement, the passage, the transition from one form of image to another. By contrast, idolatry would be defined by attention to the visual *per se*. Thus iconoclasm may be defined either as what attacks idolatry or as what destroys iconophilia, two very different goals. Because it seems so difficult to resist the temptation inherent in all images, that is, to freeze-frame them, the iconoclast dreams of an unmediated access to truth, of a complete absence of images. But if we follow the path of iconophilia, we should, on the contrary, pay even more respect to the series of transformations for which each image is only a provisional frame. In other words, we should be iconophilic in all domains at once, in art, in science, and in religion.



## ON THE USEFULNESS OF ART HISTORY TO MAKE SENSE OF SCIENTIFIC PRACTICE

The study of scientific practice has provided us, in the last twenty years, with more and more insights into the fabrication and transportation of information (see the essays by Lorraine Daston, Peter Galison, and Simon Schaffer in this volume). If we could summarize the change of emphasis of such a diverse body of work, we could reuse, with a different meaning, Marshall McLuhan's motto: "the medium is the message." The active locus of science, portrayed in the past by stressing its two extremities, the Mind and the World, has shifted to the middle, to the humble instruments, tools, visualization skills, writing practices, focusing techniques, and what has been called "re-representation."<sup>3</sup> Through all these efforts, the mediation has eaten up the two extremities: the representing Mind and the represented World.

This shift has had the enormous advantage of multiplying the connecting points between art history and the history of science. When science was obsessed by what happened in the Mind or what was the case in the World, the distance with arts, especially the visual arts, was at its maximum.<sup>4</sup> But when science began to be seen as a mediating visual activity, then the visual arts offered a fabulous resource; they had always thought of themselves in terms of mediation and never bothered enormously about the representing Mind nor the represented World, which they took as useful but not substantial vanishing points. To be sure, it was much more difficult to extirpate scientific activity from its epistemological past than to free art history from aesthetics, but once the two moves were completed, a vast common ground was opened and, in recent years, a flurry of studies have "vascularized" the connection between visualization in science and the visual arts.<sup>5</sup>

The social history of the visual arts could teach historians of scientific activity quite a lot in the matter of mediations, since the beauty of a Rembrandt, for instance, could be accounted for by *multiplying* the mediators—going from the quality of the varnish, the type of market force, the name of all the successive buyers and sellers, the critical accounts evaluating the painting throughout history, the narrative of the theme and its successive transformations, the competition among painters, the slow invention of a taste, the laws of composition and the ways they were taught, the type of studio life, and so on in a bewildering gamut of heterogeneous elements that, *together*, composed the quality of a Rembrandt.<sup>6</sup> In art history the more mediators the better, and even now, it is my impression that there is very little in the cultural studies of science at the level of details, heterogeneity, and instability of the best social history of art. Deploying mediations without threatening the work itself—*l'oeuvre*—remains an art history specialty.

If the social history of the visual arts is good at teaching quite a few tricks to the history of science in terms of multiplying mediations, it is also true that it has an *easier* job

since it can bracket more easily the question of *what* is carried over through all these mediations and of *who* is doing the carrying over. Once the aestheticians and their ahistorical Beauty have been pushed aside, it is slightly easier to recompose the quality of a Rembrandt, out of a motley crowd of small mediators, than, say, the second law of thermodynamics. In other words, the constructivist character is built into the arts in a different way than into a scientific fact. The more I read about the intermediary steps that make up the picture of the *Night Watch*, the more I may like it. Constructivism adds to the pleasure, going, so to speak, *in the same direction*, toward the multiplication of mediators. In some deep sense, constructivism flatters some essential feature of the arts.

This is not, however, the case with scientific facts. Constructivism, when it multiplies intermediary steps, seems always to *weaken* the claims to truth, to destroy the object under scrutiny. Instruments should be black-boxed, history forgotten, erratic moves erased, local and social circumstances eradicated.<sup>7</sup> Of course, and this confirms the point nicely, it is possible to take much greater pleasure in learning the laws of thermodynamics after having read the social historians on the construction of the first or the second law, but this reading, precisely, takes on some aesthetic character.<sup>8</sup> The same mediators that should have been black-boxed to produce scientific certainty, now that they are deployed by the historian, generate a type of pleasure that we rightly associate with the arts. Even if I exaggerate the differences, it remains fair to say that Beauty is more easily seen as a construction than is Truth.

There is thus an *additional* problem in science studies that should help the commerce between art history and science studies to go both ways.<sup>9</sup> Art history offers extraordinary skills in multiplying the mediators, but history of science insists on a question with which art historians can do away with too easily. The question is not that of Truth, since this epistemological question is no more answerable than that of Beauty in aesthetics, but another question, related to it, that *qualifies* the type of mediators. If you hear the screeching noise of the violin cords, this mediation adds to the quality of your pleasure, exactly as much as the plot you have just read on the program, or the envious glance that you got from a friend who learned that you had been able to get a seat for this most vaunted performance. More exactly, you do not have to build a *stable hierarchy* of those mediators to find it acceptable to consider that Bach's work is indeed "made up" of all these elements associated and combined, no matter how. Extracting from it the "real core" of Bach's work will not necessarily strike you as an important task. Bach, you will say, is made of "all that," snobbery and execution included, scores and lighting, ticketing and pietism, CDs and numerology. In art it remains slightly easier than in science to be constructivist and realist at the same time.

On the other hand, if you sit through a dark and freezing night inside an observatory, there is something you do not want to hear, and that is the screeching noise of your spectrometer that would ruin your data. It is crucially important that, out of the

local and temporary array of instruments and set up, all of the mediators function as so many transparent intermediaries. It is essential that a tiny core of information escape from the setting and let you ignore the rest. This is the condition of felicity you want fulfilled. You cannot, as in a performance, be constructivist and realist at once, even though you know pretty well—and scores of science students will remind you of it in case you forget!—that you have “constructed” your data.<sup>10</sup> Once aligned, scientific mediators have to have a way of escaping their origin in a manner that is *not* required from art mediators, where their continuing presence and vibration remain essential. If I am right, what history of science has learned from art history, it should repay by insisting on its own different questions, addressed to *both* fields. I think it would be fair to say that most of science studies (that is not denunciatory) can be defined as an aesthetization of science. This is not meant as a criticism, on the contrary, it was done with the worthwhile intention to “elevate” the study of science to the level and quality of art history.

It seems to me that, as a scholarly community, we begin to know pretty well how to multiply the mediators (especially in the work on visualization in science), but we have no clear idea yet of how to account for the various ways in which the same mediators are telescoped, unfolded, embedded into one another. We cannot simply say that “all of them” count in the making of an observation. If we were stopping at that, something would be missing from the mere deployment of heterogeneous associations. Thus the same care that has been invested in multiplying mediators in art history and then in the history of science, should be now engaged in *specifying* the types of mediations. The notion of mediation itself is much too weak and hazy to define the whole middle range between the bygone representing Mind and the represented World. This is true even if one is careful not to define mediation as what is “in between” (for this I reserve the word intermediary) but rather as that which produces, in part, the elements that come in and out of meditation. If the medium is the message, slightly different types of media (and mediation) will produce enormous differences in types of messages.

## THE TRANSCENDENCE OF SCIENCE: THE TRANS-FORMATION OF IN-FORMATION

What would be the simplest way to characterize the type of mediation that renders a visualizing activity scientific? The notion of in-formation captures a first trait, provided we understand the word in a very practical sense, as what put something into a *form*, in its most material aspect of inscription. To travel over distance, matters have to be changed into forms. If there is no trans-formation in the sense of encoding or inscribing into a form, then there is no travel nor transportation and the only way to know something is “to be there” and to point at features silently with the index. The



scientist in the first picture could still use her index in this simple commonsense way but only to designate the table or her companions. If she starts to direct her index toward an absent feature, like the field site, then it has to be aiming at an inscription of some sort (at what I am calling in-formation). As soon as one is at a distance from features one wishes to refer to, some *vehicle* has to be invented to carry the reference in a state completely different from the one it had when it was locally and materially present.

Disembodiment and re-embodiment is essential to the task of transformation. It is essential to remember that visualization is only one of the many vehicles that help in this encryption; numbering, tagging, counting, and stuffing are some of the many others.<sup>11</sup> The mass of work now available on visualization in science has been extremely productive in describing a type of “formal matter,” so to speak, that is neither in the mind nor in things, but is at once material and symbolic. Actually, the very meaning of symbolic has been completely dislodged out of its mentalist or structuralist past.<sup>12</sup> It is now an activity as empirically loaded—and as observable—as that of child care, fencing, gardening, or baking. This is why more and more work on visualization in science, which had started with an interest in text, then in diagrams, figures, and charts, is now devoted to theory and mathematics, following, by the way, the very path of representation.<sup>13</sup>

A second trait of these displacements is as important as the first: the maintaining of constant features through the shifts in representations. Since, by definition, the local matter has been abandoned, how could a form refer to it, if some of the relations were not kept constant? This maintaining of a constant through transformation has nothing to do with the carrying over of the things themselves, as in the naive scenography of realism, since the things have to be abandoned so that we have, at a distance, an information “about” them. But it has a lot to do with conserving a constant through successive transformations of the medium. Information is never simply transferred, it is always radically transformed from one medium to the next. More accurately, it pays for its transport through a heavy price in transformations.

In his major book, Edwin Hutchins has described many examples, for instance, of the ways in which angles are conserved and redescribed from the pelorus operator on the deck of a U.S. Navy ship, all the way to the chart of the plotter, in the cabin, carrying hoeys, rulers, and compasses.<sup>14</sup> Half a dozen media are used to redescribe the information, but they are aligned in such a way that something essential is conserved, and that is the measure of the angles. Each scientific discipline, whether completely “abstract” like topology or completely “concrete” like the building of natural history collections, can be described by the choices it makes in what should be kept constant through which sort of transformations into different media.

As it has been noted, many years ago, by the art historian William Ivins, perspective and relativity theory are two related examples that bring art history and science



studies even more closely together in terms, this time, of content.<sup>15</sup> I have proposed to call this common obsession “immutable mobiles” and I stick to this term because it seems to capture pretty well, in my eyes at least, what is scientific in an array of mediators that, otherwise, are very similar to those found in countless other visualizing activities.<sup>16</sup> What they have in common is not the visual itself but the constants carried intact through the transformation of the media. Immutable does not mean that information is transferred unproblematically but that some features have to be maintained *in spite* of the mobility provided to them. In describing the visual practice of scientists, we can be attentive to the textual quality of the document, to the layout of the paperwork, to the intensity of the contrasts, to the enhancement of the features, to the local interpretive traditions, to the relative efficiency of graphs and tables, to the skilled work of rewriting the equations. In that sense, we do exactly the same work as an art historian or a sociologist of art like Howard Becker, but we can also *add the ways* these mediators align with one another, what they choose to keep constant through transformations, and what they determine to discard.<sup>17</sup>

We have thus at least two reasons for being fascinated, for instance, by the work of preparing an electron microscopy image; one will come from the hundred or so intermediary steps going into the construction of the artifactual image, but the second will be the gradual *disappearance* of those hundred steps into one shape that will be kept as a reference through those re-representations.<sup>18</sup> Of course, the quality of the shape can never escape the series of these transformations—and this is what naive realism will always miss so badly and constructivism will always deploy so beautifully—but these transformations are aligned in a way that *justifies* the claim of realism (if not the *modus operandi* it had imagined). They end up summarizing one another in a way that differs from the deployment of mediators in art.

The *longue durée* history of this type of alignment has been made only in part, but two things are already clear: first, the twin ideas of a calculating Mind and of a mathematizable World are the projection, at its two extremities, of this very specific type of mediation.<sup>19</sup> Wherever this type of network expands, there will be, as a correlate, a certain type of subject and a certain type of object invented at both ends, to sustain the transformations of the forms. This is the strong metaphysical meaning of the expression that the “medium is the message,” and this is what justifies the daring and somewhat adventurous move taken, many years ago, by science students who bracketed out the individual internal Mind as well as the World “out there.” We were right to extract ourselves from Cartesianism by refusing at once the *ego cogito* and the *res extensa*, in order to focus our attention on the middle ground, since this middle ground—practice, loci, inscription, instrument, writing, groupware—was the active part, and not simply, as we are told, “the means for a Mind to gain access to the World.”<sup>20</sup> By holding the mediation we do not miss the essential parts: what happens in the mind of scientists “in there” and what is the real stuff of the world “out there.”

On the contrary, by concentrating on the trivial aspects of the cooking of science, we may also end up accounting for its two vanishing points, *res* and *cogito*.

The second important point is that the definition of what counts as an essence or a substance has a lot to do with this question of maintaining a constant through transformations. It is fair to say that, in our scientific cultures, we cannot entertain any alternative notion of what is a substance, except as what is maintained through successive transformations.<sup>21</sup> Of course, in popular metaphysics, we project this substance as what lies "under" the shifting and passing attributes, but this too, like the twin notions of a calculating Mind and a calculable World, is a projection, an extension, an effect of the development of immutable mobiles. What is kept constant from one representation to the next is morphed, quite naturally, into the *thing itself* to which, thanks to "accurate information," we gain access. But in this little shift from information by transformation to information as a mere transfer without any transformation, the word "reference" changes its meaning and instead of being what is carried through the media and the successive inscriptions, it becomes what the thing is, unaltered, unmediated, uncorrupted, inaccessible.<sup>22</sup> This, then, is the ultimate paradox of a historical mediation that provides access to what is then seen as an inaccessible, ahistorical, and unmediated essence.

If the work of mediations that is responsible for these products is erased further, a powerful scenography is then generated: a calculating Mind, a calculable World, a substance that lies under its passing attributes, and the medium of language to circulate in between. All the other types of mediation will now be evaluated according to whether or not they are able to provide an accurate "access to the world." And of course, by comparison, all of the other forms of mediations will be found wanting, and will be condemned as so many fantasies or so many outright lies. Information transfer will be used as the standard, although it does not even do justice to the risky business of producing scientific information. To be sure, the proliferating mediators of art will be able to escape from this indictment, only by accepting their destiny as "forms of art," that is, by abandoning any durable access to the World and any objectivity in the Mind. Hence, this rather terrifying definition of art epitomized in Kant where the free play of subjectivity "mediates" between science and morality. The relative freedom enjoyed by art historians has been obtained at a heavy price, since they had been let loose only because art did not count "seriously" compared to "what we can know" and "what we should do." As to historians of science, according to this scenography, they had nothing to do except reconstruct, in the most whiggish ways, the vagaries of reason slowly ascending to truth through the purification of its concepts.

On the other hand, if we stick to the mediators and join the forces of art history (good at deploying mediators because none of them can be ordered in a stable hierarchy) with the forces of history of science (good at tackling the question of reality and objectivity), then the hideous scenography of mind/world/substance/language

disappears and we have to consider heterogeneous associations of mediations *plus* the types of mediations that group or gather the entities in completely different aggregates. Science becomes rich in visualizing skills and art regains many entries into the object. Fiction is no longer free under the pretext that it would be subjective or impotent, and science is no longer merely “accurate,” because to be so it would also need to be unmediated, unsituated, and ahistorical. This, then, is the juncture that makes this volume such an interesting venture.

## THE ART OF PERSON MAKING THROUGH BROKEN IMAGES

In order to elucidate this “new deal” between art and science—once the attention to the number of mediators and to their types has been clarified—I want to introduce a third type of mediation. What happens when it is not information that is transported through immutable mobiles, but *persons*? You do not ask a lover “do you love me?” with the same expectation as when you ask “what is the present bearing of Point Loma?” If your lover answers “I have already told you three times! Why do you ask again?” you can deduce, with a pretty good margin of error, that there is no love anymore between you two. The question and the expected answer are not supposed to transport information with the minimum of deformation by propagating through many different representational states, as when you align your statement, your watch, and the clock of Big Ben (itself relying on atomic clocks in Greenwich, and those on the Bureau International du Temps at the Paris Observatory). It is not alignment and re-representation that you are expecting. The question and the answer are supposed to create *persons* who are present to one another in the very act of speaking.

To be sure, it is also a question of presentation, and even of re-presentation, but the meanings of these terms are entirely different. “Present” has first the meaning of a gift that is not due as a payment of any sort of debt or that is not the return half of any sort of barter. The conditions of felicity of the little sentence “I love you” implies that it is given as a gift and that this gift generates in those who give as well as those who receive it a form of personhood: “I am the one who is loved by that one,” “*parce que c’était lui, parce que c’était moi,*” as Montaigne said of La Boétie. The word “present” also means that both are present to one another, or in the presence of one another—instead of being “absent” as in many other interactions where we are foreign to one another. More interestingly, it does not just mean being present, since the little sentence “I love you,” when uttered rightly, has the other virtue of putting both speaker and listener in the presence of one another *again* and *anew*. Hence the different meaning of re-presentation, as what is presented again, or what provides another chance of being in the presence of someone or something (instead, for instance, of being “in the absence,” that is, dead!). Although the conditions of felicity of this “speech act” are

difficult to detail, every one of us seems to have an uncanny ability to detect its infelicities: "you don't really mean it," "you say that to please me," "you said that too fast," "you did not say that like the first time." Although it is "*un petit je ne sais quoi*," as we say in French, we seem to know a lot about it!

For the purpose of this meditation on mediators, it is very important not to oppose information transfer and person making as objectivity and subjectivity. Information is never transported without being deeply transformed, this, as I said, is the paradox captured in the notion of "immutable mobiles." Thus, as we learned from science studies, there is nothing especially objective about science; this type of mediation simply generates a *form* of transfer, that is, reference, while it projects, at the two vanishing points of its networks, a certain type of subject—the calculating Mind—and a certain type of object—the calculable World. Person making is no more subjective than information transfer is objective. It is simply the case that this new mediation generates, at the two extremities, completely different types of subjects—a person receiving the gift of presence—and a completely different type of object—presence giving. This, however, does not mean subjectivity. It is a full-blown mediation, a form of life, with its own form of judgment, its canon, its empirical world, its own taste and skills. Truth and falsity, faithfulness and infidelity are carefully detected, measured, proved, demonstrated, elicited. Nothing is less unmediated, affective, evanescent than this sturdy, careful, accurate mechanism to evaluate love. A large part of our life is spent—and well spent!—in developing those skills and honing those forms of judgment.

Once the false binaries of objectivity and subjectivity, coldness and heat, non-humanity and humanity, visibility and invisibility have been put aside, it is much easier to see the differences in the types of mediation. Both are pointing at features absent from the scene of the action; both are transcendent since they designate features beyond the inscription; both are non-realistic since they work by transforming deeply the representation; both define, with a sure skill, truth and falsity, faithfulness and betrayal. Yet, they differ completely on what they point at. In information transfer, everything is sacrificed to the maintenance of a constant that undergoes transformations and, so to speak, jumps from one medium to the next. Einstein's famous "mollusk of reference" is an extreme example of this obsession. Every commonsense definition is modified, but the transfer of information from one accelerated frame of reference to another is saved through the generalization and reconceptualization of the Lorentz transformations—a very apt term.<sup>23</sup> In person making what counts above all, what requires the utmost sacrifice, is the designation, here and now, of the person at hand, being presented with the gift of presence. But there is no way to produce this effect by directing attention *away* from the scene. On the contrary, the only way is to *redirect* attention by pointing, through cracks into the discourse, to the character in the flesh listening to the story or watching the scene.

Let me restate this essential point. Redirecting attention away from the wrong

direction toward the gift of presence that produces persons here and now, is the obsession of this type of delegation. This differs a lot from transporting information with the minimum of deformation through the maximum of transformations. It differs a lot, but *not* as objectivity used to differ from subjectivity, and especially *not* as an access to a "natural" world used to differ from an access to a "world beyond." Access is precisely *not* what is in question in this person-making form of life, no matter if it is beyond or beneath, before or after. Moreover, "access to a world beyond the present one," paradoxically, is a much better definition of information transfer and of its specific type of transcendence. In person making, there is no interest whatsoever for substances.

In the first picture (see Figure 1), the botanist was directing her index to a world beyond, which was obtained by what remained stable through the transformation of the chart, the aerial photograph, the trip to the field site, the visual evidence they will gain tomorrow, the metrology of cartography and the surveying that held the bearings together. A substance, the locus of the field site, exists through its attributes. In that sense, scientific visualization offers a much more transcendental, immaterial, spiritual vehicle than anything we could think of. The angel, in the second picture (see Figure 2), is doing another job that we can now consider much more clearly: the two hands are *redirecting attention* to something else, something much more important: "He is not here; He has risen! Why do you look for the living among the dead? Go away to Galilee!" But the second hand is not directing attention to the image of the risen Christ *instead*, as if it were displacing something intangible from one representational medium to another, the way our lady scientist could go from an inaccurate map to a more accurate aerial photograph to produce a better reference. The holy women cannot see the apparition at their back!<sup>24</sup> So, who can see the apparition? Nobody, and that is exactly the point designated by the finger, that is exactly the angel's warning, what explains the "opacity of painting," to use Louis Marin's magnificent expression.<sup>25</sup> According to him, perspective allows exactly the opposite of what Samuel Edgerton describes as rationalization and transparency.<sup>26</sup> The new coding of perspective does not eliminate the repertoire of the ancient pre-perspectival icons; on the contrary, by stabilizing most of the conventional reading of the rest of the picture, perspective allows Quattrocento painters to *highlight* in a most dramatic fashion the discrepancies, the cracks, that allow the paintings to make the presence real. In Piero della Francesca's *Annunciation*, it is essential to understand that the angel cannot see the Virgin hidden behind the pillar—but this understanding is made possible only by the geometrical convention of the pavement. Standardization makes re-representation possible.

This opacity of painting does not mean, however, as it is often construed, that painting designates something that is always beyond, something above, something spiritual and immaterial, a substance beneath its attributes, or that it designates the indefinite vacuity of belief. On the contrary, it *can* be seen, but not *here* in the empty



tomb and not either by *replacing* the empty tomb by the invisible apparition. For the viewer, seeing is no longer the accessing of a substance beyond the present setting, but *being designated* now, here, in the flesh, as someone receiving freely the gift of life anew. What is missing in the picture, to get its meaning, is the monk in the cell, to whom the index of the angel, and the whole painting as an index, is addressing its warning. Beware, your life is in question.

The kneeling painted monk on the left, Dominicus, who sees everything but the apparition (which can only be seen from another point of view not within the picture), marks a perfect transition between what is missing from the picture and how the picture should be read, that is, the "legend" of the fresco. All the more so since, as a father of the Dominican order, he is also the one better suited to teach the friar in the cell how to read, see, behave, and pray. What is designated by the fingers of the angel is visible only by kneeling in prayer and looking not among the dead but among the living, not at the past but at the present. The index here is not about others but about you, not about absent belief but about present persons. Whereas, in information transfer, all the arrows are pointing at entities that are absent, in person making all the arrows, through the cracks, discrepancies, visual puzzles, absurdities of the scene, are pointing at the kneeling monk in the cell putting himself in the presence of what is a present person and not a dead belief, in the presence of what "has risen" and is understood now, in a flash of recognition, by this designated monk who, at last, grasps the gesture of the angel redirecting attention to the text of the Gospel that this painting reenacts, making the text as luminous and as simple as Dominicus's teachings. The fresco is the empty tomb out of which life has risen again.

I have moved surreptitiously from the ordinary sentence "I love you" to the theme of the San Marco fresco as if they were dealing with the *same* type of mediation. The reason for this move is that the only form of talk that we are still good at and that remains close enough to person making, is to be found, nowadays, in what is called "interpersonal relations." The situation is similar to that of Maussian gift giving that used to link whole economies in the past, but remains now visible only in the domestic realm of friendship and family relations, the rest being taken over by market relations (according to the economists at least).<sup>27</sup> This has not always been the case however, and there used to be a time where the most common, public, and collective form of life was not information transfer but person making. I hesitate to use the word "religion" to describe this form of mediation, since religion has been turned, *because of* the contamination of the model offered by information transfer, into something exactly *opposite*: a belief in the existence of a distant substance beyond the realm of experience to which we have access only through the intermediary of special vehicles—a definition that, funnily enough, is a good description of science production, but *not* of person making as defined above.

Even stranger, when considering pictures that have a religious theme, art historians,

even sophisticated ones, take the theme, the narrative, as being *about* some scene of the New Testament, or some stories of the Golden Legend. They know very well of course that no picture represents, in any realistic sense, a genuine scene that would exist somewhere, and yet they analyze the picture as if there existed a *body of beliefs* on which the picture would draw or to which it would refer. In so doing, they forget one crucial element of those pictures: not only do they *not* refer to a specific landscape or to a genuine event in any scientific sense, but they do *not* relate in any sort of referential way to a body of beliefs *about* the Virgin Mary or the history of Christ. In other words, although art historians are bona fide constructivists for every aspect of the painting—market forces, varnishes, perspective, programs ordered by the sponsors, and so on in a bewildering display of scholarship—they talk about what the scene represents by using a definition of representation that is utterly scientific, in the sense that it should “refer to” a scene of the Bible and not in the sense that it presents it anew. The visual puzzles to solve—for the painters, their patrons, and their customers—are entirely different if one or the other meaning of representation is chosen.

My contention is that those pictures that are engaged in person making are not at all about reference and access, *not even* in the somewhat innocuous sense that they would allude, refer, or be “about” scenes of the Bible. They do something utterly different, they re-present, in the other sense of the expression, what these stories and scenes really meant—meanings that had been lost by those who read them, but which can be re-understood now again, because of the picture (as in the case of stigmata traced by Arnold Davidson in this volume). Like the fingers of the angel, they redirect attention to what is important and ask, through the discrepancies of the visual display, that we do not look away among the dead, but here among the living, for what is meant. Hence the subtitle of Georges Didi-Huberman’s book, *Dissemblance and Figuration*, is itself based on an interpretation of Denys the Aeropagite’s theory of images, which uses for what I called “cracks” and “discrepancies,” words like *dissimiles*, *inconsequentes*, *inconvenientes*, *deformes*, *confusae*, *mixtae*.<sup>28</sup> All the meditations of Christianity are about bringing *real presence*, not about illustrating themes. But compared to this obsession, the historical differences between iconoclasm and iconophilia appear to be very small, even if one takes into account Reformation image breaking, Lutheran search for “mental images,” the sorting out of Catholic images after the Counter-Reformation, the Byzantine “economy” of icons, or even the iconoclasm of Modern art.<sup>29</sup> Avoiding information transfer is what all these visual cultures have in common. Iconoclasm, in that sense, might be only one aspect of this long history, another way of multiplying the discrepancies, the cracks, and redirecting attention to what really counts. But what can be done literally by destroying the image itself, can be done figuratively in the image. In that sense, all Christian images are born broken.

When they are not, they are broken in yet another meaning of the word: they are so bad that they are ready for the bonfire! The simple demonstration of this is to live the

rather horrifying trial of walking by mistake into the rooms of Modern Sacred Art in the Vatican Museum. Thousands of *croûtes* allude to biblical scenes, refer to beliefs, represent biblical stories; not one of them, *not one*, has any sort of pretense at re-understanding anew what those stories meant. Absolutely devoid of theological values, they are also, interestingly enough, devoid of artistic ones—as if mediators of different sorts supported one another and the art ones refused to sit where their person-making brethren had been excluded.

Theology, unfortunately, has been for a long time in the same dire state where epistemology and aesthetics were before the onslaught of constructivism. It is thus of very little help at this juncture, since it has absorbed the language of science to the point where it really believes it has to defend certain “beliefs” in the “real existence” of “real substances” that would reside “beyond” the reach of natural and empirical grasps and that would be accessible only through the successive ladders of more and more immaterial intermediaries. Thus, its most essential phenomenon, its own original type of mediation, its very core, is defined in the exact terms of another one that goes in completely different directions and produces utterly different objects and subjects. An invisible world of belief is mistakenly built beyond the visible world of science, whereas it is almost the opposite: science gives access to a form of invisibility and religion to a form of visibility: *ego, hic, nunc*.

## THE “LEGEND” OF SCIENTIFIC AND RELIGIOUS IMAGES

It is difficult for us to pay equal attention to different forms of iconophilia because we tend to confuse the conditions of felicity of visual cultures. This is nowhere clearer than in the notion of belief. Religion, or, to be more precise, person-making mediation, has no more to do with belief than science with a visible world. The notion of belief is the projection on religious mediators of the trajectory of information-transfer ones. We start to talk of belief when we try to grasp the content of a person-making statement by using the reading cue offered by science and then, finding it empty, realizing that no immutable mobile is at work, that no information is carried over, and thus, since this statement is “empty,” decide that it should correspond nonetheless to something nonexistent that we call the “content of a belief.” Belief is a charitable interpretation but an ill-applied charity. Instead of modifying the reading key, it tries to save the interpretation by offering it a content *it never had* in the lived world of those who uttered those sentences. In other words, no one, absolutely no one, ever believed in anything according to the manner imagined by science.<sup>30</sup> To put it more polemically, the only believers are the ones, immersed in scientific networks, who believed that the others believed in something.<sup>31</sup>

Several consequences can be drawn from this. The first is that the information content of religious mediators is nil. Angels, like the one painted on the San Marco cell,

are very good at redirecting attention, but if one asks what they did say, what sort of constant they maintained through shifts in messages or inscriptions, the answer is tragically void. In this sense the information content of the whole Bible is nonexistent. This is the case in spite of the Creationists' hilarious attempts to read it as if the geologist Georg Lyell had written it, thus proving that they misconstrue religion talk even *more* than they misunderstand scientific discourse. Creationists are an excellent demonstration that some Christians can be rationalized to the marrow, unable even to retrieve a shred of the kind of talk that would not carry information but transport persons.

What the angels carry, however, is something crucially important: another mediation, "He is not here, He has risen." But who is this He? Not a substance to which one would have access, but another mediation, a life-giving person, a mediator of God. And to this God, in turn, do we finally have access through successive ladders of mediations, like the ones deployed by the scientist in the first picture, accessing one spot in the Amazonian forest? No, since God is another mediation, another way of saying what is present, what is presented again and anew, what is, has been, and will be. But Presence is in no way construed as a substance beneath, everlasting under its attributes. Hence its definition by John in terms of ways of talking, of enunciation: "In the beginning was the Word (*Verbum*)" (John 1:1). To shift from person to substance is to change the reading key and to replace the meaning—what gives life presently—to a completely different one: what has always existed. The second one, contrary to the belief in belief, is not religious; it is, through and through, a scientific way of accessing and managing the transit of immutable mobiles.

The second consequence is that this tension between substance and persons, information transfer and person making, is inherently unstable—as the whole Patristic theology can show. That is, there is no way, no *direct* way (this would go against the very notion of mediation) to put oneself in the presence of presence and to understand, once and for all, the meaning of this message. This is what I meant in the little anecdote above. If, to the question, "Do you love me?" you answer "I have *already* told you," you shift to a temporality where a message could be capitalized once and for all. This is not possible with love talk, since what is required from it is a renewal, on the spot, of what you had indeed said thousands of times to the same person, but that has to be remade anew for the two to be again in the presence of one another, even, for instance, after a quarter of a century of common life. This is why the angels, in religious forms of life, have so much work to do, although they carry no information: they ceaselessly have to redirect attention to the presence, which, by the very passage of time, is always lost. This temporality is well-known and easily experienced in love, but we should use this tiny cue to understand that it has always been the same with religion.

Another way of putting this point is to say that there is no such thing as a pure or direct religious expression, not because it would be ineffable, subjective, spiritual—this is, as we now understand clearly, a charitable but utterly scientific way of talking—but simply because the meaning of the message is in a presence that becomes absent through the displacement of the mediation itself. Meaning is always missed if it is not renewed now. This is what Rudolf Bultmann indicated long ago by making mythologization and rationalization two synonyms.<sup>32</sup> Rationalization is not a *defect* of religious talk that we could eliminate. In the Gospels themselves, the evangelists are busy rationalizing, inventing scenes, adding anecdotes, making the story smoother, making it look more reasonable. Conversely, the most bizarre rationalization can suddenly retrieve meaning through the cracks or discrepancies of its construction when it is seized again by what is meant, persons being made alive again in the presence of what is person-giving. If we dislike the theme of the Assumption, for instance, we may displace it, break it, or shake it, but we cannot replace it by a purer, less corrupted meaning that would access more directly what is in question *through* that theme. Contrary to many of the Reformation and Counter-Reformation theories of images, directedness, transparency, purity, and access are important properties of information-transfer mediators, but destroy the person-making ones.

A final consequence is that the best way to respect images is certainly not to save them through a “symbolic interpretation” that would lie hidden beneath the popular and metaphoric usage. Contrary to appearances, this way of reading would be thoroughly scientific, since it would take the relations between the empty tomb (first message), the apparition beneath the holy women (second message), the admonition of Dominicus as a kneeling painted monk (third message), the passage of the Gospel (fourth message), and the understanding of the message by the praying monk in the flesh (fifth message), as *substitutes* for one another *in the same way* as the ones used by the scientist (Figure 1) who could go from a chart, to an aerial photograph, to visual evidence. Such is not at all the way messages order themselves along religious paths. They are not about messages at all, no matter how abstract, pious, reasonable, or gnostic, they are about *messengers*.<sup>33</sup> And they are not about having access to a superior reality beyond, but about designating the speaker as the one who receives the gift of life anew, and suddenly, starts understanding what those messages finally—but always provisionally—meant. Messengers, not messages; persons here and now, not substance there and above or below.

To use again love talk as a template, it is the trembling of the voice, the tone that gives truth-value to the otherwise repetitive sentence “I love you.” In the same way, it is the trail through all the discrepancies, the puzzles, and the breaches—in the visual constructions, in the uses of the themes, in the interpretation of the programs—that provides meaning, or not, to the religious icons. The unerring skill with which we



define proofs and pass judgments on this tone that sounds, on the face of it, so unseizable, is what should be retrieved, in my view, from those paintings by following their “shaking” and their “trepidation.”

What we have to retrieve is the carrying of a *movement* that uses the message to produce the *enunciators* of this message. Since this is obviously impossible, the only way it can be done is to render the message unable to do the job of information transfer, in order to force attention away. But this “away” is not the “beyond” of belief, and here again, the path falsely indicated by the message has to be broken, shattered, and interrupted, so as to redirect the sight away from the invisible and unalterable substance of the spiritual world. *Always away, but not beyond*. Yet neither is the direction the depth of an individual soul moved by the beauty of a message that is addressed to the *ego, hic, nunc*. Again, to cancel out this third possible reading and escape in the right direction, the message has to be split, cracked, shaken, and redirected away. *Away, but not down* toward the feelings of psychology or even deeper in the dark unconscious. And so on, in a circulation, a spiral, which provides meaning not only for a painting but for the whole setting—theological, institutional, cultural—in which the mediators are gathered, reshuffled, and assembled (see Joseph Koerner in this volume). This spiral going from one index redirecting the sight away to another resembles slightly, but only slightly, the way art mediators, as I said above, are unable to be listed in a stable hierarchy around a core which would be the “real worth of a work.” The resemblance is enough to understand the *resonance* of the two, but the difference is still easy to detect, as in the beautiful case of Bach’s “blasphemy.”<sup>34</sup> Alliances between types of mediators are always provisional.

## CONCLUSION: AGAINST ICONOCLASM

What can we conclude in this meditation on mediations? That it is no easier to be iconophilic in science than in religion. On the face of it, the intensity of visual inscriptions seemed to make scientific practice an ideal case for the study of visualization. But we saw above that this was not the case, since what is visible is only the freeze-frame of a process of transformation that remains extremely difficult to grasp, a proper form of invisibility. Conversely, if we turn our attention toward religious images, there is nothing ineffable in those conditions of felicity. It is perfectly possible to find the empirical grasp that would allow us to write down their specifications, but the grasp should be adjusted to the type of fragile mediators, to the frail feathers of angels.

One of the great interests, to me at least, of the emphasis on visualization in science studies, is to offer us a *vision* of the practical production of facts, which is not very much easier, direct, transparent, or unmediated than that of the religious movement I tried to outline. The quality of the scientific reference continues only if you add

yourself to it and push it one step further, or deteriorates if you stop carrying it over; exactly in the same way, albeit through a radically different movement, the meaning of religious mediators can be retrieved only if you add yourself to the list of relays that vibrates through the whole tradition of interpretation. To put it bluntly, Nature is now seen as no less transcendent than God; or to put it even more strangely: angels' work is not very much more difficult to grasp than the work of scientific instruments. To be sure, the ways the mediators circulate is entirely different, but the ways in which they have to be deployed is not so different: visual cultures are immensely complex in both cases, and it is as difficult to claim that we would have a better knowledge "without all that" (meaning the instruments, inscriptions, graphs, and laboratories), as it is to say that we could have better ways of producing persons if we could get rid of "all that" (meaning angels, icons, and love talks).

The difficulty is to learn how to be iconophilic for one form of visual culture without being iconoclastic for the others (as has been so often the case in the past). To come back one last time to the example of the San Marco fresco, we can now see how to write down the "specifications" or the "conditions of felicity" of other regimes of mediations, once the tyranny of information transfer is lightened. A tyranny, we should remember, that makes the practice of science incomprehensible as well. To transcribe these conditions, we have to build two lists. The first one provides a message, or a series of successive messages, and the second one is made up of all the breaches that make those messages unfit for normal consumption, and whose succession indicates, as so many relays, the circulation of a meaning that would cut transversely through all these stories, none of which is believed (although each is used for a little time). The first list gives us several layers of meaning: the empty-tomb story of the Gospel, the apparition of Christ, Dominicus kneeling down, and so on. If you displace these inscriptions to align them in the same way as the chart and the photograph in Figure 1, then they become an extraordinarily clumsy and uninformative way of relating you (now in the mind set of a scientist) to events happening in year 30 B.C. in Jerusalem. You cannot push your finger on it as does the scientist on the table at the restaurant and have any sort of access to Jerusalem, as she has to her field site in the Amazonian forest.<sup>35</sup> Harnessed for this use, the mediators appear as a sympathetic and possibly beautiful tissue of lies. This remains so if, shifting this time to art history, the fresco is seen as one of the many examples of a theme inside the program of Dominican visual culture. This time they are no longer outright lies, but mere realizations of a prototype localized in the mental and visual culture (what Michael Baxendall calls the "period eye") of Quattrocento Florence.<sup>36</sup> From bad information they have been turned into good symptoms. Still, they *do* nothing.

But, if you now add the many little elements that are used to redirect attention: the mute angel, the non-visible apparition of Christ, the skewed position of Dominicus who sees nothing, the empty tomb itself, and so on in a list that grows constantly with

your knowledge of theology and art history, then you begin to make the whole tissue of messages vibrate all the way to your understanding (now in the mind-set of someone designated by the picture) of what is carried out: this is what was meant by the *invention* of the empty tomb, by the *innovation* of the angel, by the complete *lie* of Galilean apparitions, by this *way of talking* that makes the Evangelist say "He has risen. . . ." <sup>37</sup> On the other hand, if you paint a scene from the Bible, but without shaking its construction by inventing new indices that redirect attention away from it; or worse, if you imitate inventions made at another time and place by other painters for other patrons and customers, then your painting will be much more devoid of religious meaning than an oyster with lemon on a napkin even though you fill it with two thousand angels, hundreds of halos, and countless kneeling worshipers. This is what explains the nightmarish quality of a visit to the Vatican Modern Sacred Art Museum. These *croûtes* simply forgot to renew the "putting into presence" vocabulary and to reinvent new tricks, breaks, and cracks. Their painters, patrons, and viewers have become, literally, *absent-minded*.

The conditions of felicity for such a movement seem, to us, very strange, and become even queerer when we take religious icons as our example, instead of love talk, for which we all have reasonable competence. We should not be surprised by this difficulty, however. About three centuries of forms of life are missing to make the junction between these two ways of talking, since theologians and priests, overinfluenced by the example of immutable mobiles, stopped reinventing new modes of speech and *began to believe*, occupying the antirationalist position that rationalists had devised for them. Christians even went so far as to invent another world beyond the "natural" one, a world to which we could have access only through prayers, discipline, and series of aligned intermediaries! An invisible world beyond the visible one! For my part, a civilization where we can have angels and immutable mobiles circulating, each in their own way, seems a much better place to live than the one in which science is supposed to access the World directly. It also seems better than the rather horrendous culture in which the poor angels are harnessed to do the work of instruments, accessing a world beyond and carrying blank messages back on their return.

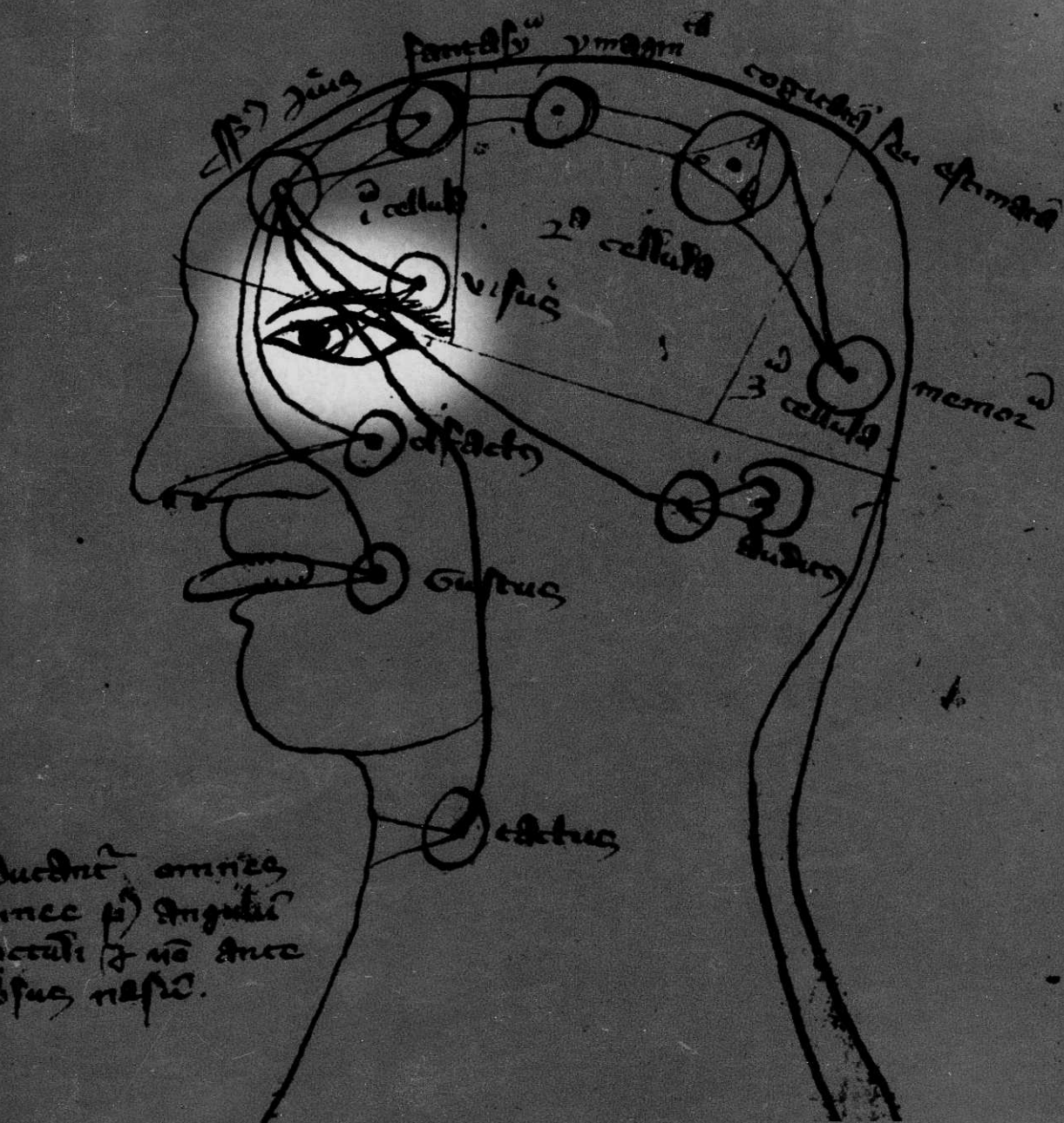
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# PICTURING SCIENCE PRODUCING ART

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