Evolutionary psychology attempts to trace our cognitive abilities back to prehistoric times when our nomad ancestors faced difficulties quite different from today’s challenges. It is to be expected that the various modules that constitute human vision will be similarly traced back to different times and different exigencies. The evolutionary history of the eye in general indicates that image formation has been the major characteristic of both the camera-eye of mammals and the compound eye of arthropods. Dawkins (1996) fascinating review of these developments indicates how the bifurcation between these two depends on an initial inward or outward bending of light sensitive receptor surfaces. Inward bending results in a concave receptive surface that with increasing curvature ends up in a camera obscura eye. Outward bending can keep up for a while but it ultimately looses out against the retinal receptors of the camera eye because of the larger size of its corresponding ommatidia. However, image formation is but part of the story of visual perception. Even Descartes, who was one of the promoters of Kepler’s new retinal image model of the eye, indicated that it was not enough to contemplate the “inner image” in the way his somewhat misleading figure seemed to suggest. Ultimately, the percept is a combination of properties that have to be computed on the basis of physical information in the light captured by the eye (see Figure 1).

On its way to the cortex, the physical image that is produced within the eye of the organism undergoes various analyses and assortments. They result in characteristics that might be consciously experienced as autonomous perceptual features while in terms of their physics they remain within a single dimension. Several discussions in this issue deal
with the status of colors as attributes of that kind. They are considered
as distinctive properties of objects while closer analysis makes clear that
they consist of values computed in the brain based on a single physical
continuum. While experienced as another different attribute, shadow too
belongs to the same dimension. Shadows are nothing but local changes
in color to be attributed to interposition and the location of the light
source. Yet, in the story of art, color and shadow markedly differ in
status. In the history of art, the myth on the origin is linking the
discovery of painting to attempts at delineating projected shadows on a
flat surface (Stoichita, 1997). As the rays of the very distant sun reach us
as parallel lines, a projected shadow of a person on a wall allows us to
draw in outline his or her profile or silhouette as a more or less faithful
pictorial representation. A point source of light will even provide a
sharper image though the diverging rays will induce size differences
between the sitter and his or her projected image. Viewed from this
angle, although reducible to a local color variation, cast shadow is closely
connected to form. While the modular approach to vision in psychology
and artificial intelligence would seem to introduce shadow and color as
quite different attributes on an equal footing, we should be aware that the
history of painting is a series of periods in which painters experimented
with the system of visual attributes to explore alternative hierarchies and
means of expression. A particularly instructive period to explore the
relationship between shadow and color is 15th century Flemish painting
with the use of grisailles within colored altarpieces. What can we learn
about the hierarchy of visual attributes from a closer look at one of the
works of the top representatives of the Flemish primitives: Jan van
Eyck’s Ghent altarpiece?

What causes a painter to do away with one of his most powerful
instruments: color? Is it to restore the primacy of the shadow? Is it the
form of the projected shadow as the most instructive information or is it
its color or orientation? Is it the subtle variation of light and dark as in
chiaroscuro that carries the most important information about the object?
Is there an implicit epistemology or pragmatics behind all of this?

The Ghent altarpiece (Figure 2) is the largest painting of Jan van
Eyck. It is commonly attributed to the van Eyck brothers but historical
evidence about Jan’s brother Hubert is so scarce and uncertain that we
will prudently refer to it as Jan’s work only. The open altarpiece is more
than three meters high and five meters wide. It is by far the largest of
Van Eyck's known works, comprising twenty panels. One of its most prominent features are the radiant colors. These have been associated with Jan's highly sophisticated use of oil paint in which the use of glazes plays an important role. However, despite this manifest mastery of color, the painter has chosen to execute some of the twenty panels in grisaille. A grisaille is, in principle, a monochromatic painting in which one single selected hue, mostly gray, is used to depict volumetric entities. On the Ghent altarpiece the most important grisailles are two panels on the closed polyptych, the statues of Saint John the Baptist and of Saint John the Evangelist (Figure 3). They clearly depict sculptured statues of these saints that are placed within their niche on a socle and with their names chiseled in the stone. Their color is not straightforward gray but it has the pale yellowish overtone of the kind of sandstone that would constitute a plausible material for such statues. What could be the purpose of alternating between monochromic and multicolored panels within a single altarpiece?

1. Chronological color code

An altarpiece is primarily a collection of pictures. The twenty panels of the Ghent altarpiece depict various personages and groups in various settings related to religious events or ceremonies. Earlier mural paintings of Italy such as Giotto's Paduan fresco's in the Scroveni chapel exhibit biblical stories in a simple narrative sequence. The images represent events that typify crucial episodes in a sequential story. All the frames are of the same size and they are meant to be viewed in their linear arrangement which closely follows the story line. Jan van Eyck's polyptych is different. There is no single linear trajectory that prescribes the viewer how to direct his eyes through the Ghent altarpiece. Both in the closed and open polyptych, there are three levels on the vertical dimension and four to seven on the horizontal dimension. The overall organization is symmetrical. Whether one should consult the panels from top left to bottom right or from center to periphery is not obvious. Probably, the prominent figures in red cloths filling some of the panels in both the closed as well as in the opened altarpiece are the ones that first capture the attention. But it is not very probable that the painter used the color as a code for controlling the sequential reading of the pictures.
The Ghent altarpiece is literally a synopsis of the Christian doctrine. We are seeing together the main figures and events in the restoration of God’s relationship with mankind, a relationship that has been ruptured since the original sin. Various viewing patterns apply and according to their acquaintance with biblical history, spectators can relive their own selection of the particular stories that the depicted figures evoke. Obviously, a pivotal event is Christ’s suffering and bloodshed on the cross (Figure 4). On the large central panel gathered around Christ’s emblem, the lamb on the altar, we see a series of angels each carrying one or two instruments of torture. Such an assemblage constitutes a typical display of the “instruments of the Passion” and is a semi-abstract representation of the suffering Christ endured for the redemption of mankind. Each instrument evokes scenes connected to the sequential story of that suffering, often shown in separate images depicting traditional stages of the Passion. A selection of such scenes is shown straightforwardly by Jan van Eyck in the ten medallions surrounding the convex mirror in the Arnolfini couple (National Gallery, London). In the Ghent altarpiece, the same scenes are only metonymically represented.

An indication regarding the status of grisailles might be found on the most peripheral top panels of the open polyptych. They contain in delicately modulated colors the nudes of Adam and Eve. However, in the lunettes at the top, each of these panels comprises a scene represented in grisaille. Reduced in size, compared to the life-size pictures of the parents, we find the pictures of their children Cain and Abel. The lunette on top of Adam shows the different outcomes for the fires of their offerings: smoke going straight up for Adam and bending down for Cain. The lunette above Eve depicts the dramatic murder committed by Cain on his brother Abel. Here, color and grisaille seem to relate in terms of antecedents and consequences (figure 5). Most important is the original sin of the parents because everything starts deteriorating from there. Their act is a basic reference point in time, the onset of a gloomy era in the history of mankind. Cain’s act, despite its cruelty compared to Eve’s sin, occurs later in time and is secondary in status. It only exemplifies the devastative consequences of the parents’ initial blunder.

The grisailles of the two Johns in the closed polyptych contain a time reference in the other direction. The person figuring as anchor is the colored figure of Joost Vijd, the sponsor of the altarpiece. Together with his wife - also represented in color – he is the initiator of the polyptych
project that, aside from its reaffirmation of the central tenets of Christianity, also commemorates his patron saints, the two Johns. Called to remembrance only, John the Baptist and John the Evangelist are represented as monochrome statues in stone. They serve only as far antecedents of the main actor, Joost (Dutch for John), who is the responsible person here.

Within the various readings that one can impose on the Ghent altarpiece, grisailles seem secondary issues related to colored main themes by a time relationship. They indicate preparatory figures or consequential events for some key elements of the central topic. Colored figures exist in a present time. Grisaille figures are reminders of elements that have been part of the story at some previous time but have dropped from time now and have become history. History is remembered by means of a medium that remains: statues in stone or sculpture in bas-relief. The colored figures are either now, such as the donors, or everlasting, such as God and the figures surrounding him. Color establishes them as anchor points in time or ultimate reference point above time. Complementary to their living presence that the spectator experiences in the confrontation with them are instructive reminders of the past evoked by grisailles. Color is for the present, gray is for the dim past.

2. Liturgical color code

As there are many colored panels interspersed with only a few grisaille ones, they do not seem to provide easy cues for a correct sequential reading through the polyptych. However, seen from a more global viewpoint than a panel by panel comparison, there is obviously one self-imposed sequence that no one can avoid to follow: from the closed to the open altarpiece. The overall impression of the closed polyptych is definitely different from the open one.

The pale yellowish sandstone color of the statues of Saint John the Baptist and of Saint John the Evangelist is not only used for the niches of the lower row of panels. It is also used as the color of the all-embracing outer garment of both the angel Gabriel and the Holy Virgin in the upper panels depicting the annunciation. Although the donators and secondary figures in the lunettes at the top are done in color and color is
equally applied in rendering the room and furniture of the annunciation scene and the spectacular city view through the window, the overall impression is predominantly monochromatic. Particularly in contrast with the coloristic splendor of the open panels, the single preponderant color for the main figures overpowers the striking colors of the secondary entities. Because of that difference the closed polyptych, while splendid in its own right, leaves a more austere impression than the florid sensation that the open altarpiece evokes. Wherefore this more restricted use of colors?

In his incisive analysis of the Jan Van Eyck dyptich that belongs to the Thyssen-Bornemisza collection, Preimesberger (1991) provides a straightforward liturgical explanation for the use of grisaille in that Annunciation and, for that matter, several other annunciations that painters have executed in grisaille on the external panels of various altarpieces (e.g. Van Eyck’s Dresden triptych but also Van der Weyden’s polyptych of The Last Judgment in Beaune). The reason is simple. As the birth of Jesus Christ is celebrated on December 25, the celebration of his conception in the womb of the Holy Virgin, which co-occurs with the annunciation, is held nine months earlier, on March 25. Thus, the celebration of the Annunciation occurs within the Lent, a period during which faithful Christians prepare for Easter by eating sparingly and toning down on desires and luxuries. Consequently, any ceremonial event, whatever joyful feat it commemorates, has to be low-keyed too to remain in line with the observation of this penitential period. Therefore, the code of conduct requires subdued colors during Lent.

Another liturgical cycle imposes another alternation between monochromy and polychromy: weekdays versus Sundays. As a rule an altarpiece with moving wings was kept closed during the common days of the week only to be opened on Sundays and days of festivities. Apparently, color is to be associated with solemn ceremony, monochromatic gray with ordinary daily business.

However, the opening and closing times of the altarpiece should not be taken to coincide entirely with the attitude of the Church toward color. Within the period that Jan Van Eyck was working, a liturgical regulation regarding color, stipulated by pope Innocentius III (1198-1216), gradually consolidated. It became the officially imposed ruling by pope Pius V (1566-1572). The rules concern the colors that are used for liturgical garb and parament. The code associates red with the Holy Spirit (fire) and
martyrdom (blood), white (pure light) with purity, joy, God and the Holy Virgin, black with mourning, violet with penitence, and green with life and hope. Realizing that the substantial period of the year that is dominated by green coincides with spring, summer and fall, a close association with astronomical seasons seems evident. On the whole however, the codes appear rather arbitrary and it is not obvious to what degree Jan Van Eyck felt compelled to adhere to it. There seems indeed a certain ambivalence in the ecclesiastical attitude toward color. Made accessible through the opening of the panels mainly on the day of the Lord and other religious feasts, color is to be associated with heavenly splendor. Washed with a dominating monochromatic tone, the absence of color in the closed panels relates them more to down-to-earth workdays. Yet color is in another sense more associated with earth than with heaven.

Consider its role in some interpretations of the annunciation. Gotlieb (1981, 135-136) assumes that the Dominican Vincent Contenson paraphrases Bernard of Clervaux when he compares the incarnation of Christ with the union of God’s light and the color of the earth contributed by the Holy Virgin: the color of flesh. “As a pure ray enters through glass and emerges incorrupt, but has acquired the color of the glass which it irradiates, likewise the Son of God, who entered the most pure womb of the Virgin, emerged pure but took on the Virgin’s color, that is, human nature and a comeliness of human form, and He garbed Himself in it.” (quoted in Gotlieb, 1981, p 136). Here, the fascination with the color of stained glass, evolving more than two centuries before Van Eyck, seems to put forward the ultimate superiority of light on color. To what degree is he a heir to that tradition?

3. Evaluating scientific color theory

There is an unquestionable hierarchy in the opinion ascribed to Saint Bernard: light is divine, color is from the earth. Is color then not superior to grisaille after all? White is sufficient to show the light and black and white offer the means to express form. What is added by color? Or is there rather something lost when color is brought in?

Though innovative ideas are around with Jan Van Eyck’s contemporary Alberti, who claims in his “De pictura” (1435) new
grounds not only for form with the concept of perspective but also for color, the dominant opinion in his time still remains quite close to the Aristotelian view. That view is based on the idea that black and white are the extremes within a wide range in which all other colors result from specific mixtures of these two. As Edgerton (1969) indicates: “All hues were transitional stages between white and black” (p 119). They were supposedly connected with such fundamental properties of matter as expressed in opposite pairs such as dry-moist, warm-cold, dense-rare. Thus associated with basic qualities of matter, colors were indeed very “earthly” and inferior to the spiritual qualities involved in incorporeal and mainly divine entities. For the painter ambitious to render the supernatural world as well as the natural one, going beyond color would seem like a sensible challenge. With science proclaiming all colors to be reducible to white and black, grisailles then look like one obvious way to try. It is not too difficult to imagine the appeal such a challenge might have had for Jan Van Eyck whose motto “Als ick kan”, freely translated from Dutch as “If I only could do it”, expresses an adventurous wish for testing out his own limits. It is almost a straightforward scientific experiment. If it is true that all colors are in the end combinations of white and black, a painting executed with only two colors should be as powerful or, maybe even more powerful, than a traditionally colored painting. One would indeed expect the essential features to come out more clearly if the more indistinctive blends that are colors, are replaced by clearly delineated blacks and whites. Grisaille could be seen as a way to overcome the flattery aspect of color and to establish unambiguously the importance and superiority of form.

Obviously, some very serious problems remain. If all colors are but mixtures of black and white, how do they relate to light and shade? On this issue that Alberti cautiously tried out some theoretical alternative. Though he claimed “I do not wish to be contradicted by the experts, who, while they follow the philosophers, assert that there are only two colors in nature, black and white, and all the others are created from mixtures of these two.” (Edgerton p 114), he chose black and white as modifiers of colors rather than as components of them. Instead of Aristotle’s seven basic colors, Alberti only introduces four, corresponding to the physical elements of nature: red from fire, blue from air, green from water and earth-color from ash. Jan Van Eyck demonstrates more affinity with Aristotle’s rainbow palette that is based on the reflection-
theory that the philosopher developed to explain that atmospheric phenomenon. According to Aristotle, the colors of the rainbow result from sunlight reflected on clouds under various angles. The rays of the sun reflected under a small angle would preserve much of their power, i.e. more white, while rays reflected under a larger angle would be more weakened and would result in less vigorous colors containing more black. The wings of the angel Gabriel in the Ghent altarpiece follow the suggested order of colors in the rainbow: red, yellow, green, and often Van Eyck keeps these colors next to each other, inserting yellow segments too to temperate the juxtaposition between red and green. It can be found back in many locations of the polyptych. But are the grisailles then the expressions of utmost sobersidedness and an austere science inspired test of the reducibility of all color to black and white?

One needs only to look a little bit more carefully to realize that it is misleading to deal with Van Eyck’s grisailles as mixtures of black and white. As so often is the case with him, behind appearances are realities that are quite different from what they look. The grisailles manifest a deceptive impression of monochromaticity but in fact they contain, within a small range, several combinations of colors. To render the sandstone statues of Saint John the Baptist and Saint John the Evangelist, various shades of yellow/ochre, brown, orange have been used. Reconstruction in pure black and white as a kind of test of a still widely accepted scientific theory was in this case apparently not the leading idea for Jan Van Eyck. But another kind of test could have been the real challenge for confronting color and grisaille: a contest with sculptors.

4. Contest between painters and sculptors

Preimesberger introduces Jan Van Eyck as the innovator who provided a creative reinterpretation of grisailles by turning them into painted sculpture. On the one hand, grisailles were already established on liturgical grounds in terms indicated above. On the other hand, Panofsky signals a growing literary debate on the competition between sculpture and painting around 1400. The invention of monochromatic painted statues constituted a brilliant move for painters, preserving their temperance while at the same time meeting higher requirements. They could claim to respect the low-keyed palette imposed by liturgical
constraints and yet demonstrate their skills in a superior rendering of volume. It shifted an up to then scholastic debate with the sculptors from the verbal to the performance domain, in a daring way going after the sculptor to confront him on his own terrain. After Van Eyck initiated them in the Ghent altarpiece, the practice of presenting grisailles in the shape of painted sculpture became widely spread in Netherlandic art (Preimesberger, p. 462).

In its initial stage, as the grisailles of the Ghent altarpiece demonstrate, the demand for monochromaticity was rather strictly observed. The ornamental arches and even the walls of the niches in which the statues of the Baptist and the Evangelist are located are all of the same material and are executed in the same color. The same material and color is equally used for the ornamental arches and niches in which the colored images of Joost Vijd and Isabella Borluut are situated. It is as if the liturgical monochromaticity is still dominant over the subtly concealed polychromaticity which later on becomes such a vigorous weapon in the contest with the sculptors. Compared to the single omnipresent sandstone material in the grisailles of the Ghent altarpiece, Preimesberger identifies in one of the later Van Eyck grisailles, the Thyssen-Boremisza diptych, four different kinds of stone (and accordingly four different colors): the white stone of the statuettes, the reflecting black stone in the back of the niche, the slightly damaged veined white stone of the frame of the niche, and the red spotted marmor of the frame (see Figure 6). Apparently, by then, Jan van Eyck had relinquished his adherence to the monochromatic austerity of liturgy in order to deploy a full-scale attack on sculpture. His strategy is cunningly effective. In the Thyssen-Boremisza annunciation, the angel Gabriel and the Holy Virgin are not represented almost life size like the Baptist and the Evangelist. The diptych depicts on two rather small wooden panels two small statuettes in stone niches. The stone from which these statuettes are made is represented with such a richness of subtle details that the imitation is totally convincing, except for one single astounding property. The fineness with which the painted statuettes would have to be made whenever executed in sculpture, is beyond the capability of even the most skilled sculptor. They look like super-real but they are too fine and too fragile to be really made. While they are perfect figures, they are impossible objects. Such provocative realism might be one of the most characteristic features of Jan Van Eyck's art: reality extrapolated beyond
itself. The shift from the grisailles of the Ghent polyptych to those of the Thyssen-Boremisza diptych seems to include stages alluded to by Alberti in his remarks on color:

Therefore, leaving other considerations aside, we must explain how the painter should use white and black. Some people express astonishment that the ancient painters Polygnotus and Timanthes used only four colours, while Aglaophon took pleasure in one alone, as if it were a mean thing for those fine painters to have chosen to use so few from among the large number of colours they thought existed, and as if these people believed it the duty of an excellent artist to employ the entire range of colours.

Indeed, I agree that a wide range and variety of colours contribute greatly to the beauty and attraction of a painting. But I would prefer learned painters to believe that the greatest art and industry are concerned with the disposition of white and black, and that all skill and care should be used in correctly placing these two. Just as the incidence of light and shade makes it apparent where surfaces become convex and concave, or how much any part slopes and turns this way or that, so the combination of white and black achieves what the Athenian painter Nicias was praised for, and what the artist must above all desire: that the things he paints should appear in maximum relief.

In painting I would praise – and learned and unlearned alike would agree with me – those faces which seem to stand out from the pictures as if they were sculpted, and I would condemn those in which no artistry is evident other than perhaps drawing. (Alberti, L.B., On Painting, (transl. Cecil Grayson), with an introduction and notes by Martin Kemp, London, Penguin, 1991, p. 82).

It looks like Van Eyck took it as a challenge to achieve "relievo" without color, only using light and shadow or white and black to render volume within a purely monochromatic picture. He achieved that goal within the grisailles of the Ghent altarpiece and thereby he already came to the level of the sculptor. To outdo the latter, he only needed to bring back in the four colors of the painters of antiquity. But could the sole purpose of the inclusion of these grisailles only have been the rivalry with his fellow artists?
5. Performative painting?

Imitating a stone sculpture in a painting and presenting other objects in the picture so cleverly that they appear like convincingly real, calls forth the impression of a definite attempt to mislead the viewer. If there is any truth in the anecdotes around Apelles, trompe l’œil techniques should have fascinated both painters and spectators since antiquity. In Jan Van Eyck’s time, perspective might have been another newly discovered or rediscovered device for achieving that apparently cherished purpose. But for Jan van Eyck, despite his mastery of such methods, just making the viewer confuse between “reality” and “representation” seems too simple a story. Why include a painted statue: a representation of a representation? The confusion Van Eyck attempts to induce in the spectator is of a more sophisticated nature than have him or her fail to differentiate a painted object from a genuine one. Maybe he is not at all aiming for any confusion! What might appear as an attempt to confuse might in fact be an attempt to explain or clarify. To understand the grisailles as components of an epistemological exposition of arguments in pictorial terms, we have to see them in the context of the other panels and in the context of the chapel for which the polyptych was designed.

The inclusion of grisaille representations of statues in stone amidst figures realistically represented in color, juxtaposes different types of representations. A person can be represented by a three dimensional volumetric statue, by a two dimensional portrait in color, by a two dimensional drawing, by a two dimensional painting of his statue, ... . There is a whole variety of pictorial techniques all of which can capture a sufficient number of perceptual features to represent univocally a person or an object. Jan Van Eyck confronts us here with the evocative power of various techniques of representation. There are many kinds of them. Some come quite close to the world we encounter in immediate experience so that we can be misled about them like in trompe l’œil. What we take for a faithful wax statue can all of a sudden, through an unexpected movement, turn out to be an actor in a mime. Others are more dissociated from that world, e.g. they might lack color, so that their status as representations that differ from what they represent is readily noticed. Sculpture in bas-relief qualifies as such a category. Van Eyck provides a rich gamut of representations that covers a wide gradation from concrete, i.e. very close to immediate experience of the world, to
abstract, i.e. linked with only a few or one single perceptual feature, to nothing but purely arbitrary features or symbols. Once we have accepted the multiplicity of representations and their gradation in which the grisaille painted statues and the color portraits are solely seen as instances drawn from a larger series of stages in a chain of representations of increasing abstraction, just a radical 180-degree turn in our direction of vision will be sufficient to come to grips with the Eyckian viewpoint.

The religious patrons supporting Van Eyck's work adhere to a doctrine that life on earth is the weak and temporary copy of a more solid eternal and divine world that encompasses it. Not the sensory world of immediate experience counts as the ultimate reality but the conceptual world of divine entities that the perceiver can reach by ascending through the various levels of increasing abstraction. Also the hallmark of Van Eyck's art, the fascination with optical reflection, should be read in this unusual direction. The earthly reality of immediate experience is the mirror image that is furthest away from the object that it reflects, remoted from it through a series of distinct stages. Tracing these reflections back from one to another, up to their ultimate source, leads up to the most solid objects of the universe: the divine entities. It seems strange to swap the mirror image and its object, thereby considering the mirror image as more real than the object seen in the mirror. The reversal becomes more plausible in cases where a portrait or a cartoon of a person is highly successful in bringing out the most typifying features and inner character. With such pictures the representation can be qualified as revealing the "real person" in a more genuine way than face-to-face contact with him or her. Various levels of representation in the Ghent altarpiece induce the viewer into such a process of gradually going after deeper essentials. Mixing realistic color portraits and grisaille pictures of statues in the polyptych is enough to invite the viewer to sort out the representations and to go beyond immediate appearances. Hyperrealistic colorful images might be comparable to deceptive face-to-face contact only capturing fluctuating and superficial features while, as a rule, statues are after more essential characteristics and come closer to revealing the "true" and "everlasting" nature of the persons they represent. A painted image of a sculpted statue over and above this illustrates that there are many kinds of representations that have on the one hand their own peculiarities but on the other hand allow also to be combined in new blends. It is this multiplicity and flexibility that incites
the viewer into pursuing a more extensive exploration beyond the first inducing steps that Jan Van Eyck discloses.

The panels of the Ghent altarpiece induce in the viewer a functional confusion, introducing him to various figures with variable reality status. Saint John the Baptist is on the closed polyptych present in the shape of a monochrome painting of his statue and in the open polyptych his portrait appears in full color. On the closed panels, he is carrying the Lamb, on the open panels he is pointing to the central divine figure. The various functions that we have explored with respect to color, form, light and shadow all apply. For Joost Vijd, who is alive at the inauguration of the polyptych and for that reason justly represented in ‘lively” color, the Baptist is only accessible as an historical figure to which a statue is most appropriate reference. At another level of reality, among the saints that have obtained everlasting life, the Baptist is very much alive and shown in full color. The open book on his knees demonstrates another level at which this story can be even more “real”, the conceptual level captured by language. When he allows viewers to see segments of handwriting, Jan Van Eyck rarely allows them more than a few fragments so that also for text ambiguity prevails and reference to other levels is preserved.

The dual view arrangement that the polyptych permits is in a sense representative for the epistemology it embodies. When it is closed, the Ghent altarpiece presents the viewers with their alive fellow citizens Joost Vijd and his spouse, commemorating the patron saints that link them to the holy story. Through that story they know that earthly life and trouble is not all there is to human destiny. Through the annunciation, God himself has come into this earthly world to open up again access to another world that was lost and from which ancestors were expelled. When the wings of the polyptych unfold, that other world is revealed: God with the most celebrated beatified figures around him and all of mankind on his way to Him, thanks to the offer of the Lamb. The closed polyptych is earthly reality, the open polyptych is heavenly reality. As indicated above, we can read it as a sequential story: after life on earth, continued life in heaven is awaiting. But that sequence applies only to individual access. In terms of ontology, both worlds are real. For mortals, the heavenly reality might temporarily only be known through revelation and belief, but that restricted recognizability undermines in no way the solidity of that heavenly world. It is there. It has always been. As a symbol for earthly life, the polyptych should remain closed. We see
our fellow men like Joost Vijd and Isabella Borluut, we see commemorations of God’s interfering with life on earth (the two Johns of the grisailles) and we learn from the followers of those saints about his presence. From their teachings, we know what is to be expected on the open panels, but we cannot yet see that and we will only see when given access to heavenly life. With the panels of the open polyptych Jan Van Eyck opens up the view on the ultimate reality underneath the earthly reality that is currently blindfolding us.

To understand how earthly reality could cover the eyes and hinder from seeing a more basic reality behind it, a common sense example of cosmic observation could be instructive. Folk wisdom would see it as self-evident that the most authentic view on reality is the one we have accessible in full daylight. Looking through the window, we see the houses, the road, the trees, the green grass, etc. That is indubitable solid reality. Who would ever dare to question the blue sky enwrapping all this? Well, on a clear night, we see much farther than during the day. In the darkness of the evening, we might no longer see the house, the trees and the grass but watching the stars, we do see light-years far into the cosmos. Night and day thus open up two different worlds for us and paradoxically, in the dark we see much farther. The clear blue sky that is the product of scattering of sunlight in the molecules of the air (Minnaert, 1954, p 239) is indeed a blindfold that closes off much of our sight of the wider universe and confines us to very local concerns. It is a segmentation that would suit the polyptych. The closed position confines us to the situation where we easily take the overwhelming daylight as offering us the most reliable view on reality while the true big world behind the blue sky remains hidden, except for the sun. The open polyptych has us see through those colloquial concerns and allows us to focus on the genuine cosmic issues.

The misleading aspect of our example on ranges of vision is that we only distinguish between two. As we have indicated, Jan Van Eyck apparently assumes that there are more layers of that kind and his mixture of various types of representations, including portraits in color, statues and bas reliefs in grisaille, etc. educes that multiplicity. In his aspiration to preserve a seamless fusion between optics and theology he cultivates his favorite optical process, reflection, as a principle for moving between layers of reality. A major mechanism for having the viewer follow through on the light is to have the light of his space penetrate into the
painting, inducing him to trace it further down within the painting as well. The lighting within the Ghent altarpiece is a very consistent continuation of the lighting within the Vijds-chapel, the location for which the polyptych was conceived. Only in the annunciation scene the natural light of the chapel that illuminates the room with Gabriel and the Holy Virgin meets with light coming from the opposite direction: the divine light of the Incarnation. However, it looks as if Jan Van Eyck is after a more active involvement of his viewer.

Philippot (1966) interpreted the bringing together of donators and saints (the Vijds and the two saints John) in one picture as another way of breaking up the boundary between the reality of the viewer and the depicted reality. Compared to its Italian pendant, Masaccio's Trinity fresco, where portraits of the donators situate them outside the depicted chapel with divine persons and saints, the donators of Van Eyck's polyptych have indeed entered the picture. Is this the expression of a more active involvement of the viewers?

Recently, Yvonne Yiu (2001) has indicated how within several religious paintings of Jan Van Eyck, a definite place has been assigned to the viewer. She focuses in particular on the "Arnolfini double portrait" of the National Gallery in London where the so-called self-portrait of Jan Van Eyck accompanied by a friend is supposedly present as an image reflected in the depicted convex mirror right in the middle. But the figures in the mirror are indeed so unspecified that they could count for any two spectators standing in front of the couple. A similarly reflected image of the viewer might be hidden in a more subtle way on the shield of Saint George in the panel of "The Virgin with Canon Van der Paele" from the collection in Bruges. In the Van Eyck panel preserved in the Louvre, "The Virgin with Chancellor Rolin", two spectators are integrated within the picture, again quite in the center. However, concealed in the arrangement of tiles is also the suggestion of a path for the viewer of the panel to join the depicted spectators by stepping into the picture. Apparently, the painter not only wants to dissolve the boundary between the viewer's space and the depicted space in order to make the depicted space as real as the viewer's. Are these pictures a sort of performative paintings that go beyond depicting or descriptive purposes in making a viewer do something? Is there some subtle pressure on viewers that tempts them to step into the picture in the way Alice in Wonderland enters into the looking glass? Would Van Eyck expect the
viewers of the Ghent altarpiece to mentally move toward the painting to penetrate reality at various depths seeing inviting worlds underneath transient earthly reality?

The capacity of the polyptych to make the viewer enter the painting and have him or her join along a visual path that finally sees through the whole collection of panels is probably best expressed in the central panel of the open polyptych. Technical analysis has revealed that originally, Jan Van Eyck might have intended a less busy central panel. Reflectography by Van Asperen de Boer has disclosed that the regular underdrawing that can be found underneath most objects and figures is not present for the fountain which is right in the middle under the altar. Furthermore, below the layers of paint that depict that fountain, one detects grass and foliage similar to the surroundings of the fountain and the altar. These findings strongly suggest that the fountain was probably a late addition that did not belong to the original design. Once that possibility accepted, it makes sense to entertain the hypothesis that the space in the middle, between the two large frontal groups, has been initially conceived as empty (see figure 7). Would it signify some Eyckian pragmatics, equivalent to a Gricean maxim where a statement is meant to evoke some action? The mixing up of types and levels of representation induces the viewer’s involvement when confronted with the closed polyptych. Had Jan Van Eyck already provided a space for the viewer in the Ghent altarpiece too? Was the inviting open area in the middle of the open polyptych meant to allow the viewer to step in to join the crowds assembling around the Lamb and to penetrate deeper into the multilayered world?

6. Conclusion

Jan Van Eyck can be found to adhere only partly to various color codes. In the Ghent altarpiece the alternation between monochrome and polychrome appears to follow a liturgical convention but at the same time it concurs with “natural” uses of specific attributes that use color for contemporary persons and grisaille for commemorated ones. While respecting such codes Van Eyck assimilates them at the same time in an entirely different project: a contest between painters and sculptors. The multiple functionality of attributes dilutes the power of specific codes and opens up possibilities for flexible alternative representation systems. It is
characteristic for Van Eyck to cultivate ambiguity through the use of polyvalent attributes, not to confuse the viewer, but to induce him into further active exploration of a multilayered reality that starts in the viewers space and extends through various layers of the painting.

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REFERENCES

FIGURE 1: Descartes’ eye
FIGURE 2A: The Ghent Altarpiece closed
FIGURE 2B: The Ghent Altarpiece open
FIGURE 3: The two grisailles
FIGURE 4: Detail altar with the instruments of the Passion
FIGURE 5: Panels of Adam and Eve, upper parts
FIGURE 6: The grisailles of the Thyssen-Bornemiza dyptych suggest statuettes of such a delicate nature that, as Preimesberger indicates, it would be almost impossible for a sculptor to chisel them. In addition, through the mirroring effect on the back wall of the niche, Van Eyck can add his favorite optical features.
FIGURE 7: Modified central panel without fountain