

Papers Presented at Conferences Sponsored by the Association of Core Text Curriculumms (ACTC)

- 1.) “Michelangelo and the Copernicun Revolution.” 2-8
Eileen Buchanan, April, 2006
- 2.) “The Buddha: A Second Life in Art.” 9-14
Ron Kidd, April, 2006
- 3.) “Figuring Out Space with Einstein and Picasso: *Les Demoiselles D’Avignon* and the Special Theory of Relativity.” 15-20
Stuart Patterson, April, 2006
- 4.) “Getting Perspective into a Core Curriculum: Alberti and *The Last Supper*.” 21-24
Harold Stone, April, 2006
- 5.) “Teaching Scientists to See: A possible Bridge between C.P. Snow’s Two Cultures.” 25-32
Jim Donovan, September, 2006
- 6.) “Learning about Life’s Journey through the Visual Arts.” 33-38
Barbara Stone, March, 2007

Michelangelo and the Copernican Revolution

Eileen Buchanan, Shimer College

Paper Delivered at the

Twelfth Annual Conference of the Association for Core Texts and Courses (ACTC)

April, 2006

In reality, this paper is about neither Michelangelo nor the Copernican Revolution. It is, in fact, about the challenges inherent in building a truly integrative core curriculum. My test case is Shimer College's senior seminar—a two-semester, 15-credit course. About 30 years ago, we combined three courses concentrating on history and philosophy and conflated them, with a good deal of literature, into a unit which we named "Integrative Studies." During its early years, some of us recognized that we could not support such a course if it didn't include science. Our students arrive at this course with four semesters of science behind them, roughly divided between the history of scientific thought, chemistry, biology, and physics. Thus, when we contemplated absorbing science into the senior seminar, we chose cosmology as the appropriate vehicle. Since the course is arranged (roughly) chronologically, we incorporated Aristotle's *"On the Heavens"* and parts of Ptolemy's *Almagest* into the first semester and Copernicus, Kepler, and Galileo into the second. This proved a fruitful choice. Students have consistently reacted enthusiastically to the notion that the way in which human beings organize their thoughts about cosmology affects the literature and philosophy they produce. Most exciting has been the movement from Dante to Milton: as we read Dante, we look at the way in which Ptolemaic notions of cosmology absolutely govern the universe he presents, showing us a stable earth in the

center of concentric spheres allowing hell to take central focus in the middle of the earth where an immobile Satan, mindless and angry, pulls unwary human beings toward sin. Three hundred and fifty years later, a little more than a century after Copernicus published *De Revolutionibus*, Milton's great epic places hell at the other end of chaos from the earth and frees Satan to fly through chaos in search of his enemies. Milton references Galileo at least five times in the epic, even having the angel Raphael mistake Satan for a sun spot. Historically, we know that in his early twenties, Milton made a pilgrimage to Florence to meet the aged, blind, Galileo. My students this year were particularly aware of how impossible Milton's world would have been before Copernicus.

Which brings me to Michelangelo. When we applied for the grant, "Great Books, Great Art," we did so with the understanding that we had never truly integrated the visual arts into our text-centered core curriculum. Our early Humanities course divides a single semester into an introduction to art and music. Art is taken up again in the final Humanities course when we look at it more theoretically using articles by Foucault, Lacan, Heidegger and others to consider what a work of art might ask from its viewer. In our senior seminar, however, while recognizing the importance of art within culture, we have never been comfortable with how to help students think about it and consider its relationship to other cultural phenomena. We began to address this with the discovery of Michael Baxandall's *Painting & Experience in Fifteenth-Century Italy*, which addresses economic and social issues surrounding Renaissance art. But we were still in search of exemplars, studies of individual paintings which would both expose our students to careful study of a few pieces of Renaissance art and help them to place these works in context with the literature, philosophy, and science which they had been reading.

Enter Michelangelo's "Last Judgment." One of my colleagues brought to my attention a 1990 article in the *Sixteenth Century Journal* entitled "Sun-Symbolism and Cosmology in Michelangelo's Last Judgment." The author, Valerie Shrimplin-Evangelidis, argues that evidence from the painting itself and from the period in which it was produced combine to suggest that not only was Michelangelo aware of the Copernican theory but that his work was inspired by the notion of a sun-centered universe in which Christ appears as an Apollo figure. (Incidentally, I highly recommend this article—I can do no more here than call attention to the careful scholarship amassed to support her argument.) Her idea intrigued my class and led first to an examination of the painting itself.

The central figure of Christ first engaged us. From Baxandall, we had learned of the tradition of representation surrounding Christ. Fifteenth-century artists believed they had an eyewitness to his appearance (since proven to be a forgery). This description promoted the view of Christ as dark-haired and bearded, his hair parted in the middle ("in the Nazarene manner") and hanging straight to his shoulders when it then curled. Another fascinating source quoted by Baxandall, a Dominican named Gabriel Barletta, remarks that we have three reasons to believe that Christ was dark: "firstly by reason of complexion, since Jews tend to be dark . . . second, by reason of witness, since St. Luke made three pictures of (Mary) . . . and these are brown-complexioned; thirdly, by reason of affinity. A son commonly takes after his mother and . . . Christ was dark." This olive-skinned, dark-haired Christ is essentially what we see in most Renaissance art: Leonardo, for instance, comes to mind. But this is not the Christ figure of "The Last Judgment." Here Christ is muscular, blond and beardless. As Shrimpton-Evangelidis points out, this is Christ as an

Apollo figure, an early Christian and Neo-Platonic notion specifically resurrected by Michelangelo for his “Last Judgment.”

Looking at the painting, my students next observed the space surrounding the Christ figure. They noted the empty space immediately around him, and the clouds which provide an active but essentially empty space, thereby giving a sense of motion to the figures swirling about him. Translated into cosmological terms, this is the sun-centered universe, the still point in a turning world. As did Shrimpton-Evangelidis, we turned to Copernicus’s description of his universe:

IN THE MIDST OF ALL, assuredly dwells the Sun. For in this most beautiful temple, who would place this luminary in any other position from which he can illuminate the whole world at once. Indeed, some rightly call Him the Light of the World, others, the Mind or the ruler of the Universe . . . So indeed, the Sun remains, as if in his kingly dominion, governing the family of Heavenly bodies which circles around him

As Shrimpton-Evangelidis remarks, these lines “could be construed as descriptive of Michelangelo’s Last Judgment . . .” Of course, this observation proves nothing about any substantial connection between the artist and the astronomer: all it suggests is that both were influenced by the active voices of Neoplatonism in the early sixteenth century and that Michelangelo might have been open to the notion of a sun-centered universe had he heard of it.

So our class next tackled the question of the availability of Copernicus to the painter. At first glance, it would seem just, tauntingly, outside the realm of possibility—Copernicus published *De Revolutionibus* in 1543 whereas Michelangelo unveiled his “Last Judgment” seven years earlier. But, as Shrimpton-Evangelidis remarks, the astronomer and the painter were “virtually contemporaneous” and “moved in very similar circles of learning in Italy in the late fifteenth and early sixteenth centuries.” Even more telling, Thomas Kuhn tells us

that “some years before the publication of *De Revolutionibus*, Copernicus had circulated ...a short manuscript called the *Commentariolus*, describing an earlier version of his sun-centered astronomy.” Shrimptin-Evangelidis offers evidence that Pope Clement VII had requested a university scientist to explain the Copernican theory to him just weeks before he met with Michelangelo to design the painting for the west wall of the Sistine Chapel. Clement VII had been boyhood friends with Michelangelo, so their meeting in all probability was not merely a formal request from a Pope to an artist, but a meeting of minds as well. How much in-put would Clement have had concerning the subject matter for the chapel? Baxandall, discussing contracts between painters and their patrons, shows a good deal of variance in this matter: patrons were always involved in dictating the exact dimensions of the painting and the amounts of expensive coloring or gold leaf involved; they commonly paid extra to have their own portraits inserted into the painting or to have landscape painted into the background; they sometimes went so far as to dictate the exact number and identity of the figures. Often they specified that they had to approve the cartoon of the painting before the actual painting could start. In contracting for the painting of a papal chapel, it seems obvious that the contract would at least specify subject matter. And since Michelangelo did sketch his plan for the “Last Judgment” and preserve the sketch, it seems likely that the arrangement of the subject matter as well as the subject itself was part of the contractual agreement.

Looking backwards, we inquired into influences which, both for Copernicus and for Michelangelo might have made this notion of a sun-centered universe attractive. As Kuhn points out, Copernicus did not have any new information with which to construct his innovation—unlike Galileo who, a century later, looked through his telescope and saw the

evidence. What Copernicus did have was an unwieldy Ptolemaic system, encrusted with equants, epicycles, and eccentrics added to explain the motions of the planets. His first impetus, then, was as much aesthetic as it was scientific:

. . .it is as though an artist were to gather the hands, feet, head and other members for his images from diverse models, each part excellently drawn, but not related to a single body, and since they in no way match each other, the result would be monster rather than man.

He also had predecessors, both ancient like Democritus and more recent like the fifteenth-century Cardinal, Nicholas of Cusa, whose influential treatise must have reached the young Copernicus. My students had read Cusa and were struck by his assumption of an infinite universe in which “all things are at the center” simultaneously. While not related to a sun-centered universe, Cusa’s work served to drive a religious and philosophical wedge into the solidly held idea of the earth-centered universe. Kuhn adds the fourteenth-century scholar Oresme to the list of intellectual forefathers to Copernicus. Shrimptin-Evangelidis adds Buridian, and Cusanus to this list. In other words, the late Renaissance had been prepared for the heliocentric universe by philosophers before the astronomer began his work.

On the whole, the seniors in my course were inclined to accept Shrimptin-Evangelidis’s theory of direct influence by Copernicus upon Michelangelo’s conception of “The Last Judgment.” It is attractive to think of the great astronomer writing for other professionals, of one of these professionals being called upon to explain the theory to Clement, of the meeting with Michelangelo (shortly afterwards) in which Clement discusses the contractual details of the “Last Judgment.” But whether or not we accepted her theory, our purposes in putting both this particular painting and Shrimptin-Evangelidis’s theory into the course were well served. Instead of presenting a slide-show

of “Renaissance Art” somewhere between Dante and Milton, we were able to hone in on one exceptional work and, through looking at it carefully, were able to examine contextual issues. Art was no longer something that simply happened on a more or less parallel track to what we saw happening in literature and cosmology. All three came together to form a picture of the fifteenth and sixteenth centuries as a time rich in cross-references between disciplines which, today, we separate from one another.

In designing this ambitious integrative course, I would hope to find one or two other such exemplars—enough to suggest that Michelangelo was not alone, as an artist, affected by the same currents of thought that clearly helped to produce the Copernican revolution, the growth of Protestantism and Milton’s great Protestant epic. Many parts of our core courses are “fixed”: Our senior seminar always includes specified works by Plato, Aristotle, Aeschylus, Virgil, Augustine, Dante, Aquinas, Copernicus, Kepler, Shakespeare, Milton and others. But there are places where we make choices based on the preferences of the instructor in any given year. These are the spaces into which we can fit some of what we are learning in our seminars on “Great Books, Great Art.” And when we’ve accomplished that, we can turn to music.

The Buddha: A Second Life in Art

Ronald R. Kidd, Shimer College

Paper Delivered at the

Twelfth Annual Conference of the Association for Core Texts and Courses (ACTC)

April, 2006

Stirred on by the flurry of activity consequent to our NEH grant and inspired by Jim Elkins' discussions with us last summer at the School of the Art Institute, I built a short unit on Buddhist art into an elective I was already scheduled to present in the fall of 2005 on the "Life of the Buddha."

First, a word about the course: We discussed, as our primary text, *The Life of the Buddha*, an anthology of texts drawn from many sources in the extensive Pali Canon, the early Buddhist scriptures composed around the first century BCE. The anthology was assembled, translated, and edited by Bhikkhu Nanamoli and originally published in 1972 by the Buddhist Publication Society, Kandy, Sri Lanka, and republished by PBS Pariyatti Editions, Seattle, 2001. After the first few readings, we alternated these texts with two other early writings, the *Sutra Nipata* (translated by H. Saddatissa, Curzon Press, Richmond, Surrey, 1994), and Thanissaro Bhikku's poetic rendering of the *Dhammapada* (Dhamma Dana Publications, Barre, Massachusetts, 1998).

Our foray into art history was intended to *extend* the material of the course, not illustrate it. We assembled images which set out in effect a life of the Buddha after his death—a second biography, if you will, in images. In order to present a fair selection of materials within the time constraints—three classes, an hour and twenty minutes each, at the end of the course—we limited our exploration to earlier Buddhist art in India, Southeast Asia, and China, omitting notably, Japan and Tibet. I first of all attempted to

select the most famous and influential images, and second of all the more striking ones, moreover including a few contemporary images.

The underlying idea was to study developing understandings of who the Buddha was and is as he was portrayed whilst familiar iconography moved from culture to culture and century to century: How do these portraits complement, modify, differ from one another, and help to develop the *word portraits* we had been studying? Is the Buddha of Thailand recognizably the same figure conveying the same message to the world as the Buddhas of the great stone caves of India? Were there lines of “theological” development? Were there new understandings and acculturations of significance at work?

We chose to concentrate on sculpture, due to the clarity of forms and the lasting qualities of stone, despite damage - heads lobbed off - during the Cultural Revolution in China and the gigantic carvings being dynamited during the reign of the Taliban in Afghanistan. We did, however, also include stupas, pilgrimage places thought to preserve and honor his relics, which serve as places of the presence of the Buddha in his absence. We also looked at the few remaining paintings from ancient India, adorning shrines themselves carved into the walls of caves.

Finally, I chose to work with a large number of images. There were several reasons: 1.) my inexperience. I did not trust my judgment in settling on only a handful of exemplars to represent whole developments in art and thought. 2.) I was unsure of the quality and *presence* of our computerized reproductions (quantity might at least suggest a richness that a more edited selection could never convey, as we were looking at flat reproductions of sculpture and architecture). 3.) This was new ground for the students: if we were to explore *meaning* and its development across centuries and cultures in artistic

expressions, which were fundamentally unfamiliar, then a fair number of images, I thought, would tell the story better than only a few selections.

This work of selecting and scanning turned out to be a great deal more than I anticipated. I chose more than 60 images from India and about 50 each for Southeast Asia and China. These were scanned into the Shimer College Intranet and fitted with a coded user name and password so as to restrict access to students in the class. Luckily, one of the students was proficient in such things and agreed to do the scanning and page layout in lieu of his final paper. I prepared a hard-copy “guide,” providing, in effect, captions for the computerized images. We also read pertinent chapters of Robert E Fisher’s *Buddhist Art and Architecture* (Thames and Hudson, 1993) for background and to give us a start on looking at illustrations, although most of his were black and white. My guide related the computer-stored images to Fisher’s book. I used approximately one dozen illustrated text and art books from my own library.

The materials, text and images, were then assigned. For class discussion, students brought lap-tops, and we gathered around them. Our discussions focused on the images and not the Fisher text. One student was especially helpful in recalling to the rest of us passages in the text that helped illuminate the images on our screens. Although the material needed more editing - at times my notes were confusing and occasionally images popped up out of place - it seemed like we were ready to open up this “second life” of the Buddha.

To our dismay, we found the images hard to discuss. Fisher did provide some useful topography, both artistic and historical. We noticed details like the drapery of the robes, expressions on the face, and common elements of iconography (hand mudras, for

instance). “Like Hum 1,” a student commented, referring to Shimer’s first semester introduction to fine art. What we found impossible, both in investigation and subsequent discussion, was to capture that “second biography” and be able to talk about it. We saw the *differences* in the myriad images—that much was clear. But was there indeed a developing *understanding* of the meaning of the Buddha across time and space?

The differences we saw were related to materials, traditions of craftsmanship, and cultural translations (e.g. the way “greatness” or “serenity” was portrayed). One student commented that we seemed unable to rise to a higher degree of abstraction, moving from what the images showed to what they conveyed. I found this hard to do, too. I wonder if this *aporia*, this stalemate, was not actually *revealing*. By this I mean that perhaps successive artistic movements and minor changes in portrayal reflected not “theology” but changes in aesthetic traditions and understandings. We were looking for new chapters in the life of the Buddha; what we found were (appropriately?) chapters in local art history.

I nevertheless remain fascinated by the original project and have to wonder if, first, fewer, better chosen images might have better focused our attention, and second, if we had had more knowledge of the artistic traditions and movements before us, would it have been easier to read the “meaning” of the developments we saw clearly paraded on the screen? I am also aware that a more purposeful selection of images could have engineered a particular view of what the development of meaning might be. I have to say, too, that perhaps I am too accustomed to finding “meaning” through *words*. When the text changes to images, why shouldn’t the type of meaning change along with it?

Student reaction to the project was generally positive. I suspect the unit provided a happy change of pace in the semester's dying days! I asked for written evaluations. Commonly, the students said they had "learned a lot" and gained new insight into the way the Buddha was rendered in art. Responding to a question about the large number of images, the students felt it facilitated discussion and did not obscure their focus by flooding the field. One student, however, took a dissenting position: "Poetry, sculpture, and art have an important place, but they don't seem conducive towards open dialogue. It has been mentioned that the role of these things is primarily propaganda/intuitive insight. The basis of these things is individual experience. Arguing for or against an issue presented in a poetic or artistic way is pointless." Personal opinion may have been at work here, however, as the same student ends his comment by saying that this experiment convinced him all the more that "organized religion is a tool to pacify and repress the illiterate masses."

I would like to express a frustration I felt as the project continued. Flat images of sculpture and architecture present, of course, only a single perspective. Were those hands really oversized? And if so, was that trying to say something about the importance of gesture? Or was it all due to the angle of the photo, looking up at the gigantic statue from below? Multiple images of the same piece from different angles helped a great deal, reproducing the effect of walking around the sculpture. But it was still very difficult to gauge the *size* of an object, even if inches or centimeters were given, unless, in the photo, a person stood alongside providing scale. The miniature and the gigantic were both reduced to a few square inches on the computer screen, thus inescapably altering their *presence*, their impact on us.

I will certainly try to do something like this again. I would, however, prefer tours to art galleries or museums, live demonstrations (e.g. of *sumie*), and perhaps even photocopying a few pieces on oversize sheets of paper. I very much enjoyed this project, even if it did consume two weekends and I don't know how many evenings for my student helper and myself. It certainly clarified for me part of that onward march of Buddhist art through time and geography, if only to straighten out in my mind that Kushan was a *period* of Indian art history, for instance, while Mathura is a *place*, not a period, and that the paintings in the Ajanta Caves are the earliest extant painting in India.

Figuring Space Out with Einstein and Picasso: *Les Demoiselles D'Avignon* and the Special Theory of Relativity

Stuart Patterson, Shimer College

Paper Delivered at the

Twelfth Annual Conference of the Association for Core Texts and Courses (ACTC)

April, 2006

Not long into their evening together at a Montmartre cabaret in late 1904, Pablo Picasso asks Albert Einstein “So you’re not just describing the world as it is?” Einstein replies “No! We are creating a new way of looking at the world!” They cry “Brother!” together and fall into each other’s arms. Unfortunately, the bonhomie does not last; they part awhile later, both at a loss as to the meaning of their encounter.

Thus the comedian Steve Martin’s account – in his play “Picasso at the Lapin Agile” - of a meeting of two of the twentieth century’s three greatest minds (the third is Elvis, who shows up in the last scene). Einstein is poised to invent Special Relativity and Picasso is flirting with Cubism. And apocryphal as it is, Martin’s dramatic fancy about the two icons’ fitful encounter needn’t be dismissed as an idle premise for an extended joke; periodic scholarly attempts to somehow reconcile Cubism and Relativity Theory can themselves run into the same kind of fond but inconclusive reverie. Most recently, historian of science Arthur I. Miller, looking for the common cultural currents that sparked Einstein’s invention of Special Relativity in 1905 and Picasso’s proto-cubist masterpiece *Les Demoiselles D'Avignon* in 1907, imagines the two enjoying a drink or two together somewhere between Paris and Bern, given their “parallel biographies.” Yet as for whether both – or either – were really trying to “describe the world as it is” or

“creating new ways of looking at it,” in Martin’s terms, is a much more vexed question. If Miller has had the latest word – briefly, that both men were highly visual thinkers and indebted to mathematician Henri Poincare’s questioning of absolute space and time - his is sure not to be the last on this matter, as his reviewers have already ensured.

So far are leading scholars from agreeing on the relationship between Cubism and Relativity Theory that one might question how much headway uninitiated undergraduates would be able to make of an unmediated encounter between Picasso’s and Einstein’s early masterpieces. Still, in good Great Books fashion, - that is, somewhat provisionally, without the benefit (or encumbrance, perhaps) of scholarly accounts of their common cultural contexts – I decided to test the question by presenting Picasso’s *Les Femmes d’Alger (O.J.)* to a session of Shimer College’s Natural Sciences 3 core course on the historical development of optics, at the end of a section on Special and General Relativity. As it happens, the most productive result of this experiment so far has in fact been the occasion of my presentation to you to formulate the following rationale for trying it again. In doing so, I want to illuminate some of the complex questions involved in such juxtapositions of compellingly resonant works of art and science that I will use as rules of thumb in designing such experiments in the future.

As it turns out, while Picasso and Einstein never met, we nonetheless have the benefit of the latter’s views on the relationship between Cubism and Relativity. In short, Einstein held that Cubism, “This new artistic “language,”” as he called it, “has nothing in common with the Theory of Relativity.” Einstein offered this verdict in a letter to the art historian Paul Laporte, who had suggested a number of correlations between cubist and relativistic investigations of “the nature of space” in a 1949 article on “Cubism and

Science.” Laporte himself had argued that Cubism was essentially a search for “new objective categories of representation” that could depict “kinesthetic experiences” as a manifold of perspectively disjunct aspects of a single spatial reality. The resulting departure from conventional perspectival renderings of space from a single, fixed point of view, Laporte maintained, involved artists in an exploration of a time-space continuum analogous to that opened up by Minkowski in his mathematical formalization of the four-dimensional Relativistic world. Likewise, the non-Euclidean geometry that under-girded this new scientific space had its counterpart in the new geometries the cubists devised to compose their non-perspectival pictures.

Yet despite such seemingly compelling correlations, Einstein maintained to Laporte that, at most, science and art in general could only be compared on the basis of their analogous efforts to create wholes of “distinctness and clarity” out of parts which by themselves remained indistinct. For the scientist, Einstein argued, the mode is a kind of practical logic, whereas artists deal in unconscious re-orderings of “traditional modes of connection.” But there the possible analogy between Cubism and Relativity Theory ended for Einstein. For him, his own theory – far from disturbing our ability to represent the world from a single perspective – had saved the scientific convention of using a single coordinate system for the expression of general natural laws, albeit by rendering each such coordinate system relative to all others. In any event, Einstein concluded that “This is quite different in the case of Picasso’s paintings.”

Laporte decided to publish his article on Cubism and Relativity anyway, though appended later a set of considerations in response to Einstein’s objections, which I want to offer as an endorsement for my own class on Einstein and Picasso, and more generally,

for the project of reading works of art and science together. For Laporte, Einstein's response to his article raises above all the question whether scientific theories like Relativity are (or at best should be) the exclusive province of trained specialists, or whether there is any merit in popularizing them even at the cost of cutting theoretical corners. Laporte wonders, in short, whether "there is only a choice between a correct understanding or no understanding at all." His response is that both scientific and artistic works are at least susceptible, and indeed seem to demand, translation into what he calls a "word picture," that is, "a bridge between what I know and what I don't know . . . like pointing a finger to what I don't know but may know." And Laporte's own word pictures of Cubism and Relativity seemed to converge in compelling ways, each illuminating aspects of the other that were otherwise only poorly outlined in themselves. Laporte maintains that the value of such experiences outweighs the possibility that his understanding of either art or science is at best an imperfect approximation of their creator's meanings.

Such are the arguments that I think underwrite Shimer's "Great Books, Great Art" initiative, and to an extent, any Great Books-type curriculum. For our respective – and collective – word pictures of any of the works under consideration in class – scientific, artistic, or otherwise – are typically just rapid sketches, given the limited time we have a given work under consideration. Still, the approximate understandings we thus produce often enough adumbrate vistas beguiling enough to at least invite further delineation. The discipline involves training our optical and mental vision to produce our own intelligible and coherent drafts of worlds which the works themselves simply present in richer coloring and more finely drawn forms.

Still, given this understanding of our aims, I am constrained to draw some cautionary lessons from my experiment in bringing Picasso's *Les Femmes d'Alger* into class at the tail end of a week spent daubing tentatively at renderings of Einstein's own popularization of his theories of Special and General Relativity. On their own, Einstein and Picasso offered exemplary materials for discussion; the former's account of Relativity is replete with versions of the thought experiments that led to the theory itself, and the latter's painting still makes frank and compelling aesthetic and even ethical demands, with its discomfiting ensemble of masked and distorted female figures. Both works entail radical revisions of common-sense space and time, offering elaborate alternatives to received understandings of how our world is itself constructed. Yet as our classroom experience suggested to me, if each has this virtue separately, it does not necessarily follow that they will immediately illuminate them in each other. As it happened, so caught up had we been in developing the vocabulary necessary to render Einstein intelligible that the Picasso basically drew stares, with students apparently thrust into a stage of immediate, pre-verbal apprehension that did not allow for us to begin surmising about the painting's motives in any way as articulately as we had with the time allowed us for Einstein's work. At best, the little we could make of the Picasso in the context of the Einstein seems to me promising at least in that it suggests that the two are indeed embarked on similar projects, but to quite varied ends, as Einstein himself seems to have suggested. And indeed, I would myself have been disheartened ultimately if the students had risen to the occasion of being presented with the Picasso only to have eloquently illustrated how it was Relativity rendered in oil on canvas. In this light, I am happy to conjecture that the blank that Picasso drew in class suggests that he was in fact

holding his own against Einstein. Still, I would hope for more next time, and intend toward that end to introduce the painting on a more equal footing, perhaps even outside the context of the Natural Sciences sequence, though to the end that it may be referred to there as well, insofar as our common core allows this sort of thing.

Let me close then with a suggestion, that in opening the paper with Steve Martin's apocryphal encounter between Einstein and Picasso, it will be enough for my purposes to suggest more strongly that the two must have something to do with each other – i.e. they demand to meet, being as they are, contemporaries, and so far in advance of their own age – though, as our historians are still trying to work out – so why not try to assist them? – what exactly they have to do with each other remains for us at least in part to decide.

Works Cited:

Laporte, Paul M. "Cubism and Science." *The Journal of Aesthetics and Art Criticism*, Vol. 7, No. 3 (Mar., 1949): 243-256.

_____. "Cubism and Relativity with a Letter of Albert Einstein." *Leonardo*, Vol. 21, No. 3 (1988): 313-315.

Martin, Steve. *Picasso at the Lapin Agile and Other Plays*. New York: Grove Press. 1996.

Miller, Arthur I. *Einstein, Picasso: Space, Time, and the Beauty that Causes Havoc*. New York: Basic Books. 2001.

Getting Perspective into a Core Curriculum: Alberti and *The Last Supper*

Harold Stone, Shimer College

Paper Delivered at the

Twelfth Annual Conference of the Association for Core Texts and Courses (ACTC)

April, 2006

At Shimer College all undergraduates are required to take a one-semester course that introduces students to a thoughtful, critical and to some extent, academic study of the fine arts and music. This course is modeled on the old Humanities 1 course of the Hutchins Core Program of the University of Chicago. The titles of the two signature books of the course, *Learning to Look* by Joshua Taylor and *Learning to Listen* by Grovesner Cooper convey something of its general spirit. The primary aim of the course is not to introduce students to the ways in which art and music are studied in an Art, Art History or Music Department. It is our general expectation that students will acquire an ease in discussing the expressive content of the fine arts and music. From this rather slender foundation, we hope that students will be able to apply some of what they have learned here when they encounter art and music in other courses and as they experience more of the world.

Humanities 1, for many years, had somehow been fulfilling its purpose. The reception of a grant from the National Endowment for the Humanities (NEH) to evaluate the role of visual images in our curriculum has allowed us to rethink the ways we had been teaching this course. Last summer we had the first of our grant funded faculty seminars: it was with Professor James Elkins of the Art Institute of Chicago. I will not go into detail concerning what we did, but will focus on its effects on our thinking about our Humanities 1 course. We had two delightful weeks working with him, and among the

things we did was to discuss the curriculum of this course. In the past, we used the Taylor book already mentioned, and a book by Rudolf Arnheim, *Art and Visual Perception*, that approached the fine arts using the methodology of Gestalt psychology. Much class time was spent discussing images selected by the instructor. The major work of the student was to select an image from the Art Institute of Chicago, bring a copy of the image to class, and lead a discussion on it for 15 to 20 minutes.

The theme of our NEH grant is the same title as this panel session, “Great Art, Great Books.” Our Core Curriculum has a clear preference for primary texts, and especially for great works. One problem we faced, as Professor Elkins pointed out, was that while identifying works of great art is fairly straightforward, pairing a great work of art with contemporary (or older) art history criticism would be different than the way we approach almost anything else in our curriculum. Our aim is for students to read, discuss, and evaluate the texts themselves. On an entirely different matter, in the Elkins seminar we spent some time drawing or rather copying drawings, attempting to reproduce on paper the lines and marks made by an artist. To accomplish this meant that one had to begin by rethinking how the original strokes had been made, and attempt to recreate the motions of hand and pencil. Many of us found that this required a different kind of concentration than we usually do and, as if we were exercising unused and forgotten muscles, left many of us mentally exhausted at the end of an hour.

One of the things we decided was to develop a unit on perspective this past fall semester. The origins of single point perspective in art, why it developed when it did, its relation to ideas about individuality and to the early history of capitalist economic practice, indicate some of the approaches one could take. But, keeping in mind the

injunction of ‘learning to look’, we kept things very practical. Right after reading several chapters in the Taylor book, we turned to Leon Battista Alberti’s *On Painting*. The Alberti is available in two excellent editions: a Penguin, based on the 1435 Latin text, and a Yale University Press edition founded on Alberti’s 1436 Italian translation. Alberti is one of those luscious Florentines; he was the bastard son of a well-to-do father who, after a remarkable education, had to make his own way in the world. And like many of his city’s elite he was an exile for decades. Alberti was a humanist; he wrote a remarkable treatise on the ethical life of the family. He trained as an architect and designed part of the façade of Florence’s Santa Maria Novella; his master work is probably Sant’ Andrea in Mantua. Although not a painter, his little book on painting has become a classic in the genre. His work demonstrated the theoretical foundations of painting which for him meant its mathematical, that is, its geometric basis. Book One describes a theory of vision and develops the idea that the eye in seeing, constructs a visual pyramid. Book Two teaches the painter how to represent objects by their hand on a two dimensional surface. The last book describes the mental and moral equipment a painter needs to compose a noble work of art. Alberti’s book had an immediate impact on the art scene of the mid-fifteenth century as can be seen in the paintings of Fra Angelico and Piero della Francesca

Alberti’s text is difficult to visualize in the abstract. To supplement our conversation about it we spent substantial class time with students constructing their own representations of visual pyramids; they drew geometrical figures from a central perspective point, and, from an off-centered perspective point. And we talked about Alberti’s exaltation of geometry, his idea about the *storia* or the narrative in a painting,

and why he believed painters needed a liberal arts education. We continued with an examination of Leonardo da Vinci's "Last Supper". As our companion we used Leo Steinberg's *Leonardo's Incessant Last Supper*. Steinberg only mentions Alberti once, and then his name has become an adjective and he is quoting another art historian. But Alberti's terminology and his general principles appear throughout the text. A good deal of Steinberg's analysis has to do with the perspective of the painting, and our students, with their recent experience in drawing objects in perspective had the patience to work through his different approaches to the geometry of the painting. Some of our best moments in class were when students explained to each other how the different perspectival drawings worked. We were led to see that the freshness of Leonardo's conception of how to represent space calls into question and makes us rethink the relationship of the geometry of Leonardo's design and its perspective. Steinberg's analysis takes us into a world on beyond Alberti.

Steinberg also investigates the *storia* of the painting; the richness of his analysis makes it clear that not only must we all learn to look, but that what people have seen in the painting has changed over time as well. Students at first were skeptical about the possibility of a 300+ page book on one all but destroyed painting. But they were quickly persuaded that the trip would be worth it. A good deal of fun was had working out the postures and gestures of Christ and his Apostles. We left our weeks with Leonardo for other topics. In our last class we talked about what continues to amaze us about Leonardo's great work. The discussion reminded me of Alberti's prescient closing lines where he talked of a successor who "would make painting absolute and perfect".

Teaching Scientists to See:
A Possible Bridge between C.P. Snow's Two Cultures

Jim Donovan, Shimer College

Paper Delivered at the Conference on

Trends in the Liberal Arts Core:
Cooperative Integration Between the Humanities and the Sciences
Sponsored by the
ACTC Liberal Arts Institute at Saint Mary's College, Moraga, California
September, 2006

Few would deny that the division between scientific and humanistic intellectuals described by C.P. Snow in his essay "The Two Cultures" continues today, five decades later. Equally few, it seems, have been able to effectively bridge the two cultures and bring them together. Some of the best work in this regard is done by the "Great Books" colleges and core programs in our universities. Yet, most of these programs' graduates consider themselves humanists who understand and appreciate the significance, if not the equations, of modern science. What can higher education do to produce more of the "complement" to these humanists i.e. scientists who understand and appreciate the humanities? I propose in this paper that a directed use of visual arts in the training of scientists can effectively further this goal by providing a motivation for practically-minded science students to study a humanistic topic because it will aid them in their scientific work.

In his essay "The Two Cultures" Snow successfully skewers both the Humanist and Scientist camps for parochialism in their interests and knowledge base. Snow can credibly do so since he had impeccable credentials admitting him to both camps. He made his career as an author and critic, yet had a Doctorate in Physics. Focusing on his comments about scientists, he says,

We were able to find out a certain amount of what they read and thought about. I confess that even I, who am fond of them and respect them, was a bit shaken. We hadn't quite expected that the links with the traditional culture should be so tenuous, nothing more than a formal touch of the cap. . . . When one tried to probe for what books they had read, [most] would modestly confess, 'Well, I've *tried* a bit of Dickens', rather as though Dickens were an extraordinarily esoteric, tangled and dubiously rewarding writer, something like Rainer Maria Rilke Remember, these are very intelligent men. Their culture is in many ways an exacting and admirable one. It doesn't contain much art, with the exception, an important exception, of music. Verbal exchange, insistent argument. Long-playing records. Colour-photography. The ear, to some extent the eye. Books, very little.

Reading this as a scientist (BA Chemistry, PhD Biophysics), I felt I was reading my own biography, written during my pre-school years. What determined my mind and education that I would fulfill Snow's description? I play several musical instruments, have collected an army of 'long-playing records' and took up photography in school. I've tried a bit of Dickens (a small bit). My relationship with the visual arts culminated in little more than an affection for Monet and impressionism, a genre described by one art critic as popular with the masses because it's so simple, accessible because it requires so little.

Since realizing the effect of scientific culture and training on my overall education, I've wondered how to save my scientific students from the same fate.

A significant complicating factor is that not only do most current educational programs for scientists neglect the liberal arts, but the science students themselves are generally not predisposed to choose such courses when given the opportunity. The members of this practically-minded culture are those who might say, as Snow quotes one scientist, "Books? I prefer to use my books as tools." So any proposed change in the education of science students must prove itself to be useful, and particularly useful to the

doing of science.

It is reasonable to expect that visual training could benefit science students. Their scholarly papers, not to mention their textbooks, are filled with diagrams, pictures, graphs and charts, illustrating the natural visual orientation of scientists. The efficient-minded scientist understands what is worth a thousand words.

One clue suggesting a possible approach to reach these students starts with Nobel Laureate Paul Dirac's admonition to his students. In teaching young physicists how to manipulate equations and conduct theoretical physics, he said that any new theorem, and its equations, "Must be beautiful." This stems from the usually implicit and sometimes explicit belief in the scientific culture that Nature, at heart, is simple. (Or perhaps even One, True, and Beautiful.) An approach to scientific education that proposes to teach what is beautiful may attract science students, allowing them to drink from the wells of the arts while growing as scientists.

A further clue comes from analyzing the way great scientists think. While many in the humanities take it as dogma that thought requires verbal language, great scientists often describe their thinking as wordless images. For example, Einstein stated that he discovered that the speed of light must be an unreachable speed by visualizing traveling at 'c' next to a light wave and observing that the light wave would appear as a pair of stationary oscillating electric and magnetic fields. Such an outcome is impossible by the laws of physics, so he proposed the speed of light as a universal speed limit, (equivalently, that light moves at c for all observers) and derived Special Relativity.

Richard Feynman's biographical books describe several examples of visual thinking

(not the least, his Feynman diagrams), and he specifically recalls when he realized the importance of this as a child. He said to a friend that "Thinking is nothing but talking to yourself." The friend replied, "Oh yeah? Do you know the crazy shape of a crankshaft in a car? How did you describe it when you were talking to yourself?" How indeed?

Through picture-thoughts.

Perhaps the most famous example is Nicholas Tesla's discovery (he would not call it invention) of the AC motor. A century ago, physicists and engineers were in agreement that it was impossible to build an electric motor that would operate with alternating current. Although alternating current was superior to direct current in every other way, this doomed AC's use in homes and businesses. Tesla dwelled on the problem for years until, he says, the full plans and schematics of the motor appeared before his eyes while he was walking through a park. All he did, he said, was copy down the diagram in the vision. The device revolutionized technology, made the modern electrical and electronic revolutions possible, and made Tesla a rich man.

Thinking in pictures, thus, can be eminently practical.

At Shimer College, we are initiating a new program with the support of a grant from the National Endowment for the Humanities. The program, titled "Great Books, Great Art" is an attempt to integrate the study of art – Great Art – into the book-oriented humanities curriculum. This grant is primarily focused on two audiences: 1) Shimer faculty who will be learning about visual works and texts in order to make innovations in the Shimer curriculum; 2) communication via a website to non-specialists in art history (college and university professors, elementary and high-school teachers, and the general

public), who are interested in integrating art history into their courses, or who wish to explore images of great art related to books they are reading. As a Great Books college with two-thirds of the curriculum comprised of required core courses, every student enrolled at Shimer College will be a recipient of curriculum innovations that are implemented as a result of this grant. Ultimately, the goal is that, with the curricular innovations generated by the grant, every student will learn to ‘see’ and interpret art and imagery better and integrate it into other areas of endeavor.

Can science students use this ‘seeing’ in their endeavor? And can they be convinced of the utility of studying art in order to ‘see’? Some cases make it easy to demonstrate to the science student the utility of seeing and visualizing better. For example, in organic chemistry courses, almost all students purchase their own set of molecular models in order to see in 3-D the real structures that are represented by written molecular diagrams. Even at the highest levels of research, much of organic synthesis depends upon the chemist knowing and using symmetry (of the orbital kind). Seeing it in the mind’s eye only makes it easier.

In another field, students moving into the advanced courses in mathematics and physics often stumble because the equations they encounter become mere symbols to manipulate on paper, unconnected with anything ‘real,’ that is, available to the senses. Many budding physicists and mathematicians decide at this point that graduate school is beyond their reach because they cannot ‘see’ the field flows of a set of differential equations or get a picture of the symmetries implied by group theory.

So it appears that training a science student to ‘see’ as an artist can help the student to do science. How would a curriculum implement such training, especially if attempting to actually apply it to science?

Since this paper presents a speculative proposal, I have no data yet to present that would explain how to implement training in visual arts for science students, much less which alternative approach might work the best. I do, though, have some examples and ideas, which have come out of discussions among Shimer faculty about how to implement the “Great Books, Great Art” program.

One obvious lesson, common for engineering students and even used for art students by James Elkins of the School of the Art Institute of Chicago, is to have students render and describe 3-D machine parts. The goal is for the student to work fluidly in both directions: from 3-D object to 2-D drawing, and from drawing back to object. This latter step, ‘seeing’ the third dimension, is the harder of the two and the more important for the scientist. Further exercises could develop this visualization skill—hopefully to the level that Tesla showed.

Another lesson is an extension of a writing exercise already used successfully by one faculty member in a different context. Students are shown a picture with significant cultural content, say a renaissance crucifixion scene. They then discuss it and need to describe what they *see* in writing. Their writing is critiqued and returned until their writing successfully describes the scene to a naïve, culture-free reader who has not seen the painting. That is, they cannot say they see ‘Jesus’, ‘a crucifixion’ or even ‘a cross’. Rather, they see a male adult human hanging on a piece of wood, supported by another

piece, with people watching, who are dressed in.... Pure description without interpretation: a key skill for the scientist. To extend this beyond a writing exercise, the science student can be shown a picture of a natural object—an organism, a nebula, a fossil, a face of rock strata, etc—with the same assignment of just describing.

A third lesson, or set of them, would center on the study of D’Arcy Thompson’s “On Growth and Form” and his approach to representing data and ideas in pictorial form where most scientists, particularly physical scientists, would try to use equations. If the student can connect the image with the equations, then all the better.

Finally, the exercises would move the student to solve problems visually through thought experiments and mental imagery. The goal would be to teach the student to think as Einstein did when he envisioned Relativity. While some ideas for such exercises have been discussed, they are in too nascent a form to be described even in this preliminary paper.

Presumably, science students trained in visual arts who learned to ‘see’ with the artist’s eyes would not only be better scientists but have a greater appreciation of the humanities. They would become vanguards, or perhaps emissaries, between the separated camps of the two cultures. Intriguingly, they would bridge the chasm in a way and for a purpose quite different from that urged by Snow. He knew that the march of technology could help feed the world, or could destroy it. He especially wanted to ensure that humanists would become scientifically literate enough to engage in discussions about the development and use of technology. For in the end, Snow argued that both camps must serve the humane value of respecting human beings, supporting human life, and

ameliorating human suffering. If the project outlined in this paper is successful, Snow's vision of cross-communication between the cultures will lead to a cross-fertilization that also enables scientists to do their own purely technical work more effectively.

Learning about Life's Journeys through the Visual Arts

Barbara S. Stone, Shimer College

Paper Delivered at the

Thirteenth Annual Conference of the Association for Core Texts and Courses (ACTC)

March, 2007

For a number of years I have been teaching a course called “Child Development and Theories of Education” at Shimer College. This course has consistently attracted a large number of students. It speaks to their interest in psychology, as is manifested in their love of introspection, and, especially for the adolescents, their working through their parental issues, independence and the like. While some of the students in the course might be just a year or two out of high-school, there would also be others, including some mothers and some single fathers, who would have returned to College after a number of years working and/or raising children. This course also speaks to their interest in education, and especially the philosophy of education, a common interest of many students who choose Great Books schools, or schools with core curriculum, honors programs and the like i.e. many of the students we at this ACTC conference work with on a daily basis. Students who participate in such programs have usually made very conscious choices about the kind of education they do or do not want; they seek to avoid textbooks, and want small discussion classes.

Though this “Child Development and Theories of Education” course is not part of the College’s required core curriculum, it has a prerequisite of our Social Sciences 1 core course (Society, Culture and Personality) and it builds on the core course materials in new and interesting ways. This is typical of many of our elective offerings; they build on the core curriculum by taking a subject and studying it in greater depth. In the pre-requisite course, students are introduced to other cultures through Benedict’s *Patterns of Culture*, oftentimes a second anthropological text, and Freud readings toward the beginning of the course. This is followed by a sequence of texts that explore these readings further, including some Piaget on moral development, Kohlberg, and Gilligan’s *In a Different Voice*, all texts that deal with issues in the development of morality and gender. Other texts included in the course are Dubois’ *Souls of Black Folk*, and works by

the two major “fathers” of sociology, Durkheim’s *Suicide* and Max Weber’s *The Protestant Ethic and the Spirit of Capitalism*. So this is the common background that students have when they come to this course on child development and education.

In creating this course, I made a number of decisions at the outset. I wanted to make it clear to our students that this course would not teach parents (or siblings for the younger students) if their child, sibling, or they themselves are psychologically “normal” or “abnormal.” This would also not be a course with the purpose of determining whether their child or sibling is reaching developmental milestones such as crawling, walking, reading, or speaking within the “normal age range.” Nor did I want us to spend much time trying to convince one another that one specific method of parenting was better than another. They could seek “experts”, put in quotes, for this kind of advice, or read many a textbook or “how-to” parenting book for such information, and would inevitably find many contradictory statements on all of these subjects. Instead, I wanted students to think deeply about some of these issues on a theoretical level, so that they would be in a better position to evaluate the “experts” and the handbooks. And of course this kind of evaluation requires some good critical thinking skills.

In addition, I wanted students to realize that their own ideas, and “contemporary society’s ideas” – however you want to define that - about child development and education have changed radically over the centuries. I wanted them to become aware that today we just may not have all the answers either, despite our increased knowledge of health issues, the proliferation of child-rearing books, and the availability of the “experts” – psychologists, psychiatrists, talk-show hosts and hostesses, internet sites galore and the like. I also knew that when it comes to child-rearing techniques people have very strong opinions, especially if they have their own children.

Early on I was quite clear about some of the books I would use in the course. Erik Erikson’s classic *Childhood and Society* expands Freud’s perspective to the psycho-social level; it introduces his famous “Eight Stages of Man”, one of the many “Odysseys” of life narrated in this academic discipline, and his work with Native American cultures raises questions about the cross-cultural opportunities and limitations of the psychoanalytic approach. I followed this with Piaget’s *The Child’s Conception of the World* - a very different kind of Piaget reading than those on moral development. It

introduces methodological questions of how to get information from children that is reliable and not just an attempt to please the inquirer, and it deals with the subject of how children understand the world around them: how one knows if something is alive, or has feelings, and the problems of anthropomorphism and origins. This Piaget reading also offers a series of steps in intellectual development, which “forces” students to delve into the question: do children think like adults, or not? Are they little adults, or is there a difference in kind? Is there a qualitative difference in their experience of the world? Bringing in class issues, but also elaborating on interview techniques, and connecting with Erikson’s work, we read a few essays from Robert Coles’ *The Moral Life of Children*. The next step has been Vygotsky’s *Thought and Language* which really gets students to think about language, especially “inner speech,” and turns Piaget’s theories up-side down and sideways. Then we move to the educational implications of these readings. We start with Maria Montessori because Montessori schools are so prevalent, probably the most common form of private, especially pre-school, education in the U.S.A. It is great to have students look at the original source and discover how Montessori’s work in the tenements of Italy, in conditions of poverty and illiteracy, in a Catholic setting, has been transported to modern –day middle/upper class private education in the U.S.A. This is eye-opening for students, and especially for the occasional student who went to Montessori school and had no idea of its origins. We often say at Shimer College that it’s very important for people “to go to the sources” and see what they learn from them; reading Montessori’s work is a particularly rich example of the surprises students encounter when they do this. We then read selections from Dewey’s *Democracy and Education*, read John Holt’s *How Children Fail*, and Jonathan Kozol’s *Savage Inequalities*. I have ended the course with a variety of different works – usually something quite contemporary: I’ve tried David Elkind’s *The Hurried Child* and Penelope Leach’s *Children First* . This semester I have reversed the order at the end of the course so that we will be reading a few essays by Kieran Egan, and then conclude with Jonathan Kozol’s *Savage Inequalities* and his discussions of race, class, taxes, school financing, and the like.

What for a long time was not clear to me was how to begin the course in a really interesting way, in a way that would immediately open up students’ minds to new ways

of thinking about the topic of childhood, and that would get them out of their “contemporary thinking” about such matters. I wanted them to realize that we would be treating the topic of “childhood” itself as a “subject matter” or “phenomenon” to be explored and critiqued, rather than assuming its existence and all the assumptions that tend to follow. I turned to Philippe Aries’ book *Centuries of Childhood, A Social History of Family Life*, one of the classics of social history. In his first two chapters, (1) “The Ages of Life” (yes, we’re back to stages, dare I say “Odysseys” like in Freud, Erikson, and Piaget) and (2) “The Discovery of Childhood” he primarily uses visual images to support his claims about changes in the family, in relationships among family members, and in the relationship between the public and the private sphere in the last few centuries. I soon realized that many of the main topics that we would be focusing on in the course (relationship between childhood and adulthood, mother/child-father/child etc.) could be best introduced by looking at a series of images that depict children from the medieval to the modern period. I tried this approach at the beginning of the semester and it has turned out to be quite an exciting endeavor. Students read the first two chapters of Aries in preparation for the first class, and I told them that we would be looking at images rather than discussing the text directly, which they are most comfortable doing. I arrived at class to a rather skeptical group of students, both regarding the enterprise and Aries’ claims that children, and the idea of “childhood” may have been understood differently in other periods of history – I say this despite so much talk about how we are living in a youth culture today.

I should add that I have had a fair amount of encouragement in the last couple of years to try to include more art history and visual images into our core curriculum, a subject which has often only been given limited treatment in Great Books curricula. For the past three years we have had a grant from the National Endowment for the Humanities called Great Books, Great Art, which is helping us remedy this situation. As faculty we have become more courageous and versatile in our introduction of visual images into our courses, and we are imparting this approach to our students as well. We now think about using images and diagrams in all sorts of courses. In the past, only two Humanities core courses treated art: in the lower-level course we had approached the subject of “art” almost exclusively on the aesthetic level: color, shape, form, perspective,

- what Joshua Taylor in his book *Learning to Look* calls a work of art's "expressive content," that is, each work's unique fusion of subject matter and compositional characteristics. Students would take a trip to the Art Institute of Chicago, choose a painting to explore in depth and do a presentation to the class. This course was more than an "art appreciation course" but certainly had some of these qualities. In Humanities 4, an upper-level course students are then brought to a "higher level" of understanding of what the West has traditionally esteemed as "great art" by studying aesthetic philosophy—Plato, Kant, Schiller, Foucault and others—in relationship to works that epitomize or gave impetus to the views of each thinker.

This, in part explains the students' skepticism about viewing images from the point of view of social history. They think of art as belonging to the humanities. And yet, after looking at a number of images they were all convinced that there have been changes in our understanding of the family, and of childhood, in particular. I should add that "convincing" them wasn't/isn't particularly important to me. Rather, "learning to read" an image in this way strikes me as a very important learning tool, because I especially hope that they will transfer this skill to other contexts and begin to view critically the infinite numbers of images that assault them day in and day out in our modern technological world.

I have brought a few of the images with me for viewing, though I should note that it's mostly an upper class group of images (Hals, Pourbus, Chardin, Renoir, Cassatt) and does not include examples from photography. But, even this small selection reminds us of the "history of the West" on numerous levels: the early images of Madonna and Child remind us of the role of religion in society; different depictions of sexuality comment on what was permitted then and now; the presentation of children in family portraits, often with much sentimentality, and the "naïve" early American images where the children resemble and are dressed like little adults except for the toy or pet they may be holding, lead us to ask the larger question: did parents, adults, and artists really "see" children in this way? And, how can we account for such changes in perception and experience?

Learning to understand, to read, the underlying messages of such images, to see visual images as reflections and statements about society, these are skills that help to create strong critical thinkers. A Great Books curriculum doesn't always offer the best

venues to do this but I think it is very important that we do so. We can do this in many ways beyond the traditional study of the Parthenon as an example of Greek society, or as an add on to the “more important” written text. In addition to reading *Hamlet* or *The Odyssey*, such images can help us, and our students better understand parent-child relationships. I therefore strongly encourage this use of images for a whole variety of topics. You needn’t be an expert in art history or aesthetics: I really didn’t want the class to spend much time talking about primary and complementary colors, or balance, or light source, figure-ground, shape, hue, saturation, perspective and line - all the technical terms that can be intimidating to the non-specialist. Visual images are rich, whether one looks at them as a child psychologist or a feminist, a politician or an economist. To read these ACTC images as historical documents, and as a way of understanding the transformations of a society is important. One can look at family portraits to better understand family relationships, or images of readers in conjunction with the rise of literacy, or at industrial scenes in conjunction with a reading by Marx, just to give a very few examples. In all cases one hopes that students will begin to realize that the world hasn’t always looked to others as it does to them right now, that they themselves have a place and a role in history and in creating the future, and that they have a sense of responsibility and citizenship to their society.