Response

JOAN A. MULLIN

Joe Trimmer's chapter causes multidisciplinary explosions in the Writing Across the Curriculum (WAC) part of my brain. That's about as visual a response to the chapter as I can give: from the central idea of bringing artifacts from the museum to the classroom, I, like the students, imagine pathways of learning in all directions. What is more,

- *The project is adaptable to any area of the country.* Every community has some local museum or historical society, is near to such resources, or can draw on the resources from state boards of commerce and tourism. Botanical societies, entomology collections, art books, even local galleries could be adapted for use as a research project that students could *own*.
- *When students become the class expert on a subject, motivation runs high.* Students are so often the subjects in class: subjected to texts, subjected to our knowledge; subjected to our ways of thinking about the world. By giving them the position of expert, they not only gain self-confidence as researchers and writers, but they begin to understand the concept of lifelong learning—they see us learn from them. The other side of their being in this expert position is that students more easily accept evaluation. The questions I may raise seem not "correctional" but sincere attempts to understand what students are saying; I become an honest audience, one that doesn't have a preconceived answer. Students readily respond with either more information or more research when I ask questions like "How did that happen?" "I don't understand the connection between the art and the point you are making." "Can you give me more examples of this, or is this a single incident in the artist's creative life?" They want to explain.
- *These exercises ease students into becoming research experts—tasks most of us have difficulty designing.* How many techniques have you developed over the years to motivate student interest in research proj-

ects? How many have, nonetheless, produced bored students about halfway through? Even when they choose their subject, even when we help them narrow the topic, students often seem to lose interest in it and thus don't benefit from the experience as much as they could. By using a visual anchor that still provides plenty of subject options, this project teaches students about the wealth of perspectives one can take on any research project: a painting holds many points of view; many pieces of the canvas can be studied; there are assumptions that guided its creation; there are cultural conditions that affected its production. One of the elements in developing critical thinking skills is the ability to see from several points of view, to choose one, to investigate a subject's many sides.

- *The project is inexpensive:* most school budgets would agree to pitch in for postcards. However, you could also direct students to museum stores and ask them to buy a card of their own choosing. Those of us with limited or shrinking budgets know that sometimes simple requests are denied. Students with limited or shrinking budgets would appreciate buying a postcard rather than a generic text on how to do research.

For all of these reasons, I am most excited about how Trimmer's ideas translate into useful projects for faculty across the disciplines or areas.

Disciplinary Variations

English

Trimmer made me think about connecting the pieces of literature students study with the art being produced at that time. Some of us have taught interdisciplinary humanities courses of this nature, but usually the two are taught to students by experts (teachers), or one field augments the other. What if students' obligation in a literature class was to read the text and then enlarge their understanding of it from the perspective of their artist's work? Using the prompts Trimmer suggests or others, course work outside of class would consist of writing about the artwork. Class discussion would center on the literary piece, but with a difference: the usual analysis of character, plot, symbolism, and other typical approaches with roots in the New Criticism of the 1940s would be augmented by the social construction, postmodern, deconstructive, new historical perspectives that students would be (unknowingly) bringing into play with their examinations of the artworks.

For example, most of us know of the relationships between the visual and literary movements of the nineteenth-century American Romanticists. The type of landscape painting of that century, in fact the very landscapes artists painted, appear in many of the canonical works by authors like Longfellow, Hawthorne, Melville, and Thoreau, which are still taught. Students could investigate a painting, its origin, its place in the art of the time, its artist, its relationship to the art that now surrounds it in the museum in which it hangs, and begin to draw relationships and correspondences to the literature discussed in class. Students would enlarge the class's knowledge of the era but would also be able to contribute specific insights to the work of literature as given shape by their outside "art" readings and writing.

Noncanonical authors, specifically those who wrote some of the slave narratives that have been recovered, are equally supported by their absence from the visual representations of the time and by their covert presence in some of the paintings, or by the folk art that continued to thrive and now appears in many museums. In these cases, historical societies and houses in the National Registry may especially prove fertile visual grounds for student postcards and pictures.

History/Art History

In ways similar to those I've suggested for English, history students could create a historical/cultural moment from postcards of artworks. In addition, collections of postcards sent from the front in World War I are available (I have some that I found at a garage sale); there are postcards of Civil War battlefields; and reproductions of postcards from World's Fairs or the Columbian Exposition in Chicago can be bought. Students in history courses could also become the expert voices on particular parts of the period being studied. A presentation by students at the end of the course would be an enlargement of what was contained in the textbook or primary resources used for the course.

Another possibility in a history course is to have students literally recreate a postcard chosen by the class to represent the period. A take-off on the design course outlined by Richard Putney in this collection, this project would ask that students each choose a section of the postcard to investigate: create dialogues with other sections of the card (or other cards if more than one is used in the class), investigate the assumptions behind the photograph (such as, why were people posed this way, why was this angle used, why is the flag included in this shot?), write about the people who are not in the photograph/postcard. Thus, a picture from the Columbian exhibition might be broken into investigative sections. Some students would *represent* and write about the buildings, architects, countries, and politics that created them. Another group might look at how Chicago

affected and was affected by the Exposition: Why was it built on the South side? What new construction, materials, and building techniques made it possible to build on this seemingly impossible site? Why was Chicago the site of the exhibition in the first place? Who designed the main buildings, and what would a conversation with other architects in the city have sounded like? What were the politics behind the construction, placement, and eventual destruction of some of the buildings? What remains standing? Why?

While a modern history or urban history course might not center entirely on Chicago, students would learn that questions like these, about a major historical event at a pivotal point in history, grow out of the past and have ramifications for what comes after. Students' work would continually inform and shape the discussion of events.

Final projects could consist of students connecting their group's work to the entire period of history covered during that course—and/or to each other's projects. Activities could also include visual representations: what the site might look like today had it been developed; what the site actually looked like then; what the interior of a single building looked like; what was important about sample materials, construction, or architectural innovations that the building introduced; whether it stimulated a movement in other urban areas or historical periods. Whichever way the course was designed, students would be experiencing the interconnectedness and importance of history. They would be learning why historical data is worth preserving, and how our reading of the past affects (and effects) the present.

A third possibility, one that translates to English as well, is to have students collect their investigations, stimulated by their responsive writings as outlined by Trimmer, into their own history books. The shape, accompanying teaching materials and, of course, the decisions about what to include and what to leave out, would be firsthand lessons in how history is created, thought about, argued. Participating in the creation of a history book would make students more careful and critical readers of facts.

Science

Throughout art, there are depictions of scientific and medical concepts. We have abandoned many of these concepts and materials, yet some still hold sway in popular culture. In a recent science workshop, a presenter asked participants how many of us believed in the theory of relativity. Many raised their hands. The workshop leader then proceeded to debunk our long-held belief in that truth and in many scientific paradigms that we continued to hold (some of which, he pointed out, made us think like our seventeenth-century counterparts!).

I am not suggesting that a science or biology class turn into a writing class at the expense of content. But there are good reasons to think about alternative pedagogy, especially in the high school and in general education or lab courses. According to Sheila Tobias, many students don't learn science because the way science is traditionally taught is geared to those students who learn particularly well in that way (Eric deals further with the issue of learning styles in Chapter 8). These students would learn science with or without the class—and with or without the teacher in many cases. But students who are not oriented toward that factual, hierarchical way of thinking learn best when they can see larger patterns first, relate one concept to another, and write through to understanding. These students would probably benefit from examining a painting and the motivation behind the painting, capturing a breakthrough moment, when, for example, Alexander Graham Bell's invention worked, or the painting of Davíd's *Portrait of Lavoisier* wherein the glass-domed surface complete with chemist's tools points to his discovery of oxygen, or the depiction of alchemical tools on the monk's table, or of the nineteenth-century doctor watching over a woman dying from childbirth.

The significant scientific and medical concepts reflected in those moments affect how we still think about electricity, communication, scientists, doctors, and midwives. These, in turn, affect how we learn about electricity, how we engineer communication tools, how we choose to hypothesize and test those hypotheses, how we establish safe practices for testing drugs, how birthing practices relate to or contradict what we know about the physical process of giving birth. The investigation of biological concepts during critical points in history or how those concepts were overturned is often represented in art—and often available via postcards. In addition to the usual science or lab reports, students could present the relationship of their visual research findings to the class material.

Social Science

Investigating the picture postcards of a cultural moment applies equally to social studies. Rarely does a painting or any artwork involving people, land usage, or monuments not suggest the social movement that created it. I think of the paintings of labor riots, speechifiers of the nineteenth century, depictions of coal miners' conditions, or the art of the sixties that defined and defied a nation. Museums and historical societies likewise present visual snapshots of grassroots groups, immigrants, ethnic cultures, gender gaps.

Political scientists could use some of the same artwork for different purposes by creating different prompts for students, or by simply using similar prompts but asking students to relate the whole to the

politics they are studying. For example, students could investigate the many political symbols in David Gilmore Blythe's *The Higher Law, 1861*. In this painting, two white men are confronting each other with daggers. On one side the Southern slave holder is also holding a paper claiming "Our Rights" and he has chained behind him a slave. On the other side an Abolitionist is holding a book called *Higher Law* and the African American watching the quarrel behind him is also picking his pocket. In between the two lies a blood-smeared figure labeled Liberty. Portraits or representations of political moments and presidential moments, as well as the graphic artists' political posters find their way into the museum shops.

Cultural geographers can use some of these same depictions to look at their areas, and all geographers can have students investigate population or location theories in light of representations by various artists and students' critical examination of the pictures before them and the conditions that may have inspired them. Landscape painting, for example, can become a rich resource for considering location, representational validity, and details omitted or present.

All these activities translate easily to psychology classes. Paintings such as Edvard Munch's *The Scream* or Artemesia Gentileschi's version of the biblical story *Judith and Holofernes* provide a wealth of different perspectives that can represent the theories of individual psychologists or send students off on a study of specific human practices. Students could use the postcards to consider the abstract vocabulary and abstract concepts used in discussing the human psyche.

For each of these activities, students could lead their peers through a museum as they present an in-depth psychoanalytical explanation of their painting, or the political dynamics that influenced a particular representation of a president, or the social hysteria underlying a painting of a strike. The museum becomes a resource for critical analysis, for problem solving, and for examining the construction of knowledge (*truth* making).

Et Cetera

In turn, paintings and sculpture can serve as wonderful resources for introducing mathematical concepts. Math teachers can have students study, as many already do, the concepts of proportion, perspective, and point of view, or where the eye falls in the painting. To what end? In the schools, to emphasize the importance of knowing math and its wide-ranging applications. Michelangelo's *David*, for example, could bemoan the oversized, disproportionate hands the artist gave him. But the artist knew what he intended and what that disproportion achieved. The same is true of Donatello's famous *Zuccone*, which, though it originally sat in a high niche on the wall of a church, looked

proportional and powerful to the viewers below. (I give these examples because of the unavailability of these pieces of sculpture in this country—let students find their own!)

Real verbal and visual problems already exist in art—why not let students discover them instead of designing Calculus IV tests for them? But what about the final exam? Students must explain their mathematical problem as they tour the museum and describe how they solved it. What place would prompts have in a math class like this? There could be prompts, for example, to discover alternative solutions, to discuss what would happen if the painting could go beyond its frame onto the gallery walls, floors, or ceiling, or where a ball hitting the Ferris wheel in the carnival painting at x miles per hour at an angle of y would end up.

Many of the activities I've suggested can be fine-tuned for vocational arts courses, agriculture courses, or various areas in engineering (chemical, civil, mechanical, and so on): students could write prompts leading to an investigation of the history of a building, of a structural, mechanical, or agricultural technique, of formal gardens or landscaping, of designing a building or a bridge, or of constructing a modern-day mechanical arm from a sketch by Leonardo. And all of these would grow from asking students, as Trimmer did, to examine not just what was apparent to them but what lay behind, around, above, or below, by encouraging students to imagine, create, investigate, and take risks.

Postscript

Trimmer has shown me how to help students discover the tools they need to turn a critical eye on their world. At the same time, he has stepped back as a teacher and handed responsibility for learning over to the students. As we seek to prepare young people for the immense amount of information that is becoming available to them, we must also prepare them to assess what they see, especially when it is computer generated or manipulated. By using art postcards they can hold, examine, live with, and become experts on, we take a giant step in this direction.

Finally, what also occurred to me as I read Trimmer's article is that if I ever have an opportunity to visit Ball State, I would enjoy touring the art gallery with one of his students. Students can play a role in the continuing education all of us need to engage in as teachers, and, if some of their presentations become public, in the education of other faculty, students from across campus, parents, the community, or historical and art societies. What better way to bring the visual into the classroom and to visually bring the classroom into the world?