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# Bridge To, Bridge From: The Arts, Technology and Education

Carol Gigliotti

The idea that education might serve as a bridge between technology and the arts is based on a metaphor in which the bridge connotes connection and, at the same time, separation. Following the physical logic of the metaphor, we locate technology on one side of the span, the arts on the other. Each is perceived in contemporary Western culture as the antithesis of the other [1]. The implied purpose of the bridge, a piece of technology itself, is to provide a ground upon which ideas from each of these areas of endeavor may travel to the other. A bridge's purpose is to connect. It may also serve, however, to solidify separation. Far from being a stable, fixed entity, education is a highly contested area where the perceived and actual stakes—the forming of the future—are high. Education's purposes and practices may encourage, discourage or redirect the flow of ideas from one area to another. As individuals, communities and the ideas they bring with them from the arts or technology, or their vast connected territories, are filtered through the institutional bridges of education, they may be reshaped, thwarted or advanced. What is certain is that some form of mitigation takes place.

In this article I investigate the conflicting theories and practices contemporary education brings to interchanges with projects involving both the arts and interactive computer technologies. It is based, in part, on my ongoing involvement with and research on various communities' efforts to use education as just such a bridge. What has constituted success or failure in these endeavors, and on what characteristics and definitions of education have various participants based their judgment? How have issues such as gender, ethnicity, class and race fared in these activities?

What must first be recognized is that the metaphor of education as the bridge between art and technology is one that, like most metaphors, persists only from a particular perspective. One may just as well have envisioned art as the bridge between education and technology, or technology as the bridge between art and education. In this case, however, I wish to emphasize the role of education as central and essential to any projects combining education with the arts and interactive computer technologies. This viewpoint, then, demands a more thorough explication of what one means when invoking the term "education," for it is a term often taken for granted. I have stated above, and will demonstrate for purposes germane to this article, the highly contested nature of education. I will confine my remarks to the situation and concerns in the United States because that is where my experience lies. My hope is that the following discussion, utilizing the United States' current problems as an example, may prove helpful to similar situations elsewhere.

## SCHOOL REFORM: . . . AND REMIND ME WHY WE ARE DOING THIS?

On 31 March 1994, a bill entitled "Goals 2000: Educate America Act" [2] was signed into law by U.S. President Bill Clinton. Authors of the legislation define this educational reform act as:

America's blueprint for prosperity and world leadership, and our children's guide to lives filled with productivity and the special rewards that only a quality education can provide [3].

This description of the ambitions of Goals 2000 relies heavily on the implementation of national standards. Admittedly, the Goals 2000 Act emphasizes the voluntary development of these standards at the local level. The clearly stated goals of these standards, nevertheless, are primarily economic:

Through the development of broadly defined skill standards, the U.S. will be able to set goals for skill achievement, competencies, and performance that will help create a lifelong learning system for all Americans and will drive our nation's economic growth into the next century and beyond [4].

Given this institutionalized description of American educational reform, is it any wonder that American educational reform theories and practices have sparked contentious and what appear as fundamentally irreconcilable battles?

The social and political environment in the United States today has led to the formulation and signing of the Goals 2000 Act and instigated numerous debates by educational theorists concerning issues that have existed for centuries in discussion about educational philosophy. From the discourse on justice in Plato's *Republic* [5] to the intricate investigations on the importance of education to democracy in Dewey's *Democracy and Education* [6], the questions of what counts as education and how education can be distinguished from indoctrination or training emerge repeatedly. These questions, popular among the last generation of analytic philosophers [7], have necessarily sprouted once again, in reaction to this program. This time around, however, questions about the purposes of

## ABSTRACT

The author investigates the theories and practices of contemporary education influenced by U.S. legislation of school reform, the political agendas driving that reform and the conflicts this current scenario creates for artists, art educators, art students and arts administrators working on projects involving the arts, education and interactive computer technology.

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utilizing skill standards for all of America's children involve how the goals and practice of those standards will affect the small but significant steps made in the last 3 decades toward a more inclusive representation of "difference" in the pedagogical canon. Additionally, and more immediately, these educational debates have surrounded the realities of teaching an increasingly disadvantaged, prematurely cynical and violent public-school population whose despair in the future is made clear by present actions.

One of the best-known philosophers of American education, and one of the most vocal critics of Goals 2000, is Michael W. Apple of the Curriculum and Instruction and Educational Policy Studies Department at the University of Wisconsin, Madison.

In Apple's review of Diane Ravitch's book *National Standards in American Education*, funded by the Brookings Institution, a conservative think tank in Washington, D.C., he predicts the outcomes of implementing the reforms outlined in Goals 2000. These predictions are instructive for understanding the current American educational climate in which any art-and-technology collaborations will take place:

*National Standards in American Education* could perform a valuable service if it was read as a set of arguments about what to be very cautious of not doing in our drive to "reform" education. There are valuable issues raised in it. However, I predict it will be put to exactly the opposite use. It will add support to those neo-conservatives who wish to centralize control over "official knowledge" or by neo-liberals who want to reindustrialize the school by making schools into places whose primary (only?) function is to meet the needs of the economy and who see students not as persons but only as future employees. And this will occur at the very same time as major corporations are shedding thousands upon thousands of workers, most of whom did quite well in school, thank you very much. It will be used once again to export the blame for our economic and social tragedies onto schools, without providing sufficient support to do anything serious about these tragedies. And, finally, it will be used to justify curricula, pedagogic relations, and mechanism of evaluation that will be even less lively and more alienating than those that are in place now [8].

Apple predicts the ways in which both neo-conservatives and neo-liberals, current versions of different sides of the same political coin, may use Ravitch's book and the actual national standards in support of those political agendas.

Both the neo-liberal and neo-conservative agendas prioritize the "free" market and eschew any governmental impediments to this process. In the case of the national standards' impact on education, both neo-liberals and neo-conservatives who profess belief in the "free" market as the best way to benefit everyone see this as an opportunity to reindustrialize education by delineating its function as primarily economic and by seeing students as future employees. I see these agendas, as Apple does, as contributing to a future for America that is devoid of purposes and goals that are based on anything but the requirements of life in a market culture.

The neo-conservative agenda, however, includes internally conflicting aspects. Apple and others [9] see these aspects, camouflaged as they are in political rhetoric borrowed from the left, contributing to outcomes that will inflict continuing harm on those segments of the American population already suffering from few, if any, opportunities for economic, social or cultural power.

These aspects are most tellingly epitomized by Newt Gingrich. His tenure as the Speaker of the U.S. House of Representatives has encompassed an impassioned embrace of new electronic technology and characterizes this technology as a force that "decentralizes and transforms all power" [10]. In his book *To Renew America* [11], Gingrich outlines six challenges facing the United States. The first involves the challenge to "reassert and renew American civilization" [12]. The second challenge involves "America's entry into the Third Wave Information Age" [13]. The rhetoric employed to frame the second challenge includes terms such as "decentralization," as well as language such as this: "We need to develop simple methods for people to participate eagerly and enthusiastically in inventing their own future" [14].

Gingrich makes clear, however, that for him American civilization is not based on the myriad civilizations and cultures that have contributed to its makeup, but depends exclusively on the arrival of the English-speaking colonists of 1607. The Native American civilization before that time and the cultural influences of the many immigrants and slaves who arrived after it are, for him and his followers, not included in American civilization; in fact, these influences subvert his stated goal of America's entry into the Third Wave and the process of people "inventing their own future." He says:

Our first task is to return to teaching Americans about America and teaching immigrants how to become Americans. Until we reestablish a legitimate moral-culture standard, our civilization is at risk [15].

This emphasis on a particular moral-cultural standard conflicts directly with the idea of the "decentralization" aspects of electronic technologies. Basing the "legitimate moral-culture standard" on the influence of a select group of Americans hides both the enormous contributions other groups have made to what Gingrich calls "American civilization" and the continuing possibilities of new influences. Similarly, the rhetoric of Goals 2000's national standards of "skill achievement, competencies, and performance" hides the possibility of educational success based on something other than the proliferation of the American market economy.

## EXPEDIENT VS. LONG-TERM EDUCATIONAL GOALS

Arts organizations and art schools—two principal environments consistently involved in American arts education and, I might add, two of the only institutionalized arts environments in the heavily anti-arts environment of the United States—have become examples of the influences of the neo-conservative and neo-liberal agendas that Apple refers to above. Certainly not exempt from the exigencies of the economic and political climate current in the United States, and struggling with understandable anxiety concerning their own future, arts organizations and art schools have become involved increasingly in the last 10 years in partnerships developed ostensibly for the expansion of educational goals. These partnerships, usually involving corporate funding of some kind, have offered to the beleaguered arts organizations—including art museums, art schools and departments of art—the possibility of the financial wherewithal to become involved in projects involving computer technology.

At face value, this scenario—that of partnerships between business, the arts, education and computer technology—seems ideal. It is a scenario that I myself do not, in principle, see as negative. In fact, I have written extensively on the necessity of becoming involved in such partnerships and the importance of collaborative activity across disciplines. My reasons for advocating this course of action, however, have been based on my

belief that, as artists and art educators, we have a responsibility to become involved in the development of computer technology. This responsibility is central to the ongoing evolution of an emerging aesthetic of interactivity in which aesthetic goals are linked with ethical goals and are based on a perspective of caring for both the individual and the larger economic, political, ecological, social and spiritual circumstances that create contexts for the individual. Additionally, this aesthetic encourages participants to take responsibility for their actions and their world. In very real terms, providing our students with the means and the encouragement to become involved in the development of interactive technologies offers them the possibility of a way to affect one of the major tools of power: communication media [16–19].

No one, least of all me, ever thought of this as an easy undertaking. In fact, much of the impetus for my involvement in constructing the theoretical framework of this aesthetic was overwhelming evidence for the absolute necessity of subverting, transforming and redirecting the development of computer technologies and creating methods by which they could develop in support of the goals of this aesthetic. I expected and have encountered enormous resistance toward this emerging aesthetic from within the art world. Arts administrators and curators, as well as members of the academic art world, have voiced strong negative reactions to this aesthetic. I did not clearly foresee, however, the particular ways in which these reactions would reinforce the combination of current political and economic factors in the United States to build an attitude so resistant to the goals of this aesthetic.

Much of the resistance of the art world toward this aesthetic centers on the continuing insistence on the importance and autonomy of the individual artist. This idea lingers from modernist aesthetics, where it began as a reaction to the dearth of spiritual values in the capitalist and totalitarian societies of the 1920s and 1930s [20], but it continues to find favor for reasons that have to do with the marketability of name artists. True, the canon of white, male artists has widened a bit, but even the new breed of “recognized” artists must in some way produce products that can be controlled or contained within the monetarily defined art-world system.

For artists involved in the creation of interactive computer-mediated art,

many of whom have been involved in the development of an interactive aesthetic—one that encourages participation of the viewer in the process of creation—the result has often been to find their work passed over by curators of museums and galleries. Many curators have preferred to commission already well-established artists (whose work has been proven to be profitable) to develop, most for the first time, works that use the technology but do not challenge the assumptions of its development.

Additionally, museum World Wide Web (WWW) sites, even though detailed in museum educational grant proposals as providing opportunities for public education, generally offer little if any educational material once they appear on-line. These WWW sites provide one-way access to information about programs, exhibits and sales opportunities available to the public on-site. Some truly entrepreneurial museums, such as the Metropolitan Museum of Art, offer the viewer on-line purchase power, which, for most visitors to museum WWW sites (as well as visitors to many actual museums themselves), is the closest thing to an interactive opportunity available.

Among the major art institutions of the United States, two recent and encouraging exceptions to this phenomenon are the 1996 “Total Museum Conference” at the Art Institute of Chicago, coordinated by that museum’s stellar Department of Education [21], and a recent paper on interactivity presented at the International Symposium for Electronic Art ’96 (ISEA ’96) in Rotterdam [22] by the Museum of Modern Art’s video curator Barbara London, a supporter of digital work long before the fashion to do so took hold, and Graham Weinren, New York artist whose interactive work dates back to 1986 and co-editor of *The Millennium Film Journal*.

In a chapter in his book *Rethinking the Museum*, Stephen Weil lists what museums might contribute to better the lives of those who use them: information, values, experience, stimulation and empowerment [23]. One of the primary ways a museum contributes is through education. In fact, the words Weil uses to describe ideal museum contributions to society could also describe the contributions of education in general. Is it possible that the primary contribution of museums is educational?

During these times of decreasing public funding for the arts, the temptation on the part of museums and art centers to increase visibility through the use of

the WWW and, perhaps because of that visibility, to increase the number and amount of funding sources, is understandable. But will these short-term objectives concerning the WWW support or erode the long-term stated goals of museums and art centers? What are those goals? Are they simply about passing on official art knowledge to generate more art consumers?

Not asking these questions plays straight into the neo-conservative agenda of “official knowledge.” The neoliberal agenda of the reindustrialization of schools, which in its original configuration grew out of the perceived and actual needs for educational methods meaningful to the vast majority of U.S. working class and impoverished populations, has worked to support the “official knowledge” of the market. Schools and departments of art, desperately attempting to support the growing demand for computer hardware and software, have partnered with arts organizations, corporations, industry and the government (often under the umbrella of an educational goal) to fill these needs. Often, students and faculty have emerged feeling either that they have been taken advantage of or that the unstated educational goal of their involvement with these projects has been to prepare them for future employment in “officially sanctioned” jobs—i.e. market-driven, computer-technological production.

Again, these partnerships are not in themselves negative, and they are necessary if we are committed to change, but ultimately they will be a mixed blessing and perhaps a very negative one (Faust comes to mind here) unless we have a clear vision of what education means to us and in what ways we can best practice that vision.

## CONCLUSIONS

What, for me, constitutes a clear vision of education? I have described some of the realities obstructing that vision, but I have not explained what I think counts as education. As I have stated above, I see education as central and essential to any combined activities of art and technology—indeed, to many areas of practice. The term “education,” however, is a term often taken for granted. Various communities with which I have worked, both within the arts and in areas external to them, have assumed I mean the same thing they do when we have talked about the value or the importance of education. In my work specifically

geared towards a melding of education, the arts and technology [24], I find myself repeatedly explaining to the adults involved that what I mean by education is providing an environment in which students feel absolutely compelled to become involved in the creation of their future by understanding how important they are to the present. Teaching, for me, is about letting each student know we take them seriously, so seriously that we expect them to contribute something essential and unique to a wider communal project of well-being.

If one is to teach well, one must teach toward the future—but education cannot be only about the teacher. The central value of education is to give the student the possibility to change, correct or build upon what we have done. It is distressing to find most art museums do not see education as central to their mission, that American schools discount the value of the arts in education, that the commonly assumed ideas about what counts as education are so entwined with goals of economic success and productivity. These goals—while certainly necessary to sustain an environment in which other goals can be pursued—have eclipsed goals just as necessary to the sustenance of a life worth living. These goals—such as compassion, justice, a profound curiosity in “how” questions, and a genuine awe that comes from continuing to be encouraged to ask “why” questions—are less easily met. These educational goals are easily strangled by the more pragmatic assumptions stamped on technology by previous developers.

The partnerships constructed between the arts and interactive computer technologies are extremely important ones to the forming and defining of the future of education. The arts have always offered another way of seeing and knowing—often at odds with and critical of the prevailing worldview. The arts offer a space in which aspects of that worldview can be worried into possible consequences, as well as imagined into

alternative possibilities. Partnerships between the arts and interactive computer technologies are necessary, then, if we wish to see technology develop from assumptions about what counts and what has value other than the prevailing consumeristic worldview.

Computer technology’s impact on all forms of communication systems is rampant and insidious. The fact that technology has impact on education is certain. How it is affecting the forming of the future is up to us. The ideas brought from either the arts or technology or their vast connected territories, as they are filtered through the institutional bridges of education, may be reshaped, thwarted or advanced. If we truly believe that what counts most in education cannot be defined only in terms of economic productivity for an already economically privileged group, then our educational goals and practice must reflect those beliefs.

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