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## Conduit and the Digital Archive

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The digital revolution has revolutionized art, which in turn, in many ways, has revolutionized our society. At the most basic level, electronics allow for expressions of art never before possible. Traditional displays of art can be brought to new life by incorporating digital media. Further, software packages have made art creation possible for even the least artistically-inclined and the Internet has made the sharing and dissemination of art a non-issue. Due to their ease of use, multimedia tools may trivialize fine art: a professional artist is no longer needed for a work of art to be created and 'bad art' or commercial art may drown out that previously considered to be fine art. These tools are also helping to bridge the often apparent gap between the arts and science/technology.

The ubiquity of multimedia has prompted a paradigm shift away from trying to justify art as important to schools' curriculum to elevating art to the same academic level as reading, writing, and arithmetic. Finally, not only does the Internet allow for art to be quickly and efficiently spread around the globe, it also provides a forum for discussions about art. Many of the same tools that have facilitated art creation for the unwashed masses and that have in the eyes of some devalued fine art are also being used to critique art, to share creation techniques, and to hold a recursive conversation about the impact of digital arts on society.

Digital techniques and electronics allow for techniques and expressions of art that decades ago would have been unimaginable. Vector-based programs, such as Adobe Illustrator, are used to create pieces that are math-based instead of pixel-based, and as a result are infinitely scalable. Images created at one size can be shrunk to be part of a larger composition without loss of detail or they can be enlarged to the size of a billboard without pixilation. Digital cameras allow photographers – amateur and professional alike – to take hundreds of photos for the same price as taking one. And once the picture is taken, the onboard LCD displays the image so that the photographer may ascertain whether a second shot is necessary. Software packaged with the digital cameras makes manipulating the images child's play; powerful programs such as Adobe Photoshop make the manipulation and composition possibilities endless; and free, open-source code such as the GNU Image Manipulation Program (GIMP) make the programs accessible to everyone.

Just as new creation techniques are enabled by digital technologies, so too are modification and embellishment methods. Two wonderful examples were presented at the 2007 Rochester Digital Arts Competition & Exhibition (now renamed Rochester Artech) by RIT Professor Anthony Toscano. *Homage to Marcel* featured a print of the *Mona Lisa* in which the mouth was replaced with a small digital display of moving lips, a play on Duchamp's *Mona Lisa: LHOOQ*. In *American Dream*, Toscano laid a cardboard refrigerator box on its side, with one panel removed and a blanket laid on the floor of the box. A woman was projected onto the blanket writhing in agony while eerie sounds filled the air. Both of these pieces augmented traditional media with digital ones.

Since new art technologies enable nearly anyone to create art, the resulting ubiquity of multimedia may trivialize art. Gold would not be precious if anyone could derive it from lead. However, just as a calculator lets anyone perform mathematical calculations yet there is a pronounced difference between a neophyte and a mathematician, so too will there remain a marked distinction between fine art and commercial art. As phrased by Jason Ohler, "The way poetry and computer manuals sit side by side in a textual world, so shall Picasso and PowerPoint both have a place in the art world" (Ohler, 2000, p. 18).

There is often a gap that is apparent between different disciplines, maybe nowhere more apparent than between the arts on one hand and STEM – science, technology, engineering, and math – on the other. Digital art serves as a bridge across this gap. As Jim Blinn, a researcher at Microsoft, said in a graduation address to the Parsons School of design:

I think that the most important result of the computer graphics revolution is not that it has provided better tools for artists. It concerns what has happened to the people involved. Engineers who make artists tools have had to learn what artists DO. When they try to mathematically simulate lighting they've been motivated to go[to] art museums. When they try to mathematically simulate trees and clouds they've been motivated to actually go out and look at nature. Now, consider the artists and designers. They now wallow in operating system version numbers and file format conversion programs. Many designers write their own programs to produce unique effects. And I think that most of them have come to appreciate that mathematical equations can stand for geometric shapes. And that mathematics can be as beautiful as sculpture. I think that the most important result of the computer graphics revolution is that it has helped heal the gulf between Art and Science (Blinn, 1995, para. 6).

In the past, including art in primary and secondary education was often justified with notions of its value in buttressing the three Rs – Reading, wRiting, and aRithmetic. Such an argument was always tenuous as there is little evidence to support this reasoning. While some causal links have been found, there are none between arts-rich education and verbal and mathematics scores/grades, arts-rich education and creative thinking, or visual arts and reading (Winner, 2000). The strongest argument this

author has heard for the arts was by Ellen Winter, professor of psychology at Boston College and senior research associate for Project Zero at Harvard Graduate School of Education. During a plenary address at the 2007 National Collegiate Honors Council Conference, Winners proposed that reading, writing, and arithmetic are so valued because they are integral to life and, in fact, extend life. Medical advances, environmental controls, warfare equipment, and much more are all dependent on these domains. Winters concluded that while art may not be necessary for any of these fields or to prolong life, what is one living for if not for art?

Jason Ohler, President's Professor of Educational Technology and Distance Learning at the University of Alaska reasons that society must move away from considering art as a superfluous addition to curriculum and even as a benefit that makes life worth living. Rather, in addition to reading, writing, and arithmetic, aRt needs to become the fourth R. Just as students are required to learn the fundamentals of writing from an early age so that they can eventually craft lengthy reports and essays, so too should they learn basic art techniques. With the ubiquity of multimedia presentations – PowerPoint, video, animations, etc. – students, and, indeed, white collar professionals, must have a grasp of artistic principles in order to effectively communicate. “Those who do not create art for a living will use it, manage it, interpret it, or interact with it in ways that simply did not exist 10 years ago” (Ohler, 2000, p. 17).

As evidenced above, digital technology has created enormous changes in the world of art, entire paradigm shifts in fact, in some ways

turning art on its head. Appropriately, the same technologies that facilitate such chaos also enable venues for organization, classification, and discussion. In the 1990s, when Tim Berners-Lee developed HTML, he did so as the result of an effort to allow CERN researchers to use and share documents. While the Internet has grown in innumerable ways since that time, the basic essence is the same: links allow people to use and share information. As in all subjects, such is the case in the online art community. The tutorials available on the Internet for using digital art authoring software are seemingly endless. So, too, are the discussion boards centered on critiquing members' art and sharing creation and innovation tips.

Conduit has a similar purpose. It was designed to enable artists and non-artists alike to participate in a discussion about how technology has affected art and how this relationship has affected society. Using the Drupal content management system, Conduit allows site users to upload images, poetry, prose, and academic papers. Other users can review the uploaded content and comment on it. Most importantly, users can link content together, so a photograph might be linked to an article on the ubiquity of digital cameras, to another photo taken by the same artist, to a photo with similar content, to a third photo taken from a like perspective, and to a Flash presentation that incorporates the photo. An article about the Fourth R might be linked to presentations created by elementary school children and to Winners' research. The site is not intended to be a forum for the critiquing of individual works of art, but rather of art movements and their impact on society, especially those spurred by digital

advancements. Conduit is a place to discuss how the digital revolution has revolutionized art and modern society.

## References

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