

## **Social Network**

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## **Abstract**

“Social Network” and its accompanying research focuses on the importance of physical and emotional connections to the success of new media art works. By creating a digital installation which addresses and questions whether digital environments can adequately communicate emotions, I hope to understand the nature of our transformed social encounters in virtual communications such as Facebook. My research uncovers that communication through digital means can be limited and that there are irreplaceable aspects to human lives and emotions that are not immediately apparent. Can computers be used to express emotions and not just communicate information and ideas?

## Introduction

Almost a century ago, Walter Benjamin, in his classic essay “Art in the Age of Mechanical Reproduction,” argued that the value of a work of art now resides essentially in its meaning and concept rather than in a physical creation that represents that concept. In the presence of a unique work, “the aura” of that work - a word coined by Benjamin to describe a viewer's response to authenticity - is sensed, but in the new mediums of art today that aura has dissipated. Benjamin's ideas looked forward to our age where nothing in our lives is an original, and much of what we value cannot be touched or felt. This trend has gone so far that it has triggered a reaction, with a resurgent interest in crafts and individual creations.

In the art world, echoing the trends in society, there's been a loss of tactile connection, nowhere more so than in digital art. Digital artists give little consideration to the aura of a unique work of art, and focus entirely on the concept and idea of the work. In fact, what was true of mechanical reproduction as mentioned by Benjamin, is infinitely truer in the age of digital reproduction, which is not restricted by the limits of physical matter. The aura of the authentic and unique has not only dissipated, but seems to be gone completely. As a group, digital artists tend to view the physicality of their work as of secondary importance. Programming art and especially Net Art is represented in the cold sterile environment of the computer and little thought is invested in its physical representation. Computers are the tools and workspace of the artist and often have little to do with the artist's core concepts. It's as if a painter presented a painting on an easel and left his paints and brushes beneath without consideration of the tools' influence on the painting's subject matter.

It is my intention in my interactive installation “Social Network” is to use the aura of the

physical and the uniqueness of my artwork to help convey concept and idea by forging a meaningful connection with a person experiencing it. This experienced connection is all the more important to a work like mine whose very concept is about achieving connection between human beings.

My installation focuses on digital social environments and the question I'm addressing is whether a digital environments can communicate an emotional impact and serve to strengthen the power of the community of people connected through digital means. Although virtual social environments like the popular websites Facebook and MySpace are typically seen as providing surface level connections lacking in intimacy, in my own experience these connections can be powerful and dynamic; I see them as contributing to each individual's self-expression and to the strength of that individual's community within the virtual world. However, it's clear to me that the emotional impact of these virtual interactive environments can be almost entirely lost unless evoked by a physical presence or in response to the unique work's aura, eliciting a response as traditional, hand-painted or hand-crafted art does. My installation explores the relation between digital art and human emotions by addressing some critical questions.

Can an emotional connection be conveyed as well through digital means as in person? Can people connected miles apart affect one another and create a synchronicity of thoughts and ideas? Is physicality essential to an emotional connection between art and people? I set out to create such a work where an individual can directly interact with a virtual community and literally see the effect of his or her involvement. My work is a metaphor for connectivity and represents the importance of physicality, and at the same time suggests the possible existence of a virtual community that can thrive on emotional connection despite being programmed to exist in a virtual space.

## Project Description

Every person in my social network affects my artwork, "Social Network". Focus of the work is a "digital painting," or a visitation generated by a computer program. The physical presentation of the "painting" is a laptop where the screen is flipped screen mounted on a wall. The image on the screen changes over time depending on information gathered from members of my own personal social network. I took a road trip in order to seek out members of my virtual social community. I met them in person and read their pulse from their wrist. Touching each person's wrist shows the contrast between virtual connection and physical.

The Digital Painting is a physically reconfigured laptop that displays the data of each network member on the screen and represents each person as a lightning bug. The laptop sits inside a plastic shell. The Digital Painting hangs on the wall and is always on. Each lightning bug pulses at a rate that matches the corresponding social network member's heart rate. At any given moment roughly one hundred lightning bugs are all pulsing at different rates on the Digital Painting's screen. The background is a visualization of trees in a forest at nighttime. The environment is lit by the weighted average of the collective lightning bugs.

Each bug's pulse is a representation of the social network member's heart rate at the time of interaction; therefore, every bug's pulse is slightly different. The bug's light the environment based on a weighted average. A social network member who uses the network most will appear to be in the foreground and will have a stronger effect on how lit the environment is, and this represents a synchronization that can occur in virtual social.

Lightning bugs conserve all of their energy to glow in order to find mates; therefore, they tend not to move from night to night. They fly up to the same position at the beginning of the night, and then back down at day to conserve their energy. The position of each bug will

remain the same. In the appliance the height of the bug is determined by how recently I began a connection with the person on the social network. The most recent are higher, and the longer I've been a friend with someone, the lower on the screen they are. Whenever a person logs onto their social network their bug moves to the front of the screen. The closer the bug to the screen the more often that person logged on and therefore the more effect they have on the community. The data is read off of their own profile page on the social network during the time of the works creation.

The final form of the project in the gallery features the Digital Painting on the wall and a laptop with a video explaining the work and showing visual representations of the Art Application. A website, <http://www.grahamgrafx.com/projects/virtualsync>, describes the project and offers a time line of the work's progress.

### **Historical, Theoretical and Cultural Context**

When I was younger walking home one night I came across a lightning bug slowly pulsing in the street. This one stood out to me because it was by itself and in the middle of the road. I stood and watched it for a few minutes as it repeatedly glowed bright ... then disappeared. A car began to slowly approach and my interest in the bug shifted from wonder to concern. The bug began it's final glow cycle just as the car hit it. The bug shot upward, still lit, and very slowly dimmed as it floated to the ground. I watched the bug's life very literally dim to invisibility. I was 16 and that moment is forever glowing in my memory.

As discussed in my introduction Walter Benjamin's essay "Art in the Age of Mechanical Reproduction" speaks of the value of the unique work of art and of the all-important presence of the artist's hand. Benjamin's related discussion of "the contemporary decay of the

aura"(Benjamin) of unique objects, expressed some seventy years ago in that essay, foreshadows the current radical transition to the non-physicality of digital representations.

Nowhere are his insights into the transcendence from the unique and to the mass-produced work more relevant than in the nature of digital art, where the physical is often an after-thought to the work's concept. When traditional art mediums experienced with Benjamin's "unarmed eye"[1], the aura perceived is in response to the physical painting of a subject or concept. The concept of Vincent Van Gogh's *Starry Night* is embedded in the aura of the unique. The intended concepts of all art should be embedded in the physical medium, which possess the aura. Yet digital art tends to drop the necessity of the very physical, which intensifies the experience of the aura.

Marshal McLuhan's paper written in the 1960s, "The Medium is the Message" argues that a medium possesses a message of its own and that there is an intrinsic value in the medium through which a message is sent. The medium "contains"[2] elements of older mediums, which convey a concept. The example that McLuhan cites is the light bulb, which has many different uses and can convey different ideas. The computer, like the light bulb, is a medium that can adapt and change depending on its use. Computers thus "contain" older mediums such as calculators, books, television, print, telephone; and a computer used as a tool to express creative thought and to challenge society contains the proceeding art mediums such as painting, sculpture, and video. It is the users of the computer who decide what the computer is and what mediums it contains. The computer as an element in a digital art project must act as an extension of traditional artwork so that it is acknowledged as such. For a work to be acknowledged as a unique painting would be, a viewer needs to be exposed to what Benjamin referred to as the aura of that work. If perceived as a computer in the sense of a machine used to calculate numbers, then any possible acknowledgment of it as

traditional artwork is lost. This is not to say that any concept of the work that uses the computer as a medium is voided, but that the art should be appropriate to the concept. If the computer is relevant to the concept, as in New Media artist Corey Arcangel's piece "Permanent Vacation,"[3] then the physicality of the computer as such is essential. In "Permanent Vacation" two computers are set up with email clients that respond to one another with an email that says "Out of Office," in an infinite loop. In this case the artist has taken into account the physicality of the computer and is sensitive to the importance of the computer's presence.(In this case all other physicality is "Out of Office!"). However if the computer is not a fundamental element of the artwork's concept, then its role should be minimized in lieu of the physical elements that do reflect the ideas an artist intends to convey.

The concept is also a part of the art and a part of what is in essence the aura. A physical aspect that mimics the concept contained in the aura will elicit a reaction from the viewer that is in sync with the concept. A viewer will take in and will therefore respond emotionally in a manner that is constant with the work's aura. If an artist adequately represents his idea physically, then the user can intuitively understand the type of input to give it in order to receive the full effect of what the artwork is. A viewer expects an appropriate response to their emotional input. If a work of art successfully creates a call for a feeling of social interaction, then the viewer will respond with their own personal feelings in order to experience the ideas the work was intended to convey.

In 1966 Joseph Weizenbaum wrote a program "ELIZA"[4] which simulated the responses of a psychologist. It was Weizenbaum's intention to write a program that parodied the responses of a real psychologist; he didn't imagine his program would be used as a replacement for human treatment. Very much to his surprise some users found comfort interacting with the program and treated it as a real psychologist, sharing real feelings even

when aware it was a program and not a real psychologist. In *Life on the Screen* by Sherry Turkle, a few examples of people interacting with ELIZA are mentioned. In one case the user interacts with the program and without feeling any particular attachment; in this case the program doesn't fulfill the position that a real person can. In a second case the person challenges the limitations of the program, asking it questions with the intention of fooling it and exposing its weaknesses. In another example the person played the "how alive can I make it ELIZA seem" game (Turkle 109) and said that she enjoyed the experience and felt a lot was gained by it. When asked about the program's limitations the person replied saying that she knew of the limitations and therefore only asked the program questions she knew it would respond to appropriately. The user knew what the program was designed for and capable of and fed the program information that she knew would elicit proper responses. This attitude resulted in a more fulfilling emotional experience with the program.

Facebook and Myspace[5] are social websites that can be viewed as programs that thrive as ELIZA did on emotional information sharing. Instead of being written to mimic humans, they're written to act as tools for human interactions. In the physical world social communication consists of many elements such as body language, facial expression, vocal tone, and any other passive interactions we make. On the surface it would seem that these mostly passive interactions are lost when filtered through clumsy input devices like keyboards and simplified to a digital understanding, but in reality these passive interactions don't disappear. They shift. The 'body language' of those on social websites is conveyed in the types of interactions we choose. The ways in which we interact with each other become little mannerisms of the virtual such as when and how often we connect, the information we share, and the tools we use.

People tend to use these sites in different ways and form their own etiquette just as in

real life. I for instance only befriend people I am friends with in the physical world. That's just how I choose to use social sites. I have a few friends who live hundreds of miles away whom I have not seen in years with my "unarmed eye," however I talk to them more through these sites than I do some best friend that live close by. Although my interactions with those who live far away feels more filtered than those I see physically more often, I still get a sense of being connected. Technically all that is being exchanged between myself and my distant friends is information, but the way we interact comes across as who we are as individuals. The way we interact is also governed by how we input information and what information we volunteer. Just as in Sherry Turkle's example, the user that plays the "how alive can I make ELIZA seem" game (109) gets the more appropriate and effective response. In this case the appropriate use of a virtual social network will dictate the emotional effectiveness of the interaction. The exchange is all the more powerful if that user is responding to a unique artwork's aura and matching embedded concept.

"Social Network" is designed for a digitally conveyed emotional interaction and this is possible not only through a connection with the artist and the unique work's aura but also because the physical work itself explicitly calls for a certain emotional interaction. The work should effectively convey what type of input is needed in order to function most efficiently.

In the time we live in we find ourselves surrounded by many of these new and exciting ways of communication without ever being near a person. The Internet is an incredibly exciting medium because it can join together anyone, anywhere, at anytime, on a relatively equal plane. The Internet is a centralized and decentralized system. It's a web of equal parts sitting on different branches. Every person connecting on social networks sits at a different, yet equal node, and this leads to the same type of social groups that develop in real life. A visualization of the web would serve as a graphic representation of how communities develop

and define themselves along interest lines. These social groups can be seen as a branch on varying levels of a tree with each leaf/individual of equal value on a branch. Each individual leaf contributes to the overall vitality or strength of that branch. The publicly editable encyclopedia website Wikipedia[6] can be seen as such a branch. The site consists of many individuals with simple interactive tools with a common goal of sharing, collecting, and monitoring information. It can be said that the individuals can make errors and create misinformation, but it's not the intelligence of the individual that makes Wikipedia 'smart.,' it's the sum of the individual contributors. "While the number of malicious edits and the number of edits to fix the damage may be comparable, the average time that articles spend in damaged states is much smaller than the average time that they spend in fixed states. Large attacks are quickly detected and fixed; while small and malevolent changes may last longer, they are comparatively few and far between." [7] The result is more reliable information than any one individual. Even unintentionally incorrect information exists for only a short time.

Protocol, one of many books that tries to tackle the understanding of just what the internet is and starts to dissect it's elements. The Internet allows a level of massive communication, a massive amount of users and contributors. "Many-to-many communication is a structure of communication where each receiver of information is also potentially a sender of information... ..Feedback loops are necessary to help produce the active subjectivity of the user"(Galloway 68). The sum of a lot of these simple individuals with their own specific bit of input makes for a stronger community as a whole. Just as with synchronized pulsing lightning bugs there is no main brain or leader. Intelligence emerges from a community of individual elements governed by simple, seemingly inconsequential input and output.

Lightning bugs make the perfect metaphor for virtual connection.

Their pulsing can represent individuality, simplicity, society, communication and mortality. "But

at a deeper level, there is a connection, one that transcends the details of any particular mechanism. That connection is mathematics. ... By studying simple models of fireflies and other self-organizing systems, scientists are beginning to unlock the secrets of this dazzling kind of order in the universe”(Strogatz 14). Individuals that begin blinking at their own pace eventually fall in line and synchronize despite the inherent chaos of the World Wide Web. This is how a lightning bug can represent those “jacking”[8] in to the Internet and virtual communities. The emergence of synchronization is achieved through a common level of emotionally driven interaction between elements, and lightning bugs are a natural example of this group interaction visualized beautifully in nature.

Software artist, Jonathan Harris creates programs that sift through Internet data of people sharing their desires and feelings. In his program “We Feel Fine”[9] he sifts through comments that contain the phrase “I feel.” The software visualizes people that are connecting virtually based on how they feel. In the program there are buttons that can be used to sort through the feelings and emotions people have shared online and create a kind of order in what was once chaos. The program visualizes the emotions, and through that visualization a synchronicity emerges that gets exponentially stronger with the increasing number of unique individuals that interact.

Visualization is valuable in my work because it represents emotional connectivity and therefore warrants the proper input from the users. The aura of the unique work inspires a deeper connection with the artwork's concept. That concept is essential in allowing the user to understand the type of input he or she should share to yield a more enjoyable and honest experience just as those who have interacted with ELIZA. That input is fed into the work. With every user the concept and idea gets stronger and visually brighter, just as the lightning bug do. The artwork represents the possible emotional connection that can be transmitted

digitally. The artwork is also a testament to the value of physicality in an age of digital reproduction.

### **Analysis and Synthesis**

When I started my research I asked myself if people were able to relate on an emotional level through the use of a virtual environment, and can some sort of physical presence of that virtual network help to make that emotional connection stronger? It was through my research that I hoped to better understand many aspects of my subject matter such as virtual communication, emergence, and the value of the physical and the unique. My research was intended to help me to build a better work of art, a work of art that tested virtual communication, but more importantly exhibited my ideas as a artist and the results of my research.

My initial interest was spawned from a desire to better understand the social interactions that occurred in the virtual spaces I experienced myself. I knew this to be an important issue in the exponentially growing medium centered on user interaction. I sought to better understand the Internet, specifically how we communicate with one another through this medium. I hoped my research would lend itself to a better understanding as to why in some cases I felt a closer connection with certain people than in others. The research taught me about the social space and contributed to the creative production of the work. This understanding was implemented so that I could more accurately depict such phenomenon in a visualization constructed with a medium that fits the concept. The research certainly contributed to the work's final incarnation as I had imagined it would and just as it contributed to the medium. It also led to a much more significant change of how interactive elements would be implemented.

The research led me to change the form of interaction implemented in the work. When I set out originally to do my research I imagined the work to be more of an interactive installation -- an installation that exemplifies the interactive nature of virtual social networks as well as exhibits and tests my hypothesis. I studied just how the physicality of the work could make a user's experience more immersive. I began to see the work not as an interactive piece where gallery-goers could interact with it, but more so a piece where members of my social community interacted and worked with me to create the visualization that represented my specific social network. I focused on how the physicality of art could convey emotion into a virtual or digital environment, however the project made a big shift when the users stopped being the ones experiencing the work and became the ones helping to create it. The idea is that people interacting with a work would be more inclined to share emotional information due to its state of physical presence. Although I did find this to be true, I feel that viewers of the piece will be influenced by the physical nature of the installation. Members of my social network, who are the ones interacting, will not even be affected by the finalized piece which would contain the aura or the uniqueness that gave the work value. The idea of emotional input into social networks is still present in the piece and that experience is represented in the visualization, however the input given is not in any way subject to the works unique aura.

### **Conclusion**

“Social Network” addresses the way we interact in this age of virtual communication. It is apparent that technology has dramatically altered our communication and social perspective, and we must make adjustments to those changes. Rather than walking through this digitally redefined world blindly, it is important to consider how these transformations now

alter our daily interaction and what are the resulting consequences.

I address social sites because it is something I witness on a day-to-day basis; something that has changed my life and has extended beyond the sites themselves. It's important to understand how people act and what is possible on these sites because their effect extends beyond the computer. People react in different ways. Some people just let go and use new communication tools without fear of consequences, while others are reluctant to change what they know and are comfortable with.

I don't pretend to know or understand the ramifications of these new social interactions better than the average user. As an artist, I merely desire the opportunity to share what I've witnessed and what I feel to be possible, and hope that those who've interacted with "Social Network" walk away with questions. I hope that the next time they sign onto a social site or a massive multiplayer game, they think about the nature of means and information they will be sharing in a virtual community.

Ultimately, in this work, I show that although the medium through which we communicate has drastically changed, the elements of human interaction are still fundamentally the same. People will always desire to connect socially with one another. The world will always contain a variety of different people with different ideas. Social groups, whether virtual or face-to-face, are a constant and evolving aspect of human interaction.

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## Notes

[1] “The unarmed eye” is an expression used by Walter Benjamin in his essay “Art in the age of Mechanical Reproduction.” It means to look at something without seeing it as a reproduction of as a photograph you might see in a magazine or news paper.

[2] “Contains” is a verb that Marshall McLuhan uses in his paper “The Medium is the Message.” To 'contain' is to possess and element of something proceeding. He refers to mediums 'containing' other mediums, such as a writing “contains” the medium of speech.

[3] Corey Arcangel's “Permanent Vacation” is a frequently revisited work. It has been in many different galleries and has used many different machines, and has sent varying messages. It's kind of a mystery as to why he changes the machine, but the core concept has remained the same, and that is the exchange of 2 computers not being used by humans.

[4] ELIZA is a program written by Joseph Weizenbaum in 1966. It is considered a pivotal point in the creation of artificial intelligence. Aside from the program, the concept alone has raised many debates on the ability of a program to act as or take the place of the highly complex human mind.

[5] Facebook and Myspace are both currently popular social networking sites. They have a lot in common and feature different tools and interface. Myspace started in 2003 and Facebook started in 2004. They have thousands of users that connect through multiple means such as messaging, content sharing, and event planning.

[6] Wikipedia is a publicly edited encyclopedia. Because it is edited by anyone the information is never 100% reliable. Most institutions have banned it being cited for research for just that reason. It's continuously expanding and has become a strong element of the internet on its own. It represents the almost factual sum of all human knowledge.

[7] An article featured the blog site [Laboratorium.net](http://Laboratorium.net). The article was found on Wikipedia and it's written by a person who can be cited, unlike the persons on Wikipedia who cannot be cited.

[8] A term used in William Gibson's iconic sci-fi novel *Neuromancer*. “Jacking in” means to connect to “cyber-space” (another term coined by him). “Cyber-space” can be thought of as the internet and “Jacking in” can be thought of as connecting. Gibson's book was an underground hit on release and struck a cord with people as it well represented what we would imagine the outcome of the information age to be.

[9] “We Feel Fine” is a program written by artist Johnathan Harris. It is a website that shows a visual read out of people who connect to the internet and care to share their feelings, feel.