

7-1-2011

Performing Graffiti: The Use of Electronically and Digitally Modified Graffiti in Activist Art Practices

Megan Schultz

Follow this and additional works at: https://digitalrepository.unm.edu/arth_etds

Recommended Citation

Schultz, Megan. "Performing Graffiti: The Use of Electronically and Digitally Modified Graffiti in Activist Art Practices." (2011).
https://digitalrepository.unm.edu/arth_etds/13

This Thesis is brought to you for free and open access by the Electronic Theses and Dissertations at UNM Digital Repository. It has been accepted for inclusion in Art & Art History ETDs by an authorized administrator of UNM Digital Repository. For more information, please contact disc@unm.edu.

Megan Schultz

Candidate

Art History

Department

This thesis is approved, and it is acceptable in quality and form for publication:

Approved by the Thesis Committee:

Susanne Anderson-Riedel , Chairperson

Catherine Zuromskis

Lee Montgomery

**PERFORMING GRAFFITI: THE USE OF
ELECTRONICALLY
AND DIGITALLY MODIFIED GRAFFITI IN
ACTIVIST ART PRACTICES**

BY

MEGAN SCHULTZ

**B.F.A., PAINTING AND PRINTMAKING,
VIRGINIA COMMONWEALTH UNIVERSITY, 2002**

THESIS

Submitted in Partial Fulfillment of the
Requirements for the Degree of

**Master of Arts
Art History**

The University of New Mexico
Albuquerque, New Mexico

July, 2011

PERFORMING GRAFFITI: THE USE OF ELECTRONICALLY AND DIGITALLY MODIFIED GRAFFITI IN ACTIVIST ART PRACTICES

By

MEGAN SCHULTZ

B.F.A, Painting and Printmaking, Virginia Commonwealth University, 2002

M.A., Art History, University of New Mexico, 2011

ABSTRACT

The role of the artist has expanded. Artworks increasingly occupy spaces not traditionally allocated for artistic practice. The materials and methods used for creative expression, along with the use of new spaces for the production, exhibition, and distribution of artistic activity work together to break down previous notions of the function of art. An example of a new mode for art practice may be seen in an increased use of technology by artists. Although artists have addressed technology and mechanization as subjects of their work since at least the Industrial Revolution, new artworks employ technology not only as a theme within their practice, but take advantage of technology increasingly ubiquitous presence. Digital and mechanical materials are incorporated into works that seek to encourage audience participation and promote community oriented interaction. Likewise, scientists and engineers are increasingly employing design strategies in the display and organization of data and in the construction of engaging models and mockups. An increasing number of artist are including technology within their artistic practice to address larger social and political issues, using technology as both a material and a symbol. This paper seeks to illustrate these new trends in

art-making, focusing on works that meld graffiti with electronic and digital media as a means to initiate public interaction. The specific projects discussed, “Laser Tag,” by the Graffiti Research Lab, “Graffiti Writer,” by the Institute for Applied Autonomy, and “Grafedia,” by John Geraci, all uniquely combine graffiti and technology in works aimed at facilitating the artists’ social activist goals.

Each project provides an example of artists and collectives working within the tradition of political art but by means of new methods and a variety of mediums. *Laser Tag’s* use of laser and projection technology, *Graffiti Writer’s* robotics, and *Grafedia’s* employment of the Internet illustrate the variety of methods explored in this form of art activism. These artists use graffiti and electronic and digital technologies both as materials and symbols of the powerful and the powerless to critique institutional, corporate, and governmental control. Due to the transformation of graffiti and technology, combined with an interest in initiating interaction as a means for social activism, the works discussed inhabit a unique realm that is not wholly dictated by art, technology, or activist practices, but rather they occupy a space that is an amalgamation of these distinct areas akin to performance art.

TABLE OF CONTENTS

List of Figures	vi
Introduction.....	1
Chapter 1: Graffiti as Symbol.....	12
Chapter 2: Technology and Graffiti.....	31
Chapter 3: Performance and Protest	58
Conclusion	72
Bibliography	77

LIST OF FIGURES

Figure 1: Example of Grafedia, “Heystrenger” in New York’s East Village and linked online content, 2005, www.grafedia.net	4
Figure 2: IAA’s “Graffiti Writer,” www.appliedautonomy.com	7
Figure 3: Graffiti writer, Temptone: spray painted tag, New York City www.graffitiresearchlab.com	9
Figure 4: Graffiti writer, Temptone: Laser Tag, New York City, www.graffitiresearchlab.com	9
Figure 5: GRL, “Laser Tag” equipment set-up, Rotterdam, Netherlands, 2007 www.graffitiresearchlab.com	10
Figure 6: GRL, “Laser Tag” appearing on the KPN Telecom Building, Rotterdam, Netherlands, 2007, www.graffitiresearchlab.com	10
Figure 7: Graffiti writer, Taki-183, New York City www.taki183.net	13
Figure 8: GRL, Laser Tag, Brooklyn Bridge, 2007 www.graffitiresearchlab.com	18
Figure 9: GRL, “Laser Tag” Pyramid of Cestius, Rome, Italy, 2007 http://fffff.at/fuckflickr/ROMA_2007/ image number: P1020868.....	18
Figure 10: IAA’s Graffiti Writer, text example www.appliedautonomy.com	19
Figure 11: Crowd gathered and participating at a Laser Tag demonstration, Taiwan, 2007, http://fffff.at/fuckflickr/TAIWAN_2007/	35
Figure 12: Crowd viewing, participating in Laser Tag appearance in Barcelona, Spain, 2008, www.graffitiresearchlab.com	36
Figure 13: GRL, “Laser Tag,” appearance in Hong Kong, 2007 http://fffff.at/fuckflickr/index.php?dir=data%2FHONG_KONG_2007%2F image number: IMG_4058	46
Figure 14: GRL, “Laser Tag,” appearance in Hong Kong, 2007 http://fffff.at/fuckflickr/index.php?dir=data%2FHONG_KONG_2007%2F image number: P1020164.....	46
Figure 15: Crowd gathered at a Laser Tag demonstration, New York www.graffitiresearchlab.com	49

Figure 16: Image of multiple layers of graffiti and street art, Brooklyn, New York,
2010, Photographed by the author.....59

Figure 17: Graffiti Writer texts on street, Karlsruhe, Germany
<http://www.appliedautonomy.com/images/street04M.jpg>59

INTRODUCTION:

The 2001 catalog for Ars Electronica, an annual arts festival celebrating the integration of art and technology, included the following statement describing the evolving role of the artist:

The task of tomorrow's artists is that of an intermediary, a catalyst between diverse fields of knowledge, ways of thinking, social models, and solution strategies.¹

This declaration articulates recent trends towards an expansion of the artists' domain, as artists occupy spaces not traditionally allocated for artistic creation or experience, increasingly appearing within the realm of social activism. Using new materials and sites for artworks, the projects created by these artists have a new functionality. The works' producers often abandon object formation, choosing to focus instead on the production of social and cultural effects. These social and cultural productions lean towards a performative nature, critically engaged, and interested in fostering interaction between artist, artwork, and art viewer. Appropriating performance strategies helps create opportunities for social interaction with a wide-ranging audience. The delivery of a social or political message is further assisted by a variety of tactical means, including imitation, appropriation, and reconfiguration. The combination of art and technology, two arenas that are generally segregated through the specialization of their practitioners, as well as through their ideology, is one such tactical method employed to produce atypical situations. These atypical situations allow art and technology to move away from their designated contexts and create new meanings and experiences for both the artworks and

¹ Gerfried Stocker, "Takeover: About the Thing Formally Known as Art" in *Ars Electronica 2001: Takeover: Who's Doing the Art of Tomorrow*, ed. Ingrid Fischer-Schreiber, Heimo Razenbacher, Jutta Schmiederer (New York: Springer-Verlag Wein, 2001), 14.

their audiences. Projects that flow freely between contexts of art, technology, and social interaction are able, largely due to the works' multi-functionality, to engage with a multi-varied audience, thus making these projects particularly suited to social activism.

The following paper investigates this relationship between art, technology, and social activism through a particular analysis of works that perform graffiti, mediated by technology, with the intention of initiating social and political criticism. This investigation will focus primarily on the specific projects of one artist and two artist groups: John Geraci's *Grafedia*, the Graffiti Research Lab's *Laser Tag*, and the Institute for Applied Autonomy's *Graffiti Writer*. The particular combination of graffiti and technology in artworks with critical intentions will be explored as a means of discussing a broader scope of artistic activity that purposefully blurs the distinction between art, activism, and everyday life. Each project will be addressed within the contexts of graffiti, "new media," and artistic activism. These three contexts are connected when the works are interpreted as a form of performance art.

The fusion of graffiti with electronic and digital materials in these projects is used to communicate a range of political intentions possessed by the individual creators. Their methods involve the tactical manipulation of semiotic systems to engage in social critique. In each example, the artists purposefully imitate systems of power, inserting the signifiers from both graffiti and forms of mass media and robotics into various situations typically controlled by those power systems. In the process of this technological fusion, several defining characteristics of graffiti are abandoned. In many cases, the medium is reduced to its basic definition as a form of public writing, thereby highlighting the political and historical significance of the act of public writing. Through laser and

projection technologies, Internet applications, and robotics, graffiti, specifically the graffiti “tag,” is transformed from an object to a subject of performance. The following is an investigation into the varying methods and strategies for transforming graffiti through its combination with new media and this hybrid’s effectiveness as a form of social activism.

Grafedia, a project created by John Geraci in 2004 while a graduate student in the Interactive Telecommunications Program at New York University, provides an example of work that specifically uses the technology of interactive hypertext to expand the site of graffiti into the public space of the Internet. Participants in *Grafedia* are instructed to choose a word, write that word in blue and then underline it—identifying the word as a hyperlink. The underlined blue word is then attached to “@Grafedia.net” to complete a link to the Internet in the form of a website. Visual or sound files may then be uploaded to the site created. Examples of this online content range from photos to poems to additional websites. Finally, the *grafedia* author writes the hyperlink anywhere in public spaces. Informed or curious viewers of *grafedia* then send an e-mail message to the hyperlink to view the online content. New cellular phone technology also allows viewers to take a photo of the hyperlink to connect to the online content instantly. Examples of *grafedia* range from the subtle—a simple blue underline of an already existing printed word on perhaps an advertisement—to the more explicit writing of the complete hyperlink format.²

² www.grafedia.net



Figure 1: Example of *Grafedia*, “heystranger,” written on a public advertisement in Brooklyn, NY and its corresponding online content, 2005.

Geraci believes that *Grafedia* empowers its users by allowing anyone to initiate interactive media.³ Through *grafedia* hyperlinks, people can view, add to, or comment on the attached online content. Traditional materials for graffiti writing such as spray paint or markers can be used in the physical writing of the hyperlinked text in public spaces, but has also been distributed through unconventional methods in the form of note cards and even appearing as tattoos.⁴ *Grafedia* differs from traditional graffiti writing, however, through its continuation online and its interactive intentions. Rather than the words

³ Rachel Metz, “It’s Not Graffiti, It’s Grafedia,” *Wired*, March 25, 2005, accessed June 6, 2011, www.wired.com/print/culture/lifestyle/news/2005/03/66992.

⁴ Examples of *grafedia* may be accessed on Geraci’s *Grafedia* website: [http:// www.grafedia.net](http://www.grafedia.net)

written on walls bearing the sole content, additional meaning is contributed by the written text's connection to the Internet both spatially and through the hyperlinked online content. Through this connection, graffiti can occupy a multitude of spaces and become an interactive medium that allows for alteration by and contributions from public viewers. Since its launch in 2004, thousands of files have been uploaded to *grafedia* links written all over the world. *Grafedia* has also been incorporated into other artists' online projects, highlighting *Grafedia's* collaborative spirit.⁵ While *Grafedia* gained a significant amount of users when it was first introduced, its popularity has fluctuated since its inception and many links are no longer active. Short life-spans are typical of Internet based works and, as will be seen further in this discussion, is not considered a negative characteristic, but its ephemeral nature allows works to be fluid and adaptable to the needs and concerns of the communities the work addresses.⁶

The *Grafedia* project uses graffiti to place emphasis on public space of both the street and the Internet. As a form of unauthorized writing in public space, graffiti brings its sense of freedom in unrestricted expression to the forum of online sites. IAA's *Graffiti Writer* and its offshoot, *Street Writer*, also appropriate graffiti's expressive sensibility, but does so through individualized content rather than stylization and with a greater emphasis on mechanical apparatuses. Since IAA's founding in 1998 in New York City, this collective of anonymous artists, engineers, and researchers, has focused largely on incorporating robotics and automation into social activist roles. IAA's mission

⁵ Christina Ray, used *grafedia* to encourage interactivity on her online magazine, Glowlab. Her work focuses on "psychogeography," and explores the effects of spaces on the actions and mental states of people. Ray's *grafedia* tag, "heystranger @Grafedia.net" appeared in locations around Williamsburg, Brooklyn. The attached image file is a white shadow on a brick wall with the words "Hey stranger, what are you up to today?" followed by a second e-mail address prompting the visitor to reply to the posted address. Responses are then displayed on her website: www.christinaray.com

⁶ Julian Stallabrass, *Internet Art: the Online Clash of Culture and Commerce* (London: Tate Enterprises Ltd., 2003), 40-41.

statement describes themselves as a “technological research and development organization dedicated to the course of individual and collective self-determination and to provide technologies which extend the autonomy of human activists.”⁷ To this end they have created several projects under the initiative known as “Contestational Robotics,” that includes a robot known as “Little Brother”(2004) that distributes “subversive literature” in the form of informational pamphlets, and the *Graffiti Writer* (1999) and *Street Writer* (2001), two variations of text writing machines. IAA’s use of robotics takes advantage of the range of historical associations with robots from the entertainment industry, to military campaigns, to medical applications, and applies them to IAA’s own agenda of social and political critique.⁸

IAA combines robotics with graffiti’s own history of social rebellion in the *Graffiti Writer* and *Street Writer* projects. The *Graffiti Writer* is a mobile tele-operated robot that resembles a remote-controlled car, and is used to deploy rows of spray cans, which, through dot-matrix printing methods, writes linear text messages at a rate of ten miles per hour directly onto the street. *Street Writer* literally expands this technology by moving the painting apparatus into a 1986 Ford extended-body cargo van. With *Street Writer*, messages can be written longer and larger and are capable of being seen from aerial perspectives.

⁷ IAA website, accessed June 6, 2011, [http:// www.appliedautonomy.com](http://www.appliedautonomy.com)

⁸ Institute for Applied Autonomy (IAA), “Engaging Ambivalence: Interventions in Engineering Culture,” in *DataBrowser 2: Engineering Culture*, ed. by Geoff Cox and Joasia Krysa (New York, NY.: Autonomedia, 2005), 97. Steve Dixon, *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation* (Cambridge, MA: MIT Press, 2007),272-274.



Figure 2: IAA's *Graffiti Writer*

Whereas the *Grafedia* project employed more intangible technologies—the Internet, hyperlinks, cellular telephone communication—the robotic technology used in the IAA's works possess more physicality. The result is often a greater public display of the graffiti writing process as the robots themselves tend to draw onlookers. This ability to attract crowds enables a different form of interaction from the collaboration achieved in *Grafedia* activities. The interactivity in *Grafedia* occurs over the Internet, among anonymous participants, with little or no physical contact between the creator and the viewer. In contrast, *Graffiti Writer* typically appears at public events or alternatively, creates small-scale public events when curious crowds are invited to operate the robotic text machine. While interaction between *Grafedia* users may be delayed and continuous,

the participants and viewers of *Graffiti Writer* interact with each other in the same space and time.

This form of public interaction is also central to the work of Graffiti Research Lab (GRL), although their emphasis is more on the graffiti writing process as an action. In contrast to *Graffiti Writer's* mechanized fonts that scarcely resemble traditional graffiti writing, GRL's *Laser Tag* system intentionally attempts to recreate a graffiti writing experience, albeit with lasers beams instead of spray paint. While the technological tools they use, laser beams and digital projectors, are also well suited for gathering crowds, these devices are more in the service of promoting graffiti writing as an art form. Founded in 2005 by Evan Roth, a design school graduate and software programmer, and James Powderly, a former robotics engineer, the work of GRL is largely concerned with making graffiti more approachable and acceptable to wider audiences. Roth and Powderly's social activist interests are expressed through their recognition of graffiti as a format for free personal expression and as capable of making a commentary based in corporate criticism.⁹ Rather than radicalizing graffiti and further alienating the public from graffiti culture, their projects achieve the opposite, enlisting the public in graffiti writing campaigns.

GRL's range of work includes the creation of the "throwie," essentially an LED affixed to a magnet tossed onto any metal surface. "Throwies" may be used to spell texts or to simply transform an object, a wall, or building into a multi-colored light display. GRL also has continuously developed the "Eyewriter," a device made specifically for

⁹ Evan Roth, "Geek Graffiti: A Study in Computation, Gesture, and Graffiti Analysis," (master's thesis, Parsons School of Design, 2005), http://a.parsons.edu/~rothe839/thesis/graffiti_analysis_09.pdf, 7-8, 12.

graffiti artist, Temptone, who suffers from Lou Gherig’s disease-induced paralysis. “Eyewriter ” tracks Temptone’s eye movements, which are then translated digitally into pixels and projected as light-based versions of his graffiti onto the sides of buildings throughout New York City.



Figure 3: Graffiti Writer, Temptone’s spray-painted tag, New York City



Figure 4 Graffiti Writer, Temptone’s Laser Tag version of his tag projected on a city wall in New York City.

Laser Tag allows for the real-time viewing of graffiti writing directly on a wall's surface. In its simplest form, the *Laser Tag* system is a camera connected to a laptop, which together, track a green laser point across the face of a building. Graphics written with a laser beam are replaced by white pixels and projected back onto the building's surface through a high powered projector. The result is the amplification of a tag or message created instantly before the public's eye.



Figures 5, 6 *Left to right*: Laser Tag's equipment set-up, and an example of Laser Tag written on the side of a building. Both images are from Laser Tag's inaugural trial in Rotterdam, Netherlands, 2007

Similarly to activities that take place with IAA's *Graffiti Writer*, the words that are written with *Laser Tag* vary, from the politically motivated to the scribbled doodles, names, and messages of individual participants. Their aim with the *Laser Tag* project is

to promote individuals' rights to public space and public creative expression as a form of free speech, a shared concern with the graffiti artists they support and emulate.

Through the Internet, laser and projection equipment, and robotics, each of these projects exposes graffiti to new audiences. GRL, IAA, and Geraci illustrate underlying mechanisms of graffiti production as well as unveil hidden semiotic structures dictated by systems of power. These artists accomplish this task through initiating a public relationship with the materials used: graffiti and digital or electric technologies. Due to the materials used by GRL, IAA, and Geraci, as well as their interactive intentions, their works may be analyzed within the distinct contexts of graffiti, technology, performance, and social activism. Viewed from these different perspectives, the projects illustrate the intermediary character called for in Ars Electronica's description of the role of tomorrow's artist. The *Graffiti Writer*, *Laser Tag*, and *Grafedia*, are interactive and socially conscious. They also diminish boundaries between art and technology, uniting the two fields to function together in a social activist capacity.

CHAPTER ONE: GRAFFITI AS SYMBOL

Graffiti Research Lab, the Institute for Applied Autonomy, and Josh Geraci each make variations of graffiti. Each project, *Laser Tag*, *Graffiti Writer*, and *Grafedia*, incorporates some form of writing activity on public walls, streets, or objects, similarly occurring in traditional graffiti practices. Additionally, innovation, modification, and community development, central themes in these digitized graffiti projects, are all historically connected to graffiti writing traditions. Infusing these characteristics with the aesthetics of graffiti allow for an approach to *Laser Tag*, *Grafedia*, and *Graffiti Writer* as evolved forms of graffiti writing. To understand why graffiti writing and graffiti culture would be a desired element in these technologically modified versions of graffiti, both for its aesthetic and social significance, a description of graffiti's history and symbolism is necessary.

The foundations of the electronic-based versions of graffiti, reside specifically in the development of the "tag" during the late 1960s and early 1970s in New York City. "Tags" as individual signatures of graffiti writers symbolize graffiti culture. *Laser Tags* often appear stylistically similar to traditional tags in addition to appearing in similar sites as their historic counterparts, while the text written with the *Graffiti Writer* and in *Grafedia* evoke comparison to graffiti simply through the act of writing in the street. Each project absorbs the symbolism attached to graffiti tags as representations of public rebellion and individualism.

The notion of the tag as a marker of an individual is an essential characteristic appropriated in GRL's, IAA's, and Geraci's technologically modified versions. Early

graffiti tags were composed of the writers' name followed by their street number, for example, Eva 62 or Tracy 168. The tag, composed of a name and street number, tied mark-making on the street directly to a particular individual from a particular place.¹⁰ From the outset, the purpose of the tag was fame. The writer, Demetrius, often credited as the originator of the "tag," purportedly scrawled his name, Taki 183, throughout New York City emulating the election campaign posters and stickers plastered around Midtown Manhattan in an attempt to attract attention from journalists or filmmakers.¹¹



Figure 7: Graffiti Writer, Taki-183, spray-painting his tag on a New York City wall, 1970

His methods were quickly copied and instances of "tagging" grew. As tag-writing increased, the graffiti writers' aims of publicity through pervasiveness shifted to recognition through stylization.¹² With personal stylization added to an individual name and street number, the tag became a representation of the writer's personality, neighborhood, and creativity. In more expressive versions that incorporated drips,

¹⁰ Lisa Gottlieb, *Graffiti Art Styles: A Classification System and Theoretical Analysis* (Jefferson, NC: McFarland and Company, Inc., 2008), 12.

¹¹ Taki's website, accessed June 6, 2011, [http:// www.taki183.net](http://www.taki183.net)

¹² Gottlieb, *Graffiti Art Styles*, 35-37.

arrows, and saturation variation, the tag also became a record of the movement and physical presence of the writer.

Graffiti may also indicate and represent the stratification present within social hierarchies. Tags have been a frequent subject of contention for the public and public authorities, evident in tagging's illegal status and the many initiatives in place to prevent graffiti's production.¹³ Consequently, the tag has been at the center of discussion involving issues of class, urban plight, failures of modernist designed and socially concerned architecture, and the ownership of public spaces.¹⁴ The tag, as a representation of urban lower-class youth, when erased by institutions of power, represented by the police and the government, may then illustrate socioeconomic relationships between lower classes and those in power.¹⁵

As indicated by Taki-183's intended imitation of campaign posters and the tag's frequent placement next to or over top of advertisements, the tag acts as defiance against the repression of the individual by a capitalist created mass consumerism. When confronted in an interview by the New York Times about the cost of graffiti removal, Taki responded: "I work, I pay taxes too and it doesn't harm anybody. Why do they go after the little guy? Why not the campaign organizations that put stickers all over the

¹³ For example, New York City's Police Department website describes the vast array of anti-graffiti measures taken by the city government, including surveillance technology, increased fines for graffiti writers, and initiation of a "graffiti hotline" which may be dialed to report graffiti complaints. They have also created a "Combating Graffiti" pamphlet detailing the methods that may be employed to eradicate graffiti. Interestingly, the subtitle of the pamphlet reads: "Reclaiming the Public Spaces of New York." This is often a stated goal of graffiti and street artists, indicating the continuing battle for rights to "public space" between graffiti writers and public officials. www.nyc.gov/html/nypd/html/home/home.shtm

¹⁴ Cedar Lewisohn, *Street Art: The Graffiti Revolution* (New York: Abrams, 2008) 14, and Susan Stewart, "Ceci Tuera Cela: Graffiti as Crime and Art," in *Life After Postmodernism: Essays on Value and Culture*, ed. John Fekete (New York: St. Martin's Press, 1987), 164.

¹⁵ Stewart, "Ceci Tuera Cela," 175.

subways at election time.”¹⁶ Similar sentiments are echoed in statements by Geraci and IAA that reflect their beliefs in an individual’s equal right to share space with corporations. Geraci has described his *Grafedia* project as an alternative outlet for interactive media—a field largely dominated by wealthy program developers—stating, “*Grafedia* is the option for the little guy to get involved in that dialog.”¹⁷ IAA speaks of the “myths of citizenry, public space, [and] open discourse” in the face of an “increase in expression management and spatial fortification,”¹⁸ enforced by corporate and government bodies.

Graffiti writers borrow a graphic style from commercial examples. Additionally, appropriating a corporate or election campaign distribution model supports the reading of the tag as self-advertisement. By sharing space with commercial advertisements, tags illustrate a contrast between the personal and the corporate mark. The graffiti tag stands, in part, as an objection to the leasing of public space to the wealthy as a site for promoting their continued social, economic, and cultural control. The connection of graffiti writing to advertisements is even more significant in later works that adopt a more focused aim specifically against corporate power. GRL in particular holds an anti-commercialism stance in their works, aligning closely with the open-source movement.¹⁹

Their projects are explicitly not for sale. GRL discourages financial profit from their

¹⁶ New York Times, “Taki Spawns Pen Pals,” July 21, 1971, pg 37, accessed May 30, 2011, http://taki183.net/_pdf/taki_183_nytimes.pdf

¹⁷ Metz, “It’s Not Graffiti, It’s Grafedia,” *Wired*, (March 25, 2005), accessed April, 2011, culture/lifestyle/news/2005/03/66992

¹⁸ IAA, “Contestational Robotics: Critical Art Ensemble and Institute for Applied Autonomy,” accessed June 6, 2011, <http://www.appliedautonomy.com/objectors.html>

¹⁹ See “The Open Source Initiative,” a non-profit organization aimed at promoting open source communities: <http://www.opensource.org/>. The term “open-source” describes production and development practices that encourage access to a product’s source materials. Initially centered on releasing source code in Internet applications, open source has since come to indicate a philosophy of creative production that embraces information sharing, free from copy writes and made readily available to the public.

works by allowing free access to the technologies developed in their projects. GRL website visitors may download detailed instructions to re-create, modify, and adapt each mechanical device for their own purposes.²⁰ This form of collaboration is similar to earlier graffiti writing practices in which new writers emulate and build upon the styles of their mentors. Tags also often appear next to pre-existing tags or other forms of street art, forming walls full of co-existing examples.

The nature of graffiti to overlap with other visual material led to the tag's increased stylization as graffiti writers competed with corporate advertisements, as well as fellow artists, for recognition. The communicative aspects of street signs and advertisements, clearly and quickly legible to a wide range of viewers, are transformed by graffiti writers into increasingly complex fonts that are often illegible to an uninitiated viewer. As a result, graffiti writers separated themselves from the general public, forming an insular community with its own language and culture. As will be discussed in greater detail later, the work of GRL, IAA, and Geraci extends this community of graffiti writers to include the uninitiated public through their aims of transforming graffiti into an interactive public event.

Each of the projects by GRL, IAA, and Geraci borrow elements from graffiti. The creators of *Laser Tag* worked closely with graffiti writers to develop software capable of imitating some of the spray-painted effects that were the hallmarks and innovations of traditional graffiti. While *Laser Tag* is limited to single colors of laser beams, the *Laser Tag* mechanism offers a range of line thicknesses and dripping effects. The ability to appear similar to tags written with markers or spray paint is an important factor in GRL's

²⁰ Links to instructions for GRL innovations may be found on their website, <http://graffitiresearchlab.com>

work, whose goal is, in addition to promoting open access to public space, to promote graffiti as a legitimate form of expression.²¹

In addition to imitating graffiti's physical likeness GRL's laser tags often appear in similar sites as traditional graffiti, such as city walls and building facades. Examples of *Grafedia* are also written in spaces typically occupied by graffiti such as posted advertisements, street lamp posts, mailboxes, or exterior and interior walls, but laser tags especially embrace the graffiti writing tradition of spectacular tag placement for the purpose of gaining greater attention and notoriety. The scope and non-damaging character of the laser beams used in *Laser Tag* allow GRL access to sites otherwise off-limits to graffiti writers, resulting in *Laser Tag* displays on the surface of the Colosseum in Rome, the Brooklyn Bridge in New York, and on the side of a mountain in Park City, Utah.

²¹ Evan Roth, interview by Alexander Tarrant, *Juxtapose*, no.117 (October, 2010): 124-135



Figure 8: GRL Laser Tag on the Brooklyn Bridge, NY. 2007



Figure 9: GRL's Laser Tag on Pyramids of Cestius, Rome, Italy, 2008

Access to potentially politically charged sites increases GRL's ability to make social commentary. Users of *Laser Tag* have written "for sale" on the Rome Colosseum, "rebuild" on a building in post-hurricane Katrina New Orleans, Louisiana, and pro-Tibet statements at sites around the 2008 Olympics in Beijing, China.

IAA's Graffiti Writer has also been strategically deployed at politically significant sites and events. *Graffiti Writer* dispersed the message, "voting is futile" outside the Capitol in Washington, DC in 1999. In 2007, the Graffiti Writer made an appearance at the Defense Advanced Research Projects Agency (DARPA) Grand Challenge Event writing, "A Robot Must Not Kill," Isaac Asimov's first rule of robotics²², onto the streets surrounding the event. DARPA, directed under the United States Department of Defense, distributes funds from military sources to academic and corporate sectors to foster the creation of new technologies intended largely for military use. Their focus on creating robotic weaponry made DARPA a target of IAA's criticism. IAA's presence at DARPA's event illustrates the *Graffiti Writer's* protest function.



Figure 10: IAA's Graffiti Writer texts at DARPA Grand Challenge Event

²² There are three rules concerning robots written by science fiction writer, Issac Asimov. The rules were introduced in his 1942 short story "Runaround" published in Asimov's "I, Robot," (New York, Gnome Press, 1951)The Laws are:

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.
2. A robot must obey any orders given to it by human beings, except where such orders would conflict with the First Law.
3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

Graffiti writers often use location to gain respect within a graffiti artist community, as the appearance in less accessible spaces contributes to a writer's fame. The difficulty posed by writing in high security areas, or in physically challenging sites proves the writer's cunning, ingenuity, and physical prowess. Additionally, the appearance of graffiti on specific buildings or walls may contribute greater social or political significance, as seen in the intentional placement of IAA and GRL graffiti. *Grafedia*, likewise, addresses the public site of graffiti, although rather than make a specific political statement, *Grafedia's* presence critiques the broader notion concerning a privatization of public space. The graffiti written on the street and connected to content on the Internet expands both the territory of graffiti and provides the opportunity for any place such as a wall, a sidewalk, or a body, to become a website. The connection of public and private spaces and behaviors is central to a comparison of *Grafedia* and the graffiti tag.

Typically, the process of writing graffiti tags is a private behavior, often taking place at night, in secret, and done alone. Although this methodology is generally employed to avoid legal repercussion, the clandestine ritual of graffiti writing has lent the tag a sense of mystery. This sense is particularly felt in the more elaborate graffiti pieces that garner their creators such fame, as viewers may wonder when and how the work was accomplished. Thus, in traditional graffiti practices, a private act is publicly viewed, with little or no interaction between the graffiti writer and graffiti viewer. The majority of *Grafedia* examples maintain the private act of writing, although some *Grafedia* examples are quite openly distributed in the form of cards and even tattoos.²³ *Grafedia*, written privately, and viewed publically—on the street, a lamppost, or mailbox for example—

²³ Several examples may be seen on the *Grafedia* website, www.grafedia.net

follows traditional graffiti writing protocol. *Grafedia* diverges from typical graffiti through the incorporation of online content, expanding the site of *Grafedia* to include the Internet. With the help of cellular phone technology, this connection between physical and virtual space may be instantaneous and simultaneous, in contrast to the delay between writing and experiencing that occurs in traditional graffiti viewing.

Each of the technologically modified graffiti projects discussed takes site into consideration, similarly to the location scouting practiced by graffiti writers, but with different purposes. GRL and IAA both tie specific sites to specific texts to make politicized statements. *Grafedia* use expands notions of site to include time and space. The multiple sites where *grafedia* occurs, written in public and accessed in private, are connected through a lapse in time, dividing the total experience for the viewer. A fragmented experience of *grafedia* is emphasized through its association with hypertext.

Hypertext has been implicated in an undermining of past notions of the authority of text, more specifically, of the written texts' solid, unchanging nature.²⁴ Variations in the interpretation of written documents may exist, but the raw material, the original form, is consistent. Hypertext, by linking segmented thought or fragmented narrative, disavows a document's structure afforded through its linearity and formatting style, and instead, creates an atmosphere of multilinearity and ambiguity.²⁵ Time and space constructed through a structure of a beginning, middle, and end, and a sense of finality, are replaced by endlessness and networked locations. *Grafedia*'s hypertexts exist on their own as forms of graffiti, but continue as linked content found on the Internet. Hypertext creates narratives that are determined by the user, rather than a single author. It is nonlinear,

²⁴ Steve Dixon, *Digital Performance: A History of New Media in Theater, Dance, PerformanceArt, and Installation* (Cambridge, MA: MIT Press, 2007),137

²⁵ Dixon, *Digital Performance*,138

immediate, and connected but not necessarily cohesive, similar to Surrealist experiments in collective narrative formation and the montage poetry in Dadaism.²⁶ *Grafedia's* creator indicates a concern with the preordained direction of media and his project aims to alter that control by enabling multi-variant connections across spaces and between users.²⁷

Imitation of the particular style of graffiti writing and a shared interest in strategic location selection are both ways in which technologically-modified versions of graffiti writing appropriate some of the characteristics of the graffiti tag. Works like *Grafedia*, *Graffiti Writer*, and *Laser Tag*, also evoke the social critique that may be derived from the relationship of graffiti and graffiti writers to the wider public and authority. Susan Stewart explains the goal of the graffiti writer during the 1970s and 1980s as a

stylization inseparable from the body, a stylization which, in its impenetrable 'wildness' could surpass even linguistic reference and serve purely as a mark of presence, the concrete evidence of an individual existence and the reclamation of the environment through the label of the personal.²⁸

Thus, tags came to represent declarations of independence from dominant economic, social, and political class distinctions. Historically, the community of graffiti writers has been populated by poor, lower-class minorities. The tag was an outlet of creative expression for a minority. As a former New York-based graffiti writer explains,

Brooklyn was a very difficult place to grow up because of poverty, drugs, violence, things of that nature. For youths at the time, the need for acceptance and being known for something unique was really the driving force behind people writing graffiti.²⁹

²⁶ See Michael Joyce's *Afternoon*, 1987, Stuart Maoulthrop's *Victory Garden* 1992, Shelly Jackson's *Patchwork Girl* (1995) for examples of digital literature that incorporates the properties of hypertext. Examples from Surrealism include the "exquisite corpse" experiments. From Dadaism, see Tristan Tzara's poetry.

²⁷ Metz, "It's Not Graffiti, It's Grafedia"

²⁸ Stewart, "Ceci Tuera Cela," 165

²⁹ Gottlieb, *Graffiti Art Styles*, 60

For graffiti writers, recognition from within their local graffiti community was a way of countering the effects of disenfranchisement, as well as a source of pride. This sentiment is expressed by writer Cool Earl, active during the 1970s: “I started writing...to prove to people where I was. You go somewhere and get your name up there and people know you were there, that you weren’t afraid.”³⁰ Similar reflections come from Taki 183, the frequently cited originator of the tag: “I don’t feel like a celebrity normally...but the guys make me feel like one when they introduce me to someone. ‘This is him’ they say. The guys know who the first one was.”³¹ From its earliest appearances, graffiti writing served several purposes. It was a form of self-advertisement, an act of defiance, and a symbol for a poor, urban, counter-culture. Shut out of the mainstream, graffiti writers created their own institution that included a system of hierarchy and status to which they could aspire.

The work of GRL, IAA and Geraci use the graffiti tag’s association with individualized expression as a symbol of class conflict. Graffiti, read as specifically the public markings of a lower class urban minority population, opposes the symbols of power that graffiti appears alongside. *Laser Tag*, *Grafedia*, and *Graffiti Writer* also oppose the systems that create symbols of power exemplified in advertisements, monuments, and institutional architecture. By appearing in and among such systems of power, offering an alternative mark of public space ownership, both the traditional graffiti tag and the technologically modified graffiti tag are able to bring attention to those systems of power.

³⁰ David Ley and Roman Cybriwsky, “Urban Graffiti as Territory Markers,” *Annals of the Association of American Geographers* 64, no. 4(December, 1974):419-505, 494

³¹ Ley and Cybriwsky, “Graffiti as Territory Markers,” 494

Jean Baudrillard writes of graffiti's counter-culture status in his 1978 essay, "Kool Killer."³² He places the tag within the tradition of public murals for a comparison of public artistic expression that may represent particular communities outside the mainstream. Baudrillard makes the distinction between graffiti and mural production based on the mural's sanctioned, community-oriented nature that connects them politically and culturally to the groups they appeal to. He contrasts the community-driven content of murals to a content-less graffiti interested only in name writing without reference or origin and with a message that is "zero."³³ Similar sentiments come from Cedar Lewisohn, who has written extensively on graffiti and street art practices, claiming that "graffiti writing has no real purpose, other than its own existence."³⁴ The role and purpose of graffiti, however, changes in its hybridized, technology-infused form. Graffiti now functions as a means of initiating interaction between graffiti writers and a participating audience.

Lewisohn further explains the motivation of many graffiti writers: "They're out to destroy; they're out to make a mess; they find the term 'art' offensive. They look down on art and are happy to be known primarily as vandals."³⁵ Graffiti writers themselves are clear on their intentions to create work that is more about style than content. The way in which the letters are formed holds greater importance than what the text states. Contrary to Lewisohn and Baudrillard's claims of a content-less nature, the content of graffiti may derive from its emphasis on form. Typically tags do not make direct reference to political statements, however, as carefully crafted signatures that represent the individual creator,

³² Jean Baudrillard, "Kool Killer, Or the Insurrection of Signs," in *Symbolic Exchange and Death (Theory, Culture, and Society)* (London: Sage Publications, 1993), 37

³³ Baudrillard, "Kool Killer" 37

³⁴ Lewisohn, *Street Art*, 19

³⁵ Lewisohn, *Street Art*, 19

the tag's content may also simply be an association with dissent. Baudrillard's writing counters this argument by regarding the assignment of greater meaning to tags by scholars as a reflection of "our bourgeois-existentialist romanticism."³⁶ Nevertheless, it is clear that regardless of any intentions of the creator, tags have accumulated a variety of readings from examples of pure, meaningless vandalism, to symbols of personal freedom. This polarization alone may qualify as content.

The paradox inherent in graffiti, then, is the claim from graffiti writers and critics alike, of its meaninglessness and how that meaninglessness can bring with it an amount of significance. Comments by Baudrillard, while they may be intended to praise the authenticity of graffiti writing, draw attention to outside opinions of graffiti writing that prevent graffiti writing's acceptance as a legitimate art form. Additionally, using graffiti's apparent meaninglessness as reason for its exclusion from the fine arts realm ignores its potential comparison to avant-garde practices that favor form over content, namely, Abstract Art.

Arguably, graffiti artists from the era in which Baudrillard was writing his essay in the 1960s were likely uninterested in being welcomed by the art establishment. As graffiti developed from Taki 183's quest for attention, to an act of defiance against the upper-class and their ownership of culture, many graffiti writers eschewed an "artist" label. Later practitioners of graffiti created separate terms, "graffiti writer" and "graffiti artist," to allow for the expansion of graffiti writing based in the tag, to more elaborate creations that could also include pictographic elements as well as text.³⁷ Even with the expansion of what graffiti was capable of aesthetically, Baudrillard's description of

³⁶ Baudrillard, "Kool Killer," 24

³⁷ Lewisohn, "Street Art," 21

graffiti as “meaningless,” highlight persistent perceptions of graffiti as folk art at best, but more commonly as pure vandalism. The contemporary work of Graffiti Research Lab especially champions the work of graffiti writers as a valuable form of creative expression, worthy of the title, “art.” GRL co-founder, Roth, sees graffiti as a “design discipline” that illustrates a “very tight relationship between the function of how graffiti is created quickly in time and the form of expressive, sweeping curves and quick changes in direction.”³⁸

The debate of graffiti as an art form illustrates key characteristics of graffiti: its often combative relationship to and reception by the public, and its continued status as a prosecutable offense. How this developed is likely due to the combination of the rebellious attitudes of the writers, the challenge to authority and control that the tag presents, and the writers’ lack of interest in being understood by a non-graffiti writing ³⁹audience.⁴⁰ The emergence of the graffiti tag within the context of the 1960s and 1970s, a politically and socially contentious time in American history, is also significant to the formation of a strained relationship between graffiti writers and the public. The height of the Vietnam War and accompanying social protest movements, followed by financial recession, created an environment that encouraged acts of defiance against government supported institutions in particular. In addition, this period saw the rise of housing projects in urban centers and the growth of a mass consumer society, both of which contributed to feelings of alienation and a loss of individualization.⁴¹ Such conditions

³⁸ Evan Roth, “Geek Graffiti: A Study in Computation, Gesture, and Graffiti Analysis,” 12

³⁹ Lewisohn, *Street Art*, 87

⁴⁰ Lewisohn, *Street Art*, 19

⁴¹ Lewisohn, *Street Art*, 87, 89

fostered a community of resistant youth culture that turned to graffiti as an aggressive retaliatory expression against authority.⁴²

Aside from being a creative outlet, graffiti writing can be purposefully destructive. This intention is reflected in the adopted terminology within graffiti writing such as, “bombing,” meaning the act of graffiti writing, and the “hit,” another name for the graffiti tag.⁴³ Purposeful confrontation is illustrated in a statement by a graffiti writer known as “Poo:”

I’ve always liked scratching, irritating, making people run away...the gusto of doing something you can’t do...the gusto of the prohibited...I’ve always much preferred to do a scratched writing, scratch the windows of a bus, even in front of the driver, and then come to blows.⁴⁴

The relationship between the graffiti writer and the public--between a discontented, often lower-class youth and the wealthier, property owning citizenry--contributes to the tag’s association with class-based alienation. The ubiquity of the tag mirrors the proliferation of names of the wealthy and powerful in public spaces that likewise, appear on public walls and are attached to buildings. The proliferation of markers of financial contributions to cultural centers, libraries, theaters, and museums--the “graffiti of the philanthropic class,”⁴⁵-- are precisely the targets of many graffiti writers’ contempt. An anti-establishment attitude, likewise, is adopted by contemporary graffiti producers such as Geraci, GRL, and IAA. IAA makes their oppositional stance to corporate control clear, stating:

⁴² Lewisohn, *Street Art*, 19

⁴³ Lewisohn, *Street Art*, 87

⁴⁴ Laurel Anderson, Stefania Borghini, John F. Sherry Jr., and Luca M. Visconti, “Street Art, Sweet Art? Reclaiming the ‘Public’ in Public Space,” *Journal of Consumer Research, Inc.* 37 (2010), accessed April, 2011, doi: 10.1086/652731

⁴⁵ Gottlieb, *Graffiti Art Styles*, 36

Since the notion of the public sphere has been increasingly recognized as a bourgeois fantasy that was dead on arrival at its inception in the 19th century, an urgent need has emerged for continuous development of tactics to reestablish a means of expression and a space of temporary autonomy within the realm of the social.⁴⁶

Evan Roth provides similar sentiments when he writes:

I find it puzzling that people find one's name written on a wall so offensive and at the same time, find the ten story billboard of a company's name so acceptable. Graffiti turns the city into a public zone for art while advertising turns the city into a homogenous zone for consumption.⁴⁷

A fight for individual autonomy and the establishment of a truly public space is a shared purpose between groups like GRL and IAA and more traditional graffiti writers. The historically contentious relationship between graffiti writers and the public authorities is reflected in the continuing cycle of action and counteraction seen in graffiti writing innovation and increasingly sophisticated anti-graffiti measures. Graffiti is not only perceived as a threat to physical environments and surfaces, but also as a threat to an entire system associated with those surfaces. As millions of dollars continue to be spent on graffiti removal and prevention, the illegal status of the practice can polarize communities, with one side seeing the tag's appearance as contributing to the "blight and degradation of neighborhoods," and others viewing the action as an effective symbol of public revolt against an ambiguous power structure in a battle for public space.⁴⁸ Graffiti then becomes a signifier of a governing body's loss of control. Additionally, graffiti

⁴⁶ IAA "Contestational Robotics" www.appliedautonomy.com

⁴⁷ Roth, "Geek Graffiti: A Study in Computation, Gesture, and Graffiti Analysis," 13

⁴⁸ Stewart, "Ceci Tuera Cela," 168

writers' denial of their tags as artistic acts, in favor of being defined as acts of aggression, is a challenge to systems that commodify art as objects.⁴⁹

A general perception exists that graffiti is offensive because it defaces property. This judgment, however, lies with the viewer. The context of graffiti and its existence in non-art spaces suggests another theory: that objections to graffiti may not be content-based or based on taste, but rather, may come from graffiti's declaration that anyone can be an artist and the site of art can be anywhere, thereby upsetting the established system of control over the appropriate placement of art. Stewart posits that those who oppose graffiti do so for its disregard of boundaries and the questions that graffiti raises about the nature of what public art is. Additionally, graffiti addresses the separation of public and private spaces and the rightful ownership of public property.⁵⁰ Stewart's suggestion calls attention to the importance of context in the evaluation of an artwork. Placement within galleries, art museums, and private collections, along with critical approval from members of the art establishment all factor into the bestowment of an "art" label. The debate over graffiti's legitimacy within the art world is complex, as graffiti has experienced fluctuating acceptance from the art establishment. Graffiti has been invited into art galleries since its popularization in the early 1970s, most notably crossing over into the work of Keith Haring and Jean Michel Basquiat.⁵¹ Academics and critics have compared graffiti's reflection of body movements to Abstract Expressionism, its typographical focus to Isadore Isou's Lettrism, and its counter-culture, outsider art status

⁴⁹ Stewart, "Ceci Tuera Cela," 175. Roth, "Geek Graffiti," 13

⁵⁰ Stewart, "Ceci Tuera Cela," 175

⁵¹ Lewsohn, "Street Art," 93-99. Haring and Basquiat have often been cited as examples of graffiti artists accepted by the mainstream gallery system. Their status as graffiti writers is contested, however, by the graffiti writing community who considers Haring and Basquiat to be fine artists who also engaged in graffiti practices rather than graffiti writers.

to DuBuffet's Art Brut and urban folk art. More recently, graffiti has been featured in recent exhibitions by the Tate Modern in London and the Museum of Contemporary Art in Los Angeles.⁵² Works by well-known graffiti artists have garnered large prices at Christie's and Sotheby's auction houses.⁵³

Many of these exhibitions of graffiti art and comparisons of graffiti to avant-garde art movements center on traditional graffiti forms. I would suggest that new forms of evolved graffiti represented in the projects such as *Graffiti Writer*, *Laser Tag*, and *Grafedia* are pushing graffiti even further into a fine arts realm. The characteristics of these projects, such as, the emphasis on audience participation, interest in process over object formation, temporality, interactivity, and public sites, recall the performance art genre in particular. While GRL, IAA, and Geraci directly reference graffiti in their work, it is in the performative qualities of their projects that they diverge most clearly from traditional graffiti production. An emphasis on interaction through transforming graffiti into a community-wide and public event, supports the concept that these technologically modified versions of graffiti are not necessarily examples of graffiti themselves, but more accurately, a performance of graffiti. Each of the projects uses graffiti's aesthetic, attitude, and history to illustrate their social concerns that center on the autonomy of individuals and individual creative expression. The incorporation of technology into graffiti writing actions contributes meaning to their projects, but is more significantly employed in the transformation of graffiti to an interactive and inclusive activity.

⁵² "Street Art" exhibition, 2008 at the Tate Modern, and "Art in the Streets," at LAMOCA, 2011.

⁵³ Christies held a Pop Culture Sale in 2008 that included the auction of graffiti painted objects. Also, Christies in Amsterdam auctioned several graffiti works on canvas in 2011. Sotheby's has included several graffiti artists in their auctions including pieces by Faile, Banksy, and Blade. See Lewisohn, Street Art, 134, 138 and Colin Gleadell, "Art Sales: Graffiti Draws a New Crowd," *Telegraph*, October 30, 2007, accessed July 3, 2011, <http://www.telegraph.co.uk/culture/art/artsales/3668890/Art-sales-Graffiti-draws-a-new-crowd.html>.

CHAPTER TWO: TECHNOLOGY AND GRAFFITI

The specific projects discussed within this paper, *Laser Tag*, *Graffiti Writer*, and *Grafedia*, have among their concerns, an interest in social activism. To this end, they each employ graffiti, for its aesthetic, its methodology, and its history. The use of text allows for a sense of the individual to be expressed. This is achieved either through stylization, as with the *Laser Tag*, through personalized content, as with *Grafedia*, or through personalized messages, seen in *Graffiti Writer*. Methods borrowed from graffiti culture include strategic site choice, and the temporal, evolving nature of the writing process and life-span of the final text. Both characteristics allow for the messages to adapt to a particular audience or to make a particular statement. Graffiti's history as a protest medium further adds to the association of these projects with an activist culture. The decision to incorporate technology into each graffiti-based project is equally significant. Media, new media, net art, open-source, electronics, digital mechanisms; each of these technological forms serve both a practical function and also contribute additional meaning to each project. The technologies used by GRL, IAA, and Geraci are specifically chosen for their ability to attract an audience and engage that audience with the intention of fostering social activism. Additionally, GRL, IAA, and Geraci each target the tolerated order and accepted power structures that often produce the very technologies used within their graffiti projects. By using specific materials to critique the dominant function of the same materials, the artists attempt to critique the power systems from within. GRL and IAA particularly employ the strategy of internal critique through their more blatant imitation and appropriation of institutional aesthetics. When combined with

technology, graffiti transforms. Many negative connotations linked to graffiti writing as destructive vandalism diminish as the forms of graffiti in *Laser Tag*, *Graffiti Writer*, and *Grafedia*, are not only less damaging, but are more inclusive, created by a wide range of collected individuals.

Electronic media has a history of being in the service of and controlled by the wealthy and the powerful. At the same time, it is also the medium of the people as a form of entertainment and communication. As a tool of the powerful, media technology stands in contrast to graffiti, understood as a tool of the underprivileged in defiance of the powerful. As a tool for entertainment, media technology's relationship to graffiti is more complex. The graffiti artists' quest for fame can be assisted by media technologies such as television and the Internet, both which enable wide distribution. Graffiti writing coupled with flashing lights and technological displays transform the solo act characteristic of traditional graffiti into activities that are able to attract and mesmerize crowds. The Internet broadens exposure and communicability between the public and the graffiti creator.

The Internet's limitless space is an essential medium in Geraci's project, but also broadens the scope of graffiti's exposure to a wider public audience. Additionally, both IAA and GRL use the forum of their group's websites to publish texts related to their political and social agendas. Their websites also host documentation of their projects and provide instructions for their re-creation. Given the desire of many graffiti artists for fame, the adoption of the Internet, as a tool for self-promotion, by graffiti artists is no surprise. Graffiti has traditionally existed outside of the realm of the art gallery or museum, instead opting for public walls. Therefore, graffiti's extension into the realm of

the Internet as another public space seems a natural progression. Just as past graffiti artists used trains and subway cars to exhibit their work citywide, today's graffiti is regularly distributed via dedicated graffiti and street art websites.⁵⁴ The viewing experience afforded by a growing number of Internet postings is often praised as increasing exposure of graffiti art and culture to larger audiences.⁵⁵ Additionally, the temporality of graffiti work, when cataloged on the Internet, is no longer an issue, as the work can survive erasure through its photographic documentation. Viewing graffiti as a screen-sized image on a computer, however, can lessen the impact of graffiti seen on public streets. Experiencing graffiti through photographs reduces graffiti to an object—the very status many graffiti writers seek to avoid. Often times, images online are cropped to the extent that the context of the work is eliminated, leaving only the graphic qualities of the works for evaluation. Increased presence of graffiti on websites signals a new era for graffiti—one in which graffiti style and culture are gaining acceptance in popular culture and the mainstream commercial realm. “Graffiti style” is now available for purchase, appearing not only in galleries and museum collections, but on products ranging from Gucci handbags to chocolate bars. Interested patrons can download a ten-step video on how to draw graffiti letters. Clearly, the bite of graffiti is diminished by its conversion to an “iPhone app.”⁵⁶ Nonetheless, the increased exposure of graffiti style, even less authentic versions of graffiti, may lead to greater acceptance of graffiti as a design aesthetic and not just an act of destruction.

⁵⁴ Among the many personal websites of graffiti artists, examples of popular graffiti websites include, Wooster Collective, <http://www.woostercollective.com>, and www.graffiti.org

⁵⁵ Lewisohn, “Street Art,” 143-144.

⁵⁶ The 10-step video may be accessed online at: <http://www.wikihow.com/Draw-Graffiti-Names>. A chocolate maker in New York, Alison Nelson, offers “Graffiti Bars” for sale that feature examples of graffiti on the candy bars’ wrappers. “DustTag” is an iPhone application designed for graffiti writers that visualizes the motion involved in the creation of a tag.

The benefits of increased exposure provided by technologies such as the Internet may still be offset by the technology's effects on the content of graffiti. As previously discussed, the role of context in graffiti writing is significant in regard to graffiti's meaning. Because graffiti often consists of illegible text, the graffiti's placement, its interaction with its surrounding environment, its size, its movement when attached to trains, and the way in which a viewer experiences graffiti passing by on foot or from a moving vehicle, all contribute to graffiti's unique character and provide graffiti's content.⁵⁷ Flattened, reduced in size, and cropped from its surroundings, graffiti on the Internet offers a less dynamic experience for the viewer. When used as an educational tool, however, the access offered by Internet websites may be invaluable to proponents of graffiti writing. In a similar fashion, Google's Art Project, began in 2011, enables Internet viewers to visit museum collections from such prestigious institutions as the Metropolitan Museum of Art in New York City and the Tate Modern in London, without leaving their homes. While there is unquestionable difference between experiencing art works in person and as a digital computer image, the educational potential of a program such as the Google Art Project should not be dismissed. Likewise, GRL in particular has pedagogical aims in their works and they use resources such as digital technologies and the Internet to educate the public on the processes involved in graffiti writing. GRL cofounder, Evan Roth, used digital technology to dissect and illustrate the actions of graffiti writers before joining GRL and both Powderly and Roth of GRL are interested in the idea that graffiti writing can be a tool of open expression and protest for all people. Consequently, their work centers on reversing the stigma attached to graffiti and

⁵⁷ Lewisohn, *Street Art*, 134.

transforming graffiti into a community activity.⁵⁸ GRL’s manifesto, “Dedicated to outfitting graffiti artists and activists with open source tools for urban communication,”⁵⁹ alludes to their desire to open a dialog between graffiti writers and the public. This desire suggests a shift in graffiti practices, also seen in IAA and Geraci’s projects, from an activity among a closed group of individuals, to a potential tool for gathering a wide range of graffiti participants. As Powderly of GRL states: “It’s not just about getting a message up — there are plenty of ways to do that. This is really about getting a community together.”⁶⁰



Figure 11: Crowd gathered at a Laser Tag demonstration, Taiwan, 2007

⁵⁸ Roth, “Geek Graffiti,” 11

⁵⁹ Graffiti Research Lab website: www.graffitiresearchlab.com

⁶⁰ Statement posted on GRL website: www.graffitiresearchlab.com



Figure 12: Crowd viewing Laser Tag in Barcelona, Spain, 2008

Exposure offered by Internet websites, and the World Wide Web's capability of connecting distant individuals is one method of stimulating interest and interaction in the work of Geraci, GRL, and IAA. The use of the Internet as a tool for distributing information and increasing exposure for art works is commonplace and is employed by each of the three artists. Geraci, GRL, and IAA have websites that act as gallery space, documentation storage, and distribution center for their work. Geraci expands his use of the Internet to include the *Grafedia* website links as extended sites for graffiti content, and thereby including the Internet as a material. Similarly, GRL and IAA use specific technologies not only as tools that assist in the interactive quality of their works, but as materials that bring with them, additional meaning.

Graffiti is one material used by Geraci, GRL, and IAA. Its formal qualities—personalized text written in public spaces—and style, particularly evident in Laser Tag, are incorporated to draw connections to graffiti's history as a medium of open communication and dissent. When approached as evolved forms of graffiti, the work of

GRL, IAA, and Geraci illustrate the effects of technology on graffiti writing and culture. If these works are approached as “new media” projects, the technological element present in each example becomes central. Graffiti becomes part of the content of the work rather than the form. The digital and mechanical components contribute content, but even more, they are the mechanisms responsible for the transformation of graffiti into interactive events.

Part of the desired outcome of the generated audience participation within the work of GRL, IAA, and Geraci, is the formulation of alternative experiences of both art and technology. The anesthetization of technology and the technologization of art is one method employed by these artists to accomplish such perception shifts. By creating hybrid forms, the boundaries of definitions for both art and technology are blurred. Technology has been viewed, particularly since the 1960s as a way to expand, alter, and transform notions of arts purpose and appearance. The newfound interest in technology’s integration into the arts realm was driven by an expanding information age that prompted both praise for the potential global interconnectivity and apprehension towards the formation of technocracies in which power is maintained through control over data.⁶¹ The term “new media” itself, came into being during the 1960s as “art by computers” rose in numbers.⁶²

The organization, automation, and variability that occur within new media formats belong to the realm of computer technology rather than human culture, yet they have come to characterize everyday life. Our ways of interacting, constructing

⁶¹ Johanna Drucker, “Interactive, Algorithmic, Networked: Aesthetics of New Media Art,” in *At Distance: Precursors to Art and Activism on the Internet*, ed. by Annmarie Chandler and Norie Neumark (Cambridge, MA: MIT Press, 2005),37

⁶² Drucker, “Interactive, Algorithmic, Networked,” 36

narratives, and perceiving the physical world are affected by this new computer based logic.⁶³ Ollivier Dyens writes in 2001 on the extent of technology's entrance into modern life:

Technologies are our extensions, not only sensory and nervous, not only prosthetic and mechanical, but also ontological....Technologies are an osmosis, the intelligent matter that inseminates and intertwines itself into the human. We are no longer merely entangled with machines, no longer simply soldered to their existence; we literally co-evolve with them. We must now perceive of technology and human beings as one entity. We are machines and the machine is within us. The machine breathes.⁶⁴

The incorporation of new technology-based materials coincided with new interests in questioning the definitions of art, the supremacy of the art object, and connecting art works and artists directly to their audiences—ideas addressed in the work of GRL, IAA, and Geraci.

For artists interested in creating community-based or interactive artworks, mass media and communications technologies allowed for wider access to audiences and new ways of incorporating audience influence into projects. Additionally, artists that sought alternative spaces for the production and viewing of artworks found new opportunities to avoid mainstream art venues and also offer alternatives to an often monopolized mass media.⁶⁵ Anti-formalist ideas in art that stressed an importance of circumstance and procedure over the art object, seen in the pioneering performance work of Yves Klein, Alan Kaprow, Fluxus, and the Situationists, are heightened by computer technology and computational approaches that allow for widespread interactivity, algorithmic processes,

⁶³ Lev Manovich, *The Language of New Media*, (Cambridge, MA: MIT Press, 2001), 47

⁶⁴ Dixon, *Digital Performance*, 272

⁶⁵ Drucker, "Interactive," 38.

and unpredictable outcomes.⁶⁶ A technological emphasis in artworks can create situations in which the artwork is determined by a set of conditions to be perceived by an audience or participant. These are ideal conditions for artists interested in initiating interactive activities in which a viewer may “intervene in a field of probabilities.”⁶⁷ The concept of situational art that began with performance artists is enhanced by technological capabilities. The Internet and cellular telecommunications technology allow for instant, broad-based connectivity. Self generating software programs allow for the outcomes of artworks to be indeterminable and ongoing. Thus, when Geraci employs hypertexts and websites, and GRL and IAA post documentation and explicit instruction for the re-creation and adaptation of their projects, they do so to invite large-scale and multi-regional influence on the evolution of their works. Geraci’s *Grafedia*, in fact, depends on this kind of anonymous collaboration for its continuation. In order for the project to grow, users must continue to access the online content produced or produce their own. In addition to posted instruction, IAA has indicated their intention of designing machines that could be created easily at a relatively low expense.⁶⁸ GRL likewise, produces apparatuses that can be manufactured affordably. In addition to encouraging the reproduction of their projects, they provide instruction for creating Graffiti Research Lab “cells,” around the world. As a result, variations of the original GRL exist throughout the United States and in France, Germany, Brazil, Canada, Mexico, Japan, and Austria.⁶⁹

⁶⁶ Drucker, “Interactive,” 40. Examples of interactive performance include Kaprow’s “Happenings”, Klein’s *Void*, the Situationists notions of “derive” and “rendezvous.”

⁶⁷ Drucker, “Interactive,” 43

⁶⁸ Erich W. Schienke, “On the Outside Looking Out: An Interview with the Institute for Applied Autonomy (IAA),” *Surveillance and Society* 1, no. 1, 104

⁶⁹ See “sister cells” section of GRL’s website: www.graffitiresearchlab.com

Nicolas Bourriaud's notion of "relational aesthetics,"⁷⁰ provides a useful description of artworks interested in enlisting an audience for the works' production. At the core of his theory is an emphasis on human relations, and interactions that artworks can highlight, foster, or set in motion. Bourriaud traces this trend towards "relational art" to the 1990s, particularly focusing on artists such as Rirkrit Tiravanija and Vanessa Beecroft, and, even further, to several movements within the twentieth century avant-garde.⁷¹ Tiravanija's work, *Untitled 1993 (twelve seventy one)*, created for the Venice Biennial for example, consists of a metal canoe filled with boiling water, café tables and chairs, and boxes of dehydrated noodle soup. Visitors to the space are invited to make bowls of soup and eat them amongst fellow gallery attendees.⁷² Audience members gazing at the models in Beecroft's performance pieces are a central element, providing a live demonstration of the artist's views on beauty and feminism.⁷³ These works reference Dadaism and the Situationist International for their common interest in changing culture, attitude and social living conditions, and the incorporation of unpredictability afforded by live audiences.⁷⁴ Bourriaud sees these works as an indication of a radical shift in modern art affecting the aesthetic, cultural, and political agendas of the contemporary art world, resulting from the expansion of the city, an increase in mobility of its inhabitants, and increased situations for contact between these inhabitants. The consequence of an increase in social contacts is revealed in art works interested in hands-on activity, created to be lived through rather than simply observed. Bourriaud notes that while opportunities

⁷⁰ Nicolas Bourriaud, *Relational Aesthetics*, trans. by Simon Pleasance and Fronza Wood (Dijon, France: Presses du Réel, 1998), 14-20

⁷¹ Bourriaud, *Relational Aesthetics*, 9

⁷² Bourriaud, *Relational Aesthetics*, 25

⁷³ Vanessa Beecroft, "Show" Guggenheim Museum, 1998

⁷⁴ Bourriaud, *Relational Aesthetics*, 22

for social contact increased with the expansion of the city, contemporary society also witnessed a loss of the “social bond.”⁷⁵ Artists interested in relational aesthetics create situations to acknowledge that loss and attempt to repair it. Similar to Tiravanija’s use of dining rituals to bring private social engagement into the gallery space and Beecroft’s performances that dissolve boundaries between art subject, art object, and art viewer, *Grafedia*, *Laser Tag*, and the *Graffiti Writer* are more concerned with creating situations rather than objects with the intention of “producing sociability.”⁷⁶ The *Graffiti Writer* and *Laser Tag* apparatus may themselves be objects, but the situations produced through use of those objects and through *Grafedia* connections are where the artwork lies.

Individually, *Grafedia*, *Laser Tag*, and *Graffiti Writer* make use of different tools to initiate situational artworks. Works like *Grafedia* specifically employ a common method used by Internet-based artists—the self-generating artwork enabled by software programming. In a similar fashion to Bourriaud’s relational artworks, *Grafedia* begins with engaging an active reader who is then offered varying degrees of opportunity to manipulate, alter, or steer the work of art in a particular direction of the readers’ choosing.⁷⁷ Readers are transformed into participants by their required presence within the project in order for the work to continue and even exist. The publicly situated hyperlinks in *Grafedia* must first be recognized by individuals as actual hyperlinks. These blue underlined words must elicit enough interest in the viewer to “click” on the hyperlinks through their cell phones or computers. Further, the life-span of *Grafedia* is dependent upon interested individuals choosing to create and distribute the hyperlinks.

⁷⁵ Bourriaud, *Relational Aesthetics*, 14-15

⁷⁶ Bourriaud, *Relational Aesthetics*, 33

⁷⁷ Beryl Graham, “What Kind of Participative System? Critical Vocabularies from New Media Art,” in *The ‘Do-It-Yourself’ Artwork*, ed. Anna Deuze, (Manchester, Great Britain: Manchester University Press, 2010), 284

Instead of producing a specific event, *Grafedia*'s purpose is to set an action in motion whose direction and termination is left to chance. An unpredictable life-span is a shared characteristic among *Grafedia* and more typical graffiti, however, this is a welcomed aspect in *Grafedia*--viewed as a consequence of user participation.

The Internet also functions as a tool of the powerful in surveillance and personal data collection. The domination of the Internet by the wealthy and powerful is directly criticized in Geraci's *Grafedia* project which aims to provide an alternative presence in the space of both the Internet and the street. The link of power to the Internet is often addressed by a category of net artists who create Web pages that illustrate, copy, or imitate the methods of information control. For example, artist Heath Bunting often confronts the Internet's contribution to identity formation. Bunting's projects often involve the collection and display of personal information gleaned from Internet postings by individuals. For "Status Project" in 2004, this information is transformed into complex diagrams and maps linked to actual public sites. These maps may then be used to create actual travel routes in physical space, based on an individual's status and class categorization. As Bunting describes: "the status project is surveying these class systems of human being management and is producing maps of influence and personal portraits or both comprehension and mobility."⁷⁸ His work addresses the tracking of human behavior by governments and corporations for purposes of surveillance and marketing.

Internet artist collective, Jodi, often uses computer game modification to create their work. By dismantling game programs and reassembling them in a nonsensical way,

⁷⁸ <http://status.irational.org>. For more information of Heath Bunting's projects, funding sources, and history, see Bunting's webpage connected to irational.org, an informational website co-created by Bunting. irational.org/heath

their web pages disrupt the typical function of websites as information centers.⁷⁹ In 2001, the artist group known as 0100101110101101.ORG created the project, *Life Sharing*, in which they allowed public access, via the Internet, to their home computers. Viewers could read their e-mails, personal files, and scan their software programs. Material could not be altered on their hard drive, but could be downloaded by viewers, manipulated, and re-published online. The *Life Sharing* project was meant to illustrate the potential benefits of unrestricted information sharing.⁸⁰

Works such as *Life Sharing* and *Status Project* address common themes among artworks that meld art and technology: the simultaneous dangers and benefits inherent to tech-based societies. The Internet may at once be a tool for interconnectivity and global communication, and an instrument of control. Geraci's *Grafedia* likewise addresses conflicting attitudes towards the Internet. His project acknowledges that many interactive web applications are produced by large corporations and seeks to offer control over such programs to the public. These examples of net art are characterized by a hacker sensibility, as the artists often produce work that reconfigures pre-existing Internet programs or tools, such as e-mail, games, and websites to produce unexpected forms or perform atypical functions. Often the work is interactive and collaborative, and requires participation from "users" rather than "viewers" of the work.

Artists like Bunting, and Jodi, succeed in producing the unexpected. Bunting will place his works in sites not typically reserved for art, similarly to graffiti artists who placed their works on advertisement sites.⁸¹ Likewise, Jodi's often low-tech computer software designs stands in contrast to typical flashy web pages. They function not as sites

⁷⁹ Jodi: www.jodi.org. Also, Stallabrass, *Internet Art*, 36-39

⁸⁰ www.0100101110101101.org. Also, Stallabrass, *Internet Art*, 111

⁸¹ Stallabrass, *Internet Art*, 54

for information or marketing, but merely exist visually or provide another atypical function, such as anonymous personal data sharing—an activity usually cautioned against.⁸² *Grafedia* produces the unexpected in another way. The graffiti component that physically appears on the street in *Grafedia* applications gains functionality through its simultaneous existence as a hyperlink. No longer just a word or text to be viewed, *grafedia* texts serve as Web links to online content.

The use of lasers and projection equipment in GRL's *Laser Tag*, contributes to the work's interactive function and communicative abilities. Both technologies lend their history to the content of GRL's work. The evolution of light-based projection follows a path from phantasmagoric entertainment, to the realm of science and education, eventually ending in the advertising world. Earlier uses of this technology can be traced to the nineteenth century when "magic lanterns" served as machinery for supernatural trickery.⁸³ Ghostly images placed in front of illuminated lamps created a source for public amusement. Later, the projected image was incorporated into classrooms and the ubiquitous use of the photographic slide revolutionized the fields of science and art history. The digital projector's ability to enlarge logos and enable presentations to large audiences made projection an attractive tool to advertisers and today urban buildings illuminated by projected advertisements are a common sight. GRL's *Laser Tag* projections offer individuals the opportunity to illuminate, enlarge, and display their personal logos alongside corporate versions, much like traditional graffiti's relationship to political and corporate posters.

⁸² Stallabrass, *Internet Art*, 54

⁸³ Darsie Alexander, "Slide Show," in *Slide Show*, ed. by Darsie Alexander (University Park, PA: The Pennsylvania State University Press, 2005) 10.

Artist, Jenny Holzer, whose text projections are similar in appearance and function to GRL's projected graffiti, also addresses a similar concern in GRL's work—the desire to present personal expressions in the same visually stimulating manner as the advertisements and entertainment products that bombard a viewer's senses. Holzer explains her interest in using sophisticated light-based technologies as follows:

The move to electronic technology had to do with my needing to be where people look. I thought I should present many hard germane subjects as well, as large, and as loud as what's done for celebrity gossip, concerts, products, and the sometimes too-cautious reporting of the news... The projections are a way to deliver feeling and writing by a number of great poets, as well as a means to highlight the natural world and to create sculpture from architecture. Plus, many of the buildings chosen as projection screens have occupants and histories worth highlighting, and projections can invite benign gatherings of people at night.⁸⁴

Holzer's comments on her choice to project text onto pre-existing structures recall GRL's choosing of culturally significant sites for the display of light works. Characteristic of Holzer's work and of other projected forms, including GRL's *Laser Tags*, is the ability of the work to create not just social interaction, but interactive space. The distance from the projecting mechanism and the projection surface creates a space so that the work itself is not limited to the projected image. Rather, the work encompasses the entire space between the projected image and its source. In public spaces, such as exteriors of urban buildings, the work includes its surrounding environment and that environment's inhabitants who may or may not pause to become spectators. The Guinness Book of World Records now has a listing for the "world's farthest tag" thanks in part to laser tag technology developed by Graffiti Research Lab. In 2007, artist Mc Yan projected his graffiti onto the Hong Kong Cultural Museum in Kowloon from a location on the Star

⁸⁴ Benjamin Buchloh, "To Whom it May Concern," *Modern Painters* 20, no.9 (2008): 62-69.

Ferry Pier on Hong Kong Island, 1200 meters away. When viewed from its originating point, the tag becomes part of the entire cityscape.



Figures 13,14, *From top to bottom*: Image of laser beam origin at the Star Ferry Pier and resulting “grl” tag, Hong Kong, China, 2005

The projection animates graffiti, turning it into a filmic experience, and connecting graffiti with entertainment. Holzer explains her particular choice of electronic light as creative material: “I continue to work with electronics because people turn toward flashing light.”⁸⁵ The animation of graffiti writing creates spectators. As spectators that can move among the space created by projection, they interact with the

⁸⁵ Adrian Dannatt, “Word on the Street” *Journal 110*, no. 3 (March 2003): 22-24

laser tag, the urban space, and other spectators. Further, *Laser Tag* turns spectators into entertained participants. The projection of the tag produces similar effects to the incorporation of laser technology. Both technologies work to dissipate negative connotations attributed to graffiti by turning graffiti writing into a source of entertainment.

As previously indicated, IAA's use of robotics also contributes a sense of interactive play or entertainment to *Graffiti Writer's* public appearances. The Graffiti Writer's resemblance to a remote controlled truck, a toy, and robots' connections to popular culture, give the *Graffiti Writer* a harmless appearance. This appearance aids in IAA's attempts to encourage public use of their robots. In addition, IAA's distinctive interest in robotics addresses issues surrounding the replacement of the human body through mechanization. Anxiety over the humanization of machines has been addressed in films, television, and literature that incorporate robot revolutions as a theme.⁸⁶ As IBM's "Deep Blue" computer defeats world chess champions, and "Watson" becomes a Jeopardy winner, the increased level of sophistication of robots able to outperform humans arouses distrust in technological progress made without thought of potential harmful consequences. An accusation of "normalized ambivalence" existing within the engineering field is at the center of IAA's "contestational robot" projects, including the *Graffiti Writer*. Their primary objection is to the use of robotics in military operations and IAA seeks to address the social relationships within the robotics industry. Their work

⁸⁶ For example: *Them Fuckin' Robots*, by Norman White and Laura Kikauka, 1998 and *Executive Machinery Intercourse*, by Istvan Kantor 1999. Computers have also recently proved their superiority over humans, winning in chess matches and Jeopardy competitions. IBM's "Deep Blue" computer famously beat world chess champion, Garry Kasparov, in 1997. In 2011, IBM's "Watson," defeated Jeopardy champions, Ken Jennings and Brad Rutter.

focuses on reassigning robotics, typically used in industry and military applications, different tasks and functions as tools for dissident groups.⁸⁷

In their role within the military and industrial sector, robots are incorporated as extensions of the human body. Medical applications involving the symbiosis of flesh and metal, such as pacemakers and artificial limbs, are exaggerated in artworks that address the increasing incorporation and dependence of the human population on technology. The work of Australian artist, Stelarc, centers on the meeting of the body and manufactured mechanics and their manipulations of each other. His performance pieces that often include body modification through the insertion of metal or electronic devices, illustrates the limitations of the human body that is unable to compete with the strength, speed, and power of technology. Media theorist, Marshall McLuhan echoes these sentiments in his text, *Understanding Media: The Extensions of Man*⁸⁸, in which he writes of the electronic body as an amplification of a flesh body, suggesting a possible existence in a “fourth dimension” where this electronic body, aided by telematics can perform actions that the physical body cannot.⁸⁹ IAA follows the model used by the military in particular where robots act as human replacements in high risk situations, comparing combat zones to public urban environments where activists are increasingly met with police resistance.⁹⁰ The Graffiti Writer was created as a tool for activists that could enter sites, distribute protest messages, and be left behind if necessary, thereby protecting the human activist from police apprehension.

⁸⁷ Schienke, “On the Outside Looking Out,” 103

⁸⁸ Marshall McLuhan, “The Medium is the Message,” in *Understanding Media: The Extensions of Man*, 2nd ed., 23-33 (New York: New American Library, 1964).

⁸⁹ Dixon, *Digital Performance*, 219

⁹⁰ Schienke, “On the Outside Looking Out,” 104.

GRL and IAA's projects differ from Geraci's work through their engagement with a live, participatory audience. The technologies used in their work support this activity. GRL's light-based graffiti has the allure of a laser show. This phenomenon is illustrated in the many photographs and videos that document GRL's Laser Tag demonstrations and depict significant crowds watching the track of the laser beam.



Figure 15: Crowd watching and participating in Laser Tag, New York

It is a common occurrence for Roth or Powderly to arrive unannounced at public events or in areas of high pedestrian traffic, with a mobile *Laser Tag* unit offered for public use.⁹¹ With operators from all age groups and levels of technical familiarity, GRL's graffiti tools prove the group's interactive intentions. Part of GRL's interactive success also results from the *Laser Tag*'s ability to appear more playful and less criminal.

IAA has also noted similar public reaction to their *Graffiti Writer*. In addition to making appearances at politically charged events, IAA has initiated a "Rogues Gallery," in which the *Graffiti Writer* is deployed in spaces for more benign public gathering, such as parks and shopping malls. Kay Saracera describes IAA's public interaction in the following statement regarding a *Graffiti Writer* appearance at a park in Philadelphia:

By making GraffitiWriter publicly available, we accomplish several goals. On the one hand, we are encouraging people to be expressive, to share their thoughts with their communities. Secondly, we are exploring the possibilities of using new technologies to create public spectacles which can alter people's conception of the world around them. If we were to go into a park and hand people cans of spraypaint, no one would write anything because we've been conditioned to believe that graffiti is destructive - not to mention illegal. However, by using a robot, it suddenly seems acceptable behavior to paint all over the ground. In a sense, we are using the robot to create, at least temporarily, a space for free action and expression in the middle of the city, and in broad daylight.⁹²

As a result of the Rogues Gallery initiative, the *Graffiti Writer* has appeared over two hundred times in seven cities within four countries.

The supremacy of the artist and the art object is questioned through work that not only engages a viewer but enlists them in the creation process. Opportunity for multiple-

⁹¹ Documentation of some of GRL's appearances, including photographs of audience participation, may be found on the GRL website: www.graffitiresearchlab.com.

⁹² Occurrence from 1999. "Robotic Insurrection in Philadelphia Streets, August 20th, 1999" www.appliedautonomy.com/phillypr.html

authorship is a characteristic of work that increasingly leaves outcomes to chance and depends on participation from an unpredictable audience. Artistic activity, based in social interaction, characterizes the work of GRL, IAA, and Geraci. Each project communicates a sense of dis-ownership in favor of multi-ownership, supported by open source methods. Theorist Söke Dinkla describes these types of projects as “floating work(s) of art” that transfer authorship from artist to user. The work created is not the “expression of a single individual,” or the “expression of a collective,” but rather, “it is the state of a ‘connective’--a web of influences that are continually reorganized by all participants.”⁹³ Dinkla’s emphasis on the connective potential of interactive works highlights the artists’ intentions of not only creating connections between individuals, but also indicates a desire to link artworks to other fields and activities. Such descriptions apply to the graffiti works outlined here. Their acceptance by the art, graffiti, and technology communities allows them to create links between those often separated fields, as well as make connections between individuals.

Both GRL and IAA use technology not only for their interactive capabilities, but also for technology’s association with authority, entertainment, and practical functionality. Robots’ use in a variety of tasks that require high precision, data collection, and distanced operation due to hazardous conditions and lasers associated with, science, and advanced technology, connect both materials to government and militarized power. Combined with a simultaneous connection to the entertainment industry, these associations serve a practical purpose for IAA and GRL specifically in their attempts to infiltrate public spaces. The air of authority granted by the technological

⁹³ Söke Dinkla, “The Art of Narrative—Towards the Floating Work of Art,” in *New Screen Media: Cinema/Art/Narrative*, ed. By Martin Rieser and Andrea Zapp (London: British Film Institute, 2008),39.

appearance of their machines has given them greater access to a wide range of events, while the entertainment quality makes them more inviting to potential audiences. Both GRL and IAA have been invited to attend technological conferences, art events, and have avoided police intervention as a result of the outward appearance and multiple applications of their projects.⁹⁴ IAA has in fact noted that “as long as [they] have these robots, [they are] immune to authority,” and that they “don’t fit the mold of what [police] are looking for. Juvenile delinquents don’t have robots.”⁹⁵ This comment was made while recalling IAA’s appearance at the Capitol in Washington, D.C. in 1999 where they were able to successfully disperse the message, “voting is futile” with little police interference. In another instance, IAA’s Graffiti Writer was used by a Pennsylvania police officer who proceeded to write, “We love the Pittsburgh Police.”⁹⁶ These examples illustrate how, through technology, artists like IAA are able to de-emphasize graffiti’s negative associations and promote graffiti writing as an act of creative expression.

GRL’s particular mission to dissipate some of the negative connotations attributed to graffiti writing is aided further by their incorporation of technology. Their non-permanent, light-based graffiti allow graffiti to be appreciated for its design elements and individualized character rather than be dismissed as pure vandalism. These intentions are mirrored in statements by GRL’s Even Roth, who aims,

by melding the technical language of code with the visceral language of written graffiti, [he aims] to reach the attention of city dwellers that have become numb to the relevance and beauty of the writing on the walls. The transformation of

⁹⁴ Both Roth and Powderly have presented their work at a range of conferences both in the Arts and Engineering fields. IAA have also appeared at Robotics conferences. Both GRL and IAA have been featured in a wide range of publications, both arts and science-based.

⁹⁵ John Mecklin, “The Dog Bits Interview: Robots that Protest,” San Francisco Weekly, November 24, 2004, accessed June, 2011, <http://www.sfweekly.com/content/printVersion/318204/>

⁹⁶ Mecklin, “The Dog Bites”

written graffiti tags into a new an unexpected digitally augmented form may allow it to be looked upon with fresh eyes.⁹⁷

IAA has also indicated similar reasons for their choice of robotics for delivering anti-authoritarian themes, suggesting that robots, through “simulations of human actions,” in this case, graffiti writing, can insert “alternative expressions” into social spaces.⁹⁸ Both projects involve a shift in the perceptions of the viewer. They seek to create alternative functions for and alter public opinion of graffiti and technology. Even as the least overtly political work included in this analysis, Geraci’s *Grafedia*, nonetheless, also seeks a perception shift to support creative expression beyond regulated art spaces.

As well as offering an alternative viewing of graffiti, the technologies employed in *Laser Tag*, *Graffiti Writer*, and *Grafedia* are presented in a new light through their new purpose as graffiti writing mechanisms. As media technologies become increasingly present in daily life, new artistic concerns focus on revealing the power structures that are created by and facilitate production of these technologies. Works including those of GRL, IAA, and the *Grafedia* project, are particularly interested in the way that information and culture is disseminated and controlled through technology by these power structures. Their appropriation of the technologies used by power structures assigns them alternative functions, a method similar to the artists’ manipulation of graffiti that results in a different application of graffiti writing. Successful reconfiguration of media technologies requires an understanding of their underlying meanings and associations. Kelli Fuery’s discussion of the particular significance the word “new” in new media provides such needed insight.

⁹⁷ Roth, “Geek Graffiti,” 7

⁹⁸ IAA, “Contestational Robotics”

Based in Foucauldian theories of discursive practices, Fuery suggests that how we understand “new” and how it is defined does not come simply from a sense of chronology but is instead determined by audience reception and is capable of raising issues of power, knowledge, and social structure.⁹⁹ The term “new” applied to objects leads to an alteration in the way it is viewed and valued, making “the new” ideologically significant. Additionally, the definition of new media is in a state of flux, changing according to the audience that determines the levels of “newness.” Simply stated, what one culture sees as “new” is based on previous experience and exposure to technology and may differ between cultures or individuals. This determination is directly tied to issues of power, as power is connected to knowledge and experience, which in turn, influences how individuals view and interact within society. Thus, how a society defines “new” and understands and relates to “the new” is influenced by underlying power structures.

Tying terms like, new, modern, or advanced, to power structures through their common association with knowledge and experience, illustrates the relationship between society and technology and also, how that relationship may be manipulated by those who control technology production. Works like those by GRL, IAA, and Geraci, offer the control of technology to anyone, regardless of wealth or power, which undermines the dominating structures—such as corporations and government agencies—that typically regulate technological usage. According to Feury, new media is “original and capable of

99 Kelli Fuery, *New Media: Culture and Image* (New York: Palgrave MacMillan, 2009), 6. Fuery uses Michel Foucault’s theories on discourse as referring to verbal and non-verbal languages that contribute to the construction of social orders, drawing special attention to discourse’s connection to power and knowledge. Foucault’s theories of discourse are particularly outlined in his work, *The Archeology of Knowledge*, originally published 1986. Michel Foucault, *The Archeology of Knowledge*, trans. by A.M. Sheridan Smith (New York: Routledge, 2002).

defining its own cultural spaces, viral and corrupting, capable of infiltrating pre-existing systems, interdisciplinary and transforming of vision and social order, and political because of this range of potential readings.”¹⁰⁰ Fuery’s description of new media works is similar to terminology used in discussions of tactical media. Use of the words “viral,” and “infiltrating,” similarly describes the intentions of artist groups, including IAA and GRL, who attempt to create wide-spread, but small actions of dissent. They do so by creating disruptions in the perceptions of their audiences. These disruptions are created through uncommon combinations, such as graffiti and technology, which give each element new functions.

In addition to fostering interactivity, a clear goal for these artists, the technologies used also contribute additional content to the works. While a graffiti approach emphasizes the project creators’ intentions to highlight and undermine power structures from the perspective of the disenfranchised, a focus on the digital and electronic mediums included offer a different perspective—one from a position of power. This approach illustrates the creators’ appropriation of technological mediums and associations in a form of subversive criticism. The technologies used by GRL, IAA, and Geraci—the Internet, cellular telephones, computer software, lasers, digital projection, and robotics—serve multiple functions and convey various associations, among them, communicative, militaristic, and entertainment. Connected to these functions are human relationships, and new technology may produce pleasure, fear, anxiety, or convenience, depending on its application. An analysis of the specific technologies central to the *Graffiti Writer*, *Laser Tag*, and *Grafedia*, and the implications of technology use within artistic practice in general, provides insight into the artists’ creative and social motivations.

¹⁰⁰ Fuery, *New Media*, 10

Important to IAA, GRL, and Geraci is the use of their tools in activist applications. Their criticism largely lies in systems of order and power. As these systems are often the producers of the technologies that are manipulated in *Laser Tag*, *Graffiti Writer*, and *Grafedia*, IAA, GRL, and Geraci share a strategy of using the language of technology, engineering, and power, to critique the use of engineering, technology, and power. Each project re-contextualizes both graffiti and technology, and thereby, seeks to create cracks in the controlled use and common perceptions of the function and purpose of graffiti and technology.

CHAPTER THREE: PERFORMANCE AND PROTEST

The work of Graffiti Research Lab, the Institute for Applied Autonomy, and John Geraci, may be discussed within the separate contexts of graffiti and technology. Both graffiti and technological devices assist these projects in their ultimate goal of expressing dissent, however, when graffiti and technology are combined, the unexpected outcomes, events, and products that result, create the greatest opportunity for initiating social activism. Many of the qualities that characterize *Laser Tag*, *Graffiti Writer*, and *Grafedia* occurrences echo those attributed to performance art: the pronounced interest in audience interaction, the atypical site choice, often outside a gallery or museum setting, temporality, unconventional material combinations, and political or social critique. By approaching these works as forms of performance art, the case may be made for their inclusion within a fine arts realm, but also align them with other works that defy clear categorization as works of art, or engineering, or protest. As will be discussed, this ambiguity is a desired effect as the artists are able to infiltrate a variety of spaces and discourses from which their politics may be presented.

The performative nature of *Laser Tag*, *Graffiti Writer*, and *Grafedia* projects are enabled largely by an incorporation of the specific technologies used to encourage communication and interactivity. *Laser Tag*, *Graffiti Writer*, and *Grafedia* enhance graffiti's publicity by enacting the graffiti act in public view. By fusing this performance with tools of mass media, graffiti's performative qualities are highlighted and, sometimes literally, illuminated. Key components to performance are temporality, collectivity, public presence, and the inclusion of an audience. *Laser Tag* and *Graffiti Writer*

appearances provide examples of each of these components. The texts created are short-lived, *Laser Tags* last only a few seconds, they occur in public spaces and appear at public events, and they intentionally draw active participating members of their audience into the creation of their texts. Instead of writing graffiti, each of these projects may be approached as performing graffiti. As the various elements of the graffiti writer and characteristics of the graffiti tag are diminished or altered, the symbol of graffiti remains. The definition of graffiti, what it may represent, becomes the subject of this performance.

An element of performance is already present in the act of writing graffiti that becomes amplified or extended through technology's intervention. The physical gesture required for large scale graffiti writing combines calligraphy with dance. The letters themselves, through variations in paint application, line thickness, and scale, also reveal a writer's movements. It is not uncommon for writers to include additional details about particular working conditions in written statements accompanying their tags such as, "sorry about the drips," or "too wet, too cold."¹⁰¹ Added to the expressive, gestural quality of an individual's marks, these statements and the tag's connection to a particular writer's name, emphasize graffiti writing's human element. Graffiti's written marks then act as records of the actions, movements, and gestures of the graffiti writer. Technology alters this solo performance in several ways. First, the projects aim to create an interactive experience among a crowd of onlookers and participants. Rather than an act of an individual, these works become group performances. Second, the marks no longer necessarily belong solely to an individual. IAA's text robots produce only one font, the font of computers, not human handwriting. If *Grafedia* is viewed as existing both on the street and on the Internet, its text is in a state of flux, added to and altered by its viewers

¹⁰¹ Stewart, "Ceci Tuera Cela," 166

and users. GRL's lasers allow for more expression, and indeed, their work is based in illuminating the graffiti writing process and uncovering the traditionally unseen graffiti performances.

Graffiti writing's temporal nature is also a shared characteristic with performance and emphasized in *Laser Tag*, the *Graffiti Writer*, and *Grafedia*. Spray-painted tags appear, are erased, and resurrected elsewhere. Tags are often modified, added to, or enhanced by other graffiti writers.



Figures 16, 17, From left to right: Image of overlapping street art and graffiti in Brooklyn, New York, 2010. Graffiti Writer texts left behind by public users, Karlsruhe, Germany.

While graffiti's temporary existence is generally enforced by authorities and graffiti removal programs, the graffiti made by *Laser Tag*, *Graffiti Writer*, and *Grafedia* are intentionally short-lived in their original state. As images that last only a few seconds in some cases, the texts and tags written using technologically modified graffiti writing tools cannot be bought or sold. They are owned by no one. Lack of ownership is purposeful and agrees with the open source ethos practiced by IAA, GRL, and Geraci and indicated particularly through the artists conscious information sharing displayed on their

individual websites. Temporality also allows these projects to be adaptable to any situation or audience, a quality that serves their activist intentions.

Temporality and mobility are key ingredients in IAA, GRL, and Geraci's form of artistic activism. The element of surprise, the unplanned, and unannounced, stems from the "happenings" and Situationist works which each incorporate spontaneity in their activities. GRL and IAA particularly follow these models, appearing unannounced within public settings with their crowd-gathering mechanisms to initiate interactive public events. Their methods bear resemblance to another current trend within the creative activism realm known as "flash mobs". Flash mobs can occur at any time in any place. They are often organized through e-mail, text messages, and social networking sites. Groups of strangers are instructed to appear at a pre-determined location, and perform a task. Often the task is absurd or humorous, incorporating an element of mischief and play.¹⁰² Examples like "Reclaim the Streets" events or "Subway parties" create unauthorized street parties as a statement in support of the freedom of public space.¹⁰³ The goals of deregulating public spaces, as well as creating alternative functions and proposing alternative definitions for accepted notions of the everyday, and the questioning of the status quo, are goals shared by flash mob organizers and by artists such as GRL, IAA, and Geraci. Popular flash mob events like "Worldwide Pillow Fight Day," or "Silent Disco" incorporate many tactics used by protestors, performance artists, and graffiti artists alike.¹⁰⁴ They are organized quickly, disappear quickly, occur in public

¹⁰² Tom Vanderbilt, "Follow the Crowd," *Artforum International* 42, no. 10 (Summer 2004), 71

¹⁰³ www.reclaimthestreets.net. *Reclaim The Streets* was originally formed by *Earth First!* in London, 1991. Initially began as an environmental group targeting streets to promote alternative transportation, the focus of the group has shifted to protesting capitalist systems in general.

¹⁰⁴ "Worldwide Pillow Fight Day" held March 22, 2008 occurred in 35 different cities around the world. Participants, notified by a variety of electronic communication methods including social networking sites, e-mails, and text messages, engaged in group pillow fights. "Silent Disco" occurred April 2006, at several

spaces and generally support the notion that public space should be open for all forms of creative expression. By creating unexpected events, engaging in unusual behavior for a particular space, artist activists are able to draw “unintentional audiences.”¹⁰⁵ They are then able to uncover the rules of public space and reveal them to their viewer/participants. These events respond to an ordered way of life and are alluring because they offer the public an opportunity to be a part of something new, of something unexpected.¹⁰⁶

Flash mobs, like GRL and IAA appearances, find success in creating curiosity and generating interest, which may then lead to promoting activism, without needing to blatantly protest a specific power structure. Arguably, the events created by flash mobs are only a portion of the entire performance. The number of people physically participating in flash mob events is often surpassed by the number of viewers that such events attract through media attention and reports of the events after they have passed.¹⁰⁷ The success of flash mobs, and likewise, of the works by GRL, IAA, and Geraci, as works that promote activism, lies in their ability to generate this post-event interest. The creation of the unexpected which in turn, attracts curious viewers, provides the attentive audience to which any desired message may be delivered. Also key to the success of their use as activist tools, is the avoidance of overly political rhetoric. Their message is often subtle or suggested, placed underneath a veneer of playfulness. Indeed, the lack of overt politics may be the most political maneuver by these artists. Traditional protest methods, marches or political rallies, require permits and are strongly monitored by authorities.

underground train stations in London. In this event, participants gathered to dance to music only heard by themselves, transmitted by headphones connected to personal music listening devices.

¹⁰⁵ Deborah Barndt, *Wild Fire: Art as Activism*, (Toronto: Sumach Press, 2006) 24

¹⁰⁶ Vanderbilt, “Follow the Crowd,” 71

¹⁰⁷ Vanderbilt, “Follow the Crowd,” 71

Appearing spontaneously and without permission, only to disappear just as quickly, allows for these events to occur and end before authorities can respond.¹⁰⁸ Thus, the temporary nature of these events serves a practical purpose while also enhancing an element of surprise and playful disruption.

Performance's inclusion in activism comes from its ability to disrupt the ordinary and the expected. By doing so the intention is to make the performance viewer aware of the practices of everyday life and their control by systems of power. Public spaces are increasingly regulated, separated, clearly marked and defined. These spaces, such as public parks and shopping malls have accompanying appropriate behaviors. What flash mobs and, in many cases, appearances of *Laser Tag*, *Grafedia*, and *Graffiti Writer*, accomplish, is the expansion of public space. Public space becomes defined as any place where a public gathering occurs.¹⁰⁹ Such gatherings may open what Hakem Bey refers to as a "temporary autonomous zone," in which even an ephemeral disturbance can create cracks in structures of authority that may lead to further political and social change.¹¹⁰ By their appearances as performance, temporary, evolving, using an audience as co-creator, *Laser Tag*, the *Graffiti Writer*, and *Grafedia* can open such a "zone."

Small-scale and multiple interventions characterize a new form of activism practiced among a number of contemporary socially conscious artists including GRL, IAA, and Geraci. The method of small, independently funded and organized protests is evident in GRL's instructions for "How to start your own Graffiti Research Lab." There are six steps offered, but two in particular speak to this particular strategy.

¹⁰⁸ Vanderbilt, "Follow the Crowd," 74.

¹⁰⁹ Vanderbilt, "Follow the Crowd," 74.

¹¹⁰ Rita Raley, *Tactical Media* (Minneapolis, MN.: The University of Minnesota Press, 2009), 37

Step 0: Hackers and Graffiti Writers unite! The street and the net are both filled with opportunities for small people to alter the course of large systems. Hackers pieced up the internet by sharing ideas, and writers hacked a billion-dollar transport system to move their art around town for free.

Step 1: ...Causing mayhem in public is like downloading music on the Internet; if enough of us rush the guards, they won't be able to take us all out.¹¹¹

Just as hackers infiltrate and alter pre-existing software programs, these artists infiltrate the systems they wish to question, including the perception of the everyday, and become works of activism through their attempted enlistment of the public in their endeavors.

Infiltration and alteration of the everyday assists artists like GRL, IAA, and Geraci in reaching potentially unresponsive audiences. Political art, according to performance theorist, Philip Auslander, is most effective when it uses representation to expose and dismantle dominant ideologies that create those representations.¹¹² Such methods of subversive social critique inserted into the realm of the everyday recall Guy Debord and the Situationist International's détournement, as well as Michel de Certeau's tactics. Contemporary examples include *Adbusters* magazine, "subvertising," and interventionist campaigns by politically minded artist groups like the *Yes Men*, and *Critical Art Ensemble* (CAE). Each practice, détournement, tactical activity, and subversion, are methods that alter structures, giving those structures new functions and appearances. Often, the new appearance functions as social or political commentary.

¹¹¹ Tyler Cabot, "Graffiti Research Lab: They Build Tools of Subversion and Mass Dissent. Like a Giant Graffiti Laser. And Throwable Lights. It's Street Art Gone High Tech. And the Start of a Whole New Movement," *Esquire* (Dec. 2007), 218

¹¹² Philip Auslander, *Presence and Resistance: Postmodernism and Cultural Politics in Contemporary American Performance*, (Ann Arbor, MI: The University of Michigan Press, 1992.), 24

Guy Debord has defined détournement as “the reuse of pre-existing artistic elements in a new ensemble,”¹¹³ which when combined, results in the creation of new meanings. Similar to satirical parody, détournement can involve the imitation of a particular target for political or social commentary. The target’s characteristics—its appearance, placement, or physical structure—provide the material for the artists repurposed versions. In one particular example, on November 12, 2008, the *Yes Men* were involved with the manufacture and distribution of fake editions of the New York Times. Dated, July 4, 2009, the copies featured headlines such as “Iraq War Ends,” and “Nation Sets Its Sights on Building Sane Economy.”¹¹⁴ The appearance as a newspaper not only criticized the US government’s political and economic policies, but was also highlighted the nature of news reporting. Similarly, CAE’s interventions see to provide “alternative social visions,” by producing work which “reverse-engineers” dominant representations.¹¹⁵ In 2010, CAE’s work, *Radiation Burn*, recreated a radioactive bomb explosion complete with police and emergency service response, Hazmat investigators, and the presence of a nuclear physicist at the event site to explain the simulation to onlookers. The “Renaming Project,” from 2002 in Victoria Square, South Australia, involved the exchange of local street signs that marked the Square with signs bearing the aboriginal name of the site, “Tarndanyunga,” as a statement against colonialism.¹¹⁶

Historical precedence for this method of social critique of dominating structures from within those structures can be found throughout avant-garde movements. The Dadaist’s experiments with process, Pop Art’s appropriation of “lowbrow” culture, and

¹¹³ Guy Debord, “The Society of the Spectacle,” (Paris, France: Editions Buchet-Chastel, 1967)

¹¹⁴ <http://theyesmen.org/hijinks/newyorktimes>

¹¹⁵ John McKenzie and Rebecca Schneider, “Critical Art Ensemble, Tactical Media Practitioners, an Interview,” *TDR* 44, no.4, 2000: 136-150, 136

¹¹⁶ CAE website: www.critical-art.net

Kaprow's Happenings each challenged the authority of the art establishment from within. Situationist International's urban interventions, Gordon Matta Clark's anarchitecture, as well as much public art from the 1980s expanded this critique beyond the art world into the realm of everyday life, semiotics, and political protest. In these later examples, the artists not only use the means of the critiqued systems, they also question the ideology that creates and perpetuates those systems.¹¹⁷

By combining graffiti with technology, GRL, IAA, and Geraci participate in the reorganization of pre-existing elements that characterizes détournment. The materials are combined—the tag and text with lasers, robotics, and hyperlinks—as well as the symbols those materials signify—dissent, counter-culture, authority, communication, entertainment, and power. Each project, in a sense, imitates graffiti, and as I suggest, this imitation may be viewed as form of performance. The participants involved in these projects take on the role of graffiti writers, altering the material of graffiti to suit their own purposes. In these specific cases, GRL, IAA, and Geraci, transform the insular nature of graffiti culture into public group activity intended to foster intercommunication among diverse communities. For example, by presenting graffiti in new formats, Roth hopes to diminish stigmas attached to graffiti that have led to graffiti's dismissal as mere vandalism. Roth states:

Because graffiti is threatening to corporate and governmental control of space, they have branded it as 'gang related,' 'vandalism,' a 'quality of life offense.' By digitizing the written form and re-presenting it in an analytical, thoughtful, and expressive way, these stigmas recede into the background creating an environment where the viewer is free to explore form and content un-tainted.¹¹⁸

¹¹⁷ Auslander, *Presence and Resistance*, 24

¹¹⁸ Roth, "Geek Graffiti," 7

Through creating alternative experiences of graffiti writing, Roth and others hope to encourage acceptance of the medium as an art form, but also, to let the form be acknowledged as a method for nonviolent dissent and activism.¹¹⁹

Additionally, just as the *Yes Men* imitated the *New York Times*, both IAA and GRL, to varying degrees, imitate the systems of power that are the targets of their criticism. This imitation is most clearly evident in their groups' naming. By incorporating the words, "institute" and "research lab," IAA and GRL lend themselves an air of authority. Indeed, the work they produce is highly technical and research oriented, and so their adoption of these titles is not inappropriate. As an example of détournement, these names, attached to their corresponding work, produce an element of surprise. "Institute" and "lab" suggest technical or scientific methods, typically the domain of industries associated with systems of power, and seem ironic when assigned to projects aimed at dismantling those systems. IAA has described their work as "Trojan horses, carrying our critique through the gates of detachment."¹²⁰ This statement reveals their subversive intentions.

Imitating bodies of power or authority —newspapers, government agencies, corporations—with the purpose of criticizing such bodies and others, similarly characterizes Certeau's tactics. In his definition of tactics, Certeau emphasizes the opportunistic quality of the tactic and its sense of "trickery," likening tactics to the "simulations" and "disguises" used in nature.¹²¹ Certeau also echoes Debord's

¹¹⁹ Roth, "Geek Graffiti," 11

¹²⁰ IAA, "Engaging Ambivalence," "Engaging Ambivalence: Interventions in Engineering Culture," In *DataBrowser 2: Engineering Culture*, ed. Geoff Cox and Joasia Krysa (New York, NY: Autonomedia, 2005) 99

¹²¹ Michel DeCerteau, *The Practice of Everyday Life* (Berkeley, CA: University of California Press, 1984), 37

suggestion for the “reuse” and reorganization of elements to produce alternative meanings, stating, “...a tactic boldly juxtaposes diverse elements in order suddenly to produce a flash shedding a different light on the language of a place and to strike the hearer.”¹²² Thus, tactics, like détournement, by appearing in unexpected formats or contexts, add to or change the meaning of its elemental materials.

Temporality, a characteristic that links graffiti, performance, and activism, is important to the connection of tactics to the interactive nature desired in *Laser Tag*, *Graffiti Writer*, and *Grafedia*. Certeau describes the tactic as necessarily mobile, transformable, and adaptable, emphasizing that tactics are time-based rather than space-situated.¹²³ As discussed earlier, temporality serves a practical function in these works that while less destructive, are still, many times illegal, and their short life-spans allows for the works to be executed with little police intervention. Likewise, interactive systems transmit a sense of simultaneous activity and “imply real-time response.”¹²⁴ Each message prompts replacement by a new message emphasizing a central theme to GRL, IAA, and Geraci’s work, that public space should be available to everyone.

Certeau connects tactics to the everyday and lists “dwelling, moving about, speaking, reading, shopping, and cooking,”¹²⁵ as activities in which individuals may participate in tactical gestures that combat what Certeau labels as “strategies,” or the “calculation (or manipulation) of power relationships,” acted out by those in power such as “a business, an army, a city, a scientific institution.”¹²⁶ Small-scale interventions that create the possibility for insurrection within everyday activities, in place of grand

¹²² Certeau, *Practice of Everyday Life*, 37

¹²³ Certeau, *Practice of Everyday Life*, 38-39

¹²⁴ Dixon, *Digital Performance*, 560

¹²⁵ Certeau, *Practice of Everyday Life*, 40

¹²⁶ Certeau, *Practice of Everyday Life*, 35-36

gestures of protest, is an element of tactics. The use of such “micro-politics”¹²⁷ is described by IAA:

Indeed, the need to appropriate social space has decreased in necessity with the rise of nomadic power vectors and with the disappearance of borders in regard to multinational corporate political and economic policy construction; however, on the micro level of everyday life activity, and within the parameters of physical locality, spatial appropriations and the disruption of mechanisms for extreme expression management still have value.¹²⁸

The works created by GRL, IAA, and Geraci each employ these methods--tactics, détournement, and hacking—through their imitation, reuse, and reorganization of systems. By combining graffiti and technology, the symbols of both act upon each other and both materials gain new meaning. Additionally, an appearance as works of art and technology, allows for a wider range of exhibition opportunities and more varied audience—a favorable outcome for artists with social activist intentions.¹²⁹

The methods for this type of opposition characteristically deviate from past forms of public protest. They occur on a smaller scale, in unexpected venues, often not clearly defining their protests or their targets of criticism, and are often unrecognized as statements of protest. Performance, audience interaction and participation with social activist aims, are methods borrowed from earlier art movements, however, the expectations of the artists is changed. CAE’s statements on their particular protest strategy provide a useful description of the attitudes of artist activists similarly engaging in small scale interventions:

¹²⁷ Raley, *Tactical Media*, 8

¹²⁸ IAA “Contestational Robotics,” <http://www.appliaautonomy.com>

¹²⁹ IAA notes several instances in which their Graffiti Writer was able to attract “people who wouldn’t normally participate in the illegal act of graffiti,” such as businessmen, members of a Girl Scout Troop, and policemen. John Mecklin, “the Dog Bites Interview: Robots that Protest,” *San Francisco Weekly*, Nov. 24, 2004. Accessed June, 2011, <http://www.sfweekly.com/content/printVersion/318204/>

Resistant models and processes will never be dominant...we only believe in temporary solutions, temporary improvement. There is only permanent cultural resistance; there is no endgame. Authoritarian culture won the day on the first day. CAE knows of no way that it can be removed-it's too deeply entrenched. But there can be spaces and processes within certain moments that can successfully stop the flow of capital, lift the repression, and in so doing, actually allow for the emergence of pleasure and happiness.¹³⁰

As forms of activism, *Laser Tag*, *The Graffiti Writer*, and *Grafedia* create resistance by producing alternative views of the order in everyday life. By revealing alternative uses for art as activism, for graffiti as interactive, and for technology as art, for activist tools, and for objects of play, artists attempt to activate awareness of the hidden mechanisms of state and market that influence the everyday. Both IAA and CAE have written extensively about their use of such methods, and CAE in particular articulates its decision to make small scale alterations to the illusion and construction of everyday life.¹³¹ They see in these interventions the potential to slowly and methodically awaken a mass public to the underlying systems that control the way people are defined, the way people interact, what they buy, where they live and how they live; essentially, the way these systems, perpetuated through blind acceptance, control culture production.¹³² By appearing in unexpected places, offering alternatives to normalized behavior, these groups expand their audiences and exposing them to art, technology, graffiti, and activism to which they may not otherwise be aware of or receptive to.

Borrowed from Certeau's notion of tactics, the term, 'tactical media', describes many of the projects discussed here. It is defined as "situational, ephemeral, and self-terminating," characterized by work that, "encourages the use of any media that will

¹³⁰ McKenzie and Scheider, "Critical Art Ensemble," 139.

¹³¹ Both IAA and CAE provide access to their books, essays, and other publications regarding theories on arts-based activism on their websites, www.appliedautonomy.com, and www.critical-art.net.

¹³² CAE, *Digital Resistance*, (New York: Autonomedia, 2001), 16-20.

engage a particular sociopolitical context to create molecular interventions and semiotic shocks that collectively could diminish the rising intensity of authoritarian culture.”¹³³Rita Raley, who studies tactical media, ties a use of tactics to a political “virtuosity” that can be supplemental to other forms of activism through technologically influenced means. Virtuosity characterizes activities whose purpose is internal, unconcerned with measurable success, or final products and specific end goals.¹³⁴ As indicated earlier, broadly facilitating activism rather than declaring a specific politicized statement, can be an effective form of subversive protest. Such methods illustrate a recent trend occurring within the creative sector, described as “metamodernism.”¹³⁵

The social aims of GRL, IAA, and Geraci derive from protest art and the aspirations of past artistic movements, namely the performance work from the 1960s and the Constructivist exhibitions from earlier in the century that rejected an autonomous art in favor of art practices that emphasized social purposes. Similar to Fluxus activities and Constructivist artist, Vladimir Tatlin’s machine aesthetic, contemporary examples that fuse graffiti with technology also call for a social and communicative aim for art within everyday practices.¹³⁶ The “metamodernism” movement is defined by the theorists, Timotheus Vermeulen and Robin van den Akker, who developed the new term, as “an oscillation between a typically modern commitment and a markedly postmodern detachment.”¹³⁷ Their statements suggest a replacement of idealistic views of an art able to produce measurable social change that distinguished many prior art movements, with

¹³³ CAE website, www.critical-art.net

¹³⁴ Raley, *Tactical Media*, 29

¹³⁵ Timotheus Vermeulen and Robin van den Akker, “Notes on Metamodernism,” *Journal of Aesthetics and Culture* 2 (2010), accessed April, 2011, doi: 10.3402/jac.v2i0.5677

¹³⁶ Alan Kaprow’s “Happenings” from the 1950s and 1960s particularly incorporate chance principles and audience involvement. Russian Constructivism was active from 1919 to the mid 1930s.

¹³⁷ Vermeulen and van den Akker, “Notes on Metamodernism,” quote taken from introduction section.

artworks striving for dissent and p

, empathy and apathy, unity and plurality, totality and fragmentation, purity and ambiguity.”¹³⁸ These artists create projects that on the surface, may not read as political, however, as with flash mobs, this lack of political rhetoric and protest aesthetic may be the key to these works’ successful transmission of activist content. The benign appearance and performative allure of works like *Laser Tag*, *Graffiti Writer*, and *Grafedia*, follows a precedence set by artists from the 1960s who sought to expand the definition of art to be all-inclusive and an activity not relegated to art spaces and art audiences. Further, GRL, IAA, and Geraci’s interest in expanding the function of technology is assisted by its use within these activist art works that can appeal to a wide ranging audience.

GRL, IAA, and Geraci are primarily interested in social interaction, and must necessarily avoid alienating the very public they wish to interact with by refraining from excessively politicized rhetoric. Thus, the works are distinguished by appearances in atypical sites and the use of uncommon juxtapositions of materials, with a purpose of infiltrating non-art spaces to attract a diverse audience for their social activist aims. The work’s entertainment aspects further encourage positive audience response. Thus, graffiti contributes a social message to the projects by GRL, IAA, and Geraci, and technology provides the means for the message’s distribution as a form of performance.

¹³⁸ Vermeulen and van den Akker, “Notes on Metamodernism,” from section, “From the Postmodern to the Metamodern.”

CONCLUSION:

A key goal of software design from the start was interactivity and programmers looked to the arts, specifically theater and film, for a model of successful interaction. The computer interface was meant to be a site of action “where both the human and the computer have a role.”¹³⁹ Art and science in the past have been separated through their different languages, and perspectives. Graffiti especially isolates itself from the world through its specialized language.¹⁴⁰ Computer technologies have offered a space for collaboration, translating and decoding these fields, turning isolation into interaction. The union of art and technology supports and encourages a revision of accepted thought with the intention of that disruption of typical behavior as a form of social activism. Critical Art Ensemble states, “tactical media practitioners initiate social processes that aid people in perceiving a social system and their roles within in it in a manner that is different from the normalized perception of these phenomena.”¹⁴¹ Public spaces and behaviors are ritualistic, rituals that are performed and determined by dominating systems. These works expose those rituals, make people aware of their normalized behaviors in an attempt to call attention to their conditioning.

Common problems in community oriented art works arise from their group appeal that insinuates the work is speaking for or on behalf of a community and runs the risk of mis-representing any particular community by connecting a variety of social and cultural boundaries such as race, gender, or class, to unify or attempt to find a commonality between diverse individuals. This grouping together unavoidably favors one subject over another risking alienation between audience participants, and the artist or reifying

¹³⁹ Raley *Tactical Media*, 170-171

¹⁴⁰ Raley *Tactical Media*, 170

¹⁴¹ Critical Art Ensemble, website: www.critical-art.net

hierarchical relationships, highlighting otherness.¹⁴² In these works, “the artist is no longer a particular individual, located at the intersection of historically specific class, racial, sexual, and other identities, but rather, a universal and nomadic empath.”¹⁴³

Theorist Grant Kester describes a myth of universality in art and the privileged position of the artist as rightfully inserting himself into communities of his choosing under the protection of this universal art myth as a “moral or pedagogical authority.” The distinction of art allows an infiltration where in other social instances opinions may not be welcomed. The projects discussed in this paper attempt to avoid an overreaching idealist sensibility by avoiding alignment with particular causes but instead, deploy their tools at a wide range of events.

The goal of the highlighted works, GRL’s *Laser Tag*, IAA’s *Graffiti Writer*, and Geraci’s *Grafedia*, is the initiation of social activism through public interaction. The combination of graffiti and technology to create instances of tactical media, détournement, and performance assists in the achievement of this activist goal. More specifically, goals of GRL, IAA, and Geraci are to interrupt the constant flow of information that controls and maintains hierarchical cultural and social systems. The belief of these artists is that systems of power are fed by simultaneous increase in privatization and globalization, each co-opting culture and counter-culture consistently for commercial use. By producing works that disrupt these systems, for example, making process based work,

¹⁴² Grant Kester, “Aesthetic Evangelists: Conversion and Empowerment in Contemporary Community Art,” *Afterimage* 22, no. 6 (January 1995) 5-7 Kester outlines activist art projects that risk alienating the communities they seek to assist, largely through a lack of true understanding of the needs of the particular community. He gives Alfredo Jaar’s work “One or Two Things I Know About Them,” from 1992 about the Bangladeshi community in the vicinity of Whitechapel Gallery in London, as an example of an artist’s failed attempt at representing a community that is not his own.

¹⁴³ Kester, *Conversation Pieces: Community and Communication in Modern Art*, (Berkeley, CA: University of California Press, 2004), 12, 17

denying clear definitions of their projects, and avoiding commodification by not participating in object creation, the intention is to create fracture within power structures.

The method used by artists like Geraci, GRL, and IAA to create fracture is largely based on imitation and a sense of trickery. An appearance in unexpected places and in unexpected formats is intended to create a semiotic disruption. The intended result is a public questioning of established codes and signs. Important to this method is not only the replication of an “existing semiotic regime,” but the “redeployment” of that regime.¹⁴⁴ Rather than simply offering an altogether different sign system and creating an either/or situation, they work within those systems, suggesting alternative viewings of those signs. In the outlined technologically modified examples, graffiti as a sign is reconfigured from a solo act of destruction to a community event. It is transformed from an action to a symbol, capable of being understood and used by everyone. In these situations, graffiti undergoes what Felix Guattari calls a “re-symbolization.”¹⁴⁵ Guattari was specifically calling for a re-symbolization of communication and information systems through its release from the commercial realm. I apply this term to results of these projects to highlight graffiti’s evolution from specific individual signatures to a term that can be applied as a surrogate for a broad notion of the individual that may be inserted into greater social critique.

This paper began with a quote from the 2001 Ars Electronica catalog calling for the artist to act as an “intermediary,” and “a catalyst between diverse fields of knowledge.”¹⁴⁶ I will conclude with a look at the most recent Ars Electronica festival in 2010. Past themes reveal an outline detailing society’s evolving relationship with

¹⁴⁴ McKenzie and Schneider, “Critical Art Ensemble, Tactical Media Practitioners, an Interview,” 140

¹⁴⁵ Raley, *Tactical Media*, 8

¹⁴⁶ Stocker, Gerfried, “Takeover,” 14

technology.¹⁴⁷ Each theme suggests conflicting relationships with technological mediums, highlighting a simultaneous anxiety and marvel regarding technological innovation. In contrast, the 2010 festival is themed, “Repair,” and illustrates a shift in the purpose of technology—the same shift indicated in the projects created by GRL, IAA, and Geraci. Much of the festival’s catalog focuses on environmental and political unrest--anxiety towards human actions--offering technology as a tool of “repair” made possible through projects that foster creativity and idealism.¹⁴⁸ It stands as an indication of a future return to hopefulness within the creative sector, unmarred by cynicism or indifference. As works that combine seemingly disparate elements, such as art and technology, increase in visibility for the sake of enacting social change, the rather traditional idea of art as communication returns in a modernized version. Works like *Laser Tag*, *Grafedia*, and *Graffiti Writer*, while evading clear categorization as art, graffiti, technology, or activism, have a particular goal that links all of these areas: communicability. Such a goal befits Ars Electronica’s call to action, to “roll up our shirtsleeves and tackle the job before us...to change ourselves and start the repairs,”¹⁴⁹ as communication is essential to change. I stress that each of the projects discussed within this paper aim to facilitate activism rather than make a specific political statement. The decision to employ graffiti and technology for their separate abilities, histories, and aesthetics assists in activist aims. When combined, graffiti and technology take on new meanings, functions, and appearances and it is this disruption of the expected that contributes most to the success of these works as works of artistic activism. By calling attention to the everyday, the

¹⁴⁷ Titles range from, “Goodbye Privacy”(2007) and “Infowar”(1998), to “Simplicity”(2006) and “Mimesis”(1996).

¹⁴⁸ Full PDF’s of past Art Electronica festival catalogs may be accessed online: <http://new.aec.at/festival/archiv>

¹⁴⁹ Ars Electronica Festival Archive: 2010, <http://new.aec.at/repair/en/>

accepted, and the expected, GRL, IAA, and Geraci make their viewers aware of the ways in which the public is controlled, formed, and regulated. Their goal of exposing underlying power structures present in the everyday is then achieved by their actions as artists and intermediaries, graffiti writers and engineers, programmers and activists. Through these unconventional combinations, a conventional desire for communication is revealed.

BIBLIOGRAPHY

- Anderson, Laurel, Stefania Borghini, John F. Sherry Jr., and Luca M. Visconti. "Street Art, Sweet Art? Reclaiming the 'Public' in Public Space." *Journal of Consumer Research, Inc.* 37 (2010). Accessed April, 2011. doi: 10.1086/652731
- Alexander, Darsie. "Slide Show" In *Slide Show*, edited by Darsie Alexander, 3-32. University Park, PA: The Pennsylvania State University Press, 2005.
- Asimov, Issac. *I, Robot*. New York: Gnome Press, 1951.
- Auslander, Philip. *Presence and Resistance: Postmodernism and Cultural Politics in Contemporary American Performance*. Ann Arbor, MI: The University of Michigan Press, 1992.
- Barndt, Deborah. *Wild Fire: Art as Activism*. Toronto: Sumach Press, 2006.
- Baudrillard, Jean. "Kool Killer, or The Insurrection of Signs." In *Symbolic Exchange and Death (Theory, Culture, and Society)*, 76-83. London: Sage Publications, 1993.
- Bell, Catherine. "'Performance' and Other Analogies." In *The Performance Studies Reader*, 2nd ed., edited by Henry Bial, 98-106. New York: Routledge, 2007.
- Birringer, Johannes. "Postmodernism, Performance, and Technology." *Performing Arts Journal* 9, no. 213 (1985): 221-233.
- Bishop, Claire. "Antagonism and Relational Aesthetics." In *The 'Do-It-Yourself' Artwork*, edited by Anna Dezeuze, 257-280. Manchester, Great Britain: Manchester University Press, 2010.
- Bosma, Josephine. "Art as Experience: Meet the Active Audience." In *Network Art: Practices and Positions*, edited by Tom Corby, 24-39. London, UK: Routledge, 2006.
- Bourriaud, Nicolas. *Relational Aesthetics*. Translated by Simon Pleasance and Fronza Wood. Dijon, France: Les Presses du Réel, 1998.
- Blum, Andrew. "The Big Pixel." *Print* 61, no. 5 (2007): 156-158.
- Bramwell, Charity. "Graffiti Research Lab: Giving People Opportunities to Tear Their City Apart Since 2005." *Artlink* 28, no. 3 (2008): 60-63.
- Buchloh, Benjamin. "To Whom it May Concern." *Modern Painters* 20, no.9 (2008): 62-69.

- Cabot, Tyler. "Graffiti Research Lab: They Build Tools of Subversion and Mass Dissent. Like a Giant Graffiti Laser. And Throwable Lights. It's Street Art Gone High Tech. And the Start of a Whole New Movement." *Esquire* (Dec. 2007), 218-220.
- Cybrivsky, Roman and David Ley. "Urban Graffiti as Territorial Markers." *Annals of the Association of American Geographers* 64, no. 4 (1974): 491-505.
- Critical Art Ensemble. "Observations on Collective Cultural Action." *Art Journal* 57, no. 2 (1998):72-85.
- ."Critical Art Ensemble, Tactical Media Practitioners, an Interview." By John McKenzie and Rebecca Schneider. *TDR* 44, no.4 (2000): 136-150.
- .*Digital Resistance*. New York: Autonomedia, 2001.
- .http://www.critical-art.net
- Dannatt, Adrian. "Word on the Street." *RIBA Journal* 110, no. 3 (March 2003): 22-24.
- DeBord, Guy. *Comments on the Society of the Spectacle*. English Translation by Malcolm Imrie. London: Verso, 1990.
- .*The Society of the Spectacle*. Paris,France: Editions Buchet-Chastel, 1967.
- DeCerteau, Michel. *The Practice of Everyday Life*. Berkeley, CA.: University of California Press, 1984.
- Dezeuze, Anna. "Everyday Life, 'Relational Aesthetics', and the 'Transfiguration of the Commonplace.'" *Journal of Visual Art Practice* 5, no.3 (2006): 143-152.
- ."An Introduction to the 'Do-it-Yourself' Artwork." In *The 'Do-It-Yourself' Artwork*, edited by Anna Dezeuze, 1-21. Manchester, Great Britain: Manchester University Press, 2010.
- Dinkla, Söke. "The Art of Narrative—Towards the Floating Work of Art." In *New Screen Media: Cinema/Art/Narrative*, edited by Martin Rieser and Andrea Zapp, 21-41. London: British Film Institute, 2008.
- Dixon, Steve. *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation*. Cambridge, MA: MIT Press, 2007.
- Drucker, Johanna. "Interactive, Algorithmic, Networked: Aesthetics of New Media Art." In *At Distance: Precursors to Art and Activism on the Internet*, edited by Annmarie Chandler and Norie Neumark, 34-59. Cambridge, MA: MIT Press, 2005.

Foster, Hal. *Recodings: Art, Spectacle, Cultural Politics*. Port Townsend, WA: Bay Press, 1985.

---. "Subversive Signs." *Art in America*. (November 1982): 88-92.

Foucault, Michel. *The Archeology of Knowledge*. Translated by A.M. Sheridan Smith. New York: Routledge, 2002.

Fuery, Kelli. *New Media: Culture and Image*. New York, NY: Palgrave MacMillan, 2009.

Geraci, John. *Grafedia* website: <http://www.grafedia.net>.

Gleadell, Colin. "Art Sales: Graffiti Draws a New Crowd." *Telegraph*, (October 30, 2007). Accessed July 3, 2011.
<http://www.telegraph.co.uk/culture/art/artsales/3668890/Art-sales-Graffiti-draws-a-new-crowd.html>.

Gottlieb, Lisa. *Graffiti Art Styles: A Classification System and Theoretical Analysis*. Jefferson, NC: McFarland and Company, Inc., 2008.

Graffiti Research Lab. [http:// www.graffitiresearchlab.com](http://www.graffitiresearchlab.com).

Graham, Beryl. "What Kind of Participative System? Critical Vocabularies from New Media Art." In *The 'Do-It-Yourself' Artwork*, edited by Anna Deuze, 281-305. Manchester, Great Britain: Manchester University Press, 2010.

Green, Rachel. *Internet Art*. New York, NY: Thames and Hudson Inc., 2004.

Institute for Applied Autonomy (IAA). "Engaging Ambivalence: Interventions in Engineering Culture." In *DataBrowser 2: Engineering Culture*, edited by Geoff Cox and Joasia Krysa, 95-103. New York, NY.: Autonomedia, 2005.

---. "Contestational Robotics." Accessed April, 2010. <http://www.appliedautonomy.com>.

---. "On the Outside Looking Out: An Interview with the Institute for Applied Autonomy (IAA)." By Erich W. Schienke. *Surveillance and Society* 1, no. 1 (2002): 102-119.

---. "The Dog Bits Interview: Robots that Protest." By John Mecklin. San Francisco Weekly, November 24, 2004.

Keene, Jarret. "The Great Wide Open: Can the Internet and Open-Source Technology Expand the Limits of Public Art?" *Public Art Review* 19, no. 2 (2008): 34-36.

Kershaw, Baz. "Curiosity or Contempt: On Spectacle, the Human, and Activism." *Theater Journal* 55, no. 4 (2003): 591-611.

- Kester, Grant. *Conversation Pieces: Community and Communication in Modern Art*. Berkeley, CA: University of California Press, 2004.
- . "Aesthetic Evangelists: Conversion and Empowerment in Contemporary Community Art." *Afterimage* 22, no. 6 (January 1995): 5-7.
- Kluszczycki, Richard W. "Re-Writing the History of Media Art: From Personal Cinema to Artistic Collaboration." *Leonardo* 40, no. 5 (2007): 469-474.
- Krauss, Rosalind. *"A Voyage on the North Sea:" Art in the Age of the Post-Medium Condition*. New York: Thames & Hudson Inc, 1999.
- Ley, David and Roman Cybriwsky. "Urban Graffiti as Territorial Markers." *Annals of the Association of American Geographers* 64, no. 4 (December 1974): 491-505.
- Litchy, Patrick. "The Cybernetics of Performance and New Media Art." *Leonardo* 33, no. 5 (2005): 351-354.
- Lewisohn, Cedar. *Street Art: the Graffiti Revolution*. New York: Abrams. 2008.
- Manovich, Lev. *The Language of New Media*. Cambridge, MA: MIT Press, 2001.
- Mason, Matt. *The Pirate's Dilemma: How Youth Culture is Reinventing Capitalism*. New York: Free Press, 2008.
- McCormick, Carlo. "Where Angels Dare to Tread." In *Trespass: A History of Uncommissioned Art*, edited by Ethel Seno, 14-16. Koln: Taschen, 2010.
- McLuhan, Marshall. "Myth and the Mass Media." *Daedalus* 88, no. 2 (1959): 339-348.
- . *The Medium is the Massage*. 1967. Reprinted with additions by Quentin Fiore. Corte Madera, CA: Ginko Press, 2001.
- . *Understanding Media: The Extensions of Man*. 2nd ed. New York, NY: The New American Library, Inc., 1964.
- Metz, Rachel. "It's Not Graffiti, it's Grafedia." *Wired* (March 25, 2005). Accessed April, 2010. <http://www.wired.com/print/culture/lifestyle/news/2005/03/66992>.
- New York City Police Department. "Combating Graffiti." Accessed June, 2011. http://home2.nyc.gov/html/nypd/downloads/pdf/anti_graffiti/Combating_Graffiti.pdf

- New York Times, "Taki Spawns Pen Pals," July 21, 1971, pg 37. Accessed May 30, 2011, http://taki183.net/_pdf/taki_183_nytimes.pdf
- Noys, Benjamin. "Destroy Cinema!/Destroy Capital!: Guy Debord's The Society of the Spectacle, 1973." *Quarterly Review of Film and Video* 24 (2007): 395-402
- Popper, Frank. "The Place of High-Technology in Art in the Contemporary Scene." *Leonardo* 26, no.1 (1993): 65-69.
- Raley, Rita. *Tactical Media*. Minneapolis, MN: The University of Minnesota Press, 2009.
- Rancière, Jacques. *Aesthetics and its Discontents*. Cambridge, UK: Polity Press, 2009.
- Roth, Evan, "Geek Graffiti: A Study in Computation, Gesture, and Graffiti Analysis," (master's thesis, Parsons School of Design, 2005). Accessed March, 2010. http://a.parsons.edu/~rothe839/thesis/graffiti_analysis_09.pdf
- . "Evan Roth." Interview by Alexander Tarrant. *Juxtapose*, no.117 (October, 2010): 124-135.
- Saltz, David Z. "The Art of Interaction: Interactivity, Performativity, and Computers." *The Journal of Aesthetics and Art Criticism* 55, no. 2 (Spring, 1997): 117-127.
- Sayer, Henry. *The Object of Performance*. Chicago: University of Chicago Press, 1989.
- Schiller, Mark and Sara Schiller. "City View" In *Trespass: A History of Uncommissioned Art*, edited by Ethel Seno, 10-11. Koln: Taschen, 2010.
- Sholette, Gregory G. "Interventionism and the Historical Uncanny...Or: Can There Be Revolutionary Art Without the Revolution?" In *The Interventionists: Users' Manual for the Creative Disruption of Everyday Life*, edited by Nato Thompson and Gregory Sholette, 133-142. Cambridge, MA.: MIT Press and the Massachusetts Museum of Contemporary Art. 2004.
- Stallabrass, Julian. "The Aesthetics of Net.Art." *Qui Parle* 14, no.1 (2003): 49-72.
- Stewart, Susan. "Ceci Tuera Cela: Graffiti as Crime and Art." In *Life After Postmodernism: Essays on Value and Culture*, edited by John Fekete, 161-180. New York: St. Martin's Press, 1987.
- Stocker, Gerfried. "Takeover: About the Thing Formerly Known as Art." In *Ars Electronica 2001: Takeover: Who's Doing The Art of Tomorrow*, edited by Ingrid Fischer-Schreiber, Heimo Razenbacher, and Jutta Schmiederer, 12-16. New York: Springer-Verlag Wein, 2001.
- Strehovec, Janez. "New Media Art as Research: Art Making Beyond the Autonomy of

- Art and Aesthetics.” *Technoetic Arts: A Journal of Speculative Research* 6, no. 3 (2008): 233-250.
- Storr, Robert. “Next Slide, Please...” In *Slide Show*, edited by Darsie Alexander, 51-69. University Park, PA.:The Pennsylvania State University Press, 2005.
- Taki 183. Personal website, accessed June 6, 2011. [http:// www.taki183.net](http://www.taki183.net)
- Thompson, Nato. “Trespassing Relevance.” In *The Interventionists: Users’ Manual for the Creative Disruption of Everyday Life*. 13-22. Cambridge, MA.:MIT Press and the Massachusetts Museum of Contemporary Art, 2004.
- Vanderbilt, Tom. “Follow the Crowd.” *Artforum International* 42, no. 10 (Summer, 2004): 71-74.
- Vermeulen, Timotheus and Robin van den Akker. “Notes on Metamodernism.” *Journal of Aesthetics and Culture* 2 (2010). Accessed June, 2010. doi: 10.3402/jac.v2i0.5677
- Ward, Frazer. “Some Relations between Conceptual and Performance Art.” *Art Journal* 56 (1997): 36-40.
- Warner, Michael. *Publics and Counterpublics*. Cambridge, MA.: MIT Press, 2005.
- Weibel, Peter. “Context Art: Towards a Social Construction of Art.” In *Situation*, edited by Claire Doherty, 46-52. London, UK.:Whitechapel Gallery Ventures Limited, 2009.
- Wodiczko, Krzysztof. “Strategies of Public Address.” In *Situation*, edited by Claire Doherty, 124-127. London,UK.: Whitechapel Gallery Ventures Limited, 2009.